

In the Matter of

**Certain Laser Bar Code Scanners and Scan
Engines, Components Thereof, and
Products Containing Same**

Investigation No. 337-TA-551

Publication 4006

May 2008

U.S. International Trade Commission



Washington, DC 20436

U.S. International Trade Commission

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Dean A. Pinkert*

*Commissioner Stephen Koplan, whose term ended on February 6, 2007, and Commissioner Jennifer A. Hillman, whose term ended on February 23, 2007, participated in the decision to institute this investigation. Commissioner Irving A. Williamson, whose term commenced on February 7, 2007, and Commissioner Dean A. Pinkert, whose term commenced on February 26, 2007, participated in the decision to review certain portions of the initial decision and in the final determination.

Address all communications to
Secretary to the Commission
United States International Trade Commission
Washington, DC 20436

U.S. International Trade Commission

Washington, DC 20436
www.usitc.gov

In the Matter of

Certain Laser Bar Code Scanners and Scan Engines, Components Thereof, and Products Containing Same

Investigation No. 337-TA-551



Publication 4006

May 2008

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matter of

**CERTAIN LASER BAR CODE
SCANNERS AND SCAN ENGINES,
COMPONENTS THEREOF, AND
PRODUCTS CONTAINING SAME**

Investigation No. 337-TA-551

**NOTICE OF RESCISSION OF LIMITED EXCLUSION ORDER
AND CEASE-AND-DESIST ORDER**

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that the U.S. International Trade Commission has determined to rescind the Limited Exclusion Order and Cease and Desist Order issued in the above-captioned case.

FOR FURTHER INFORMATION CONTACT: Paul M. Bartkowski, Esq., Office of the General Counsel, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone (202) 708-5432. Copies of non-confidential documents filed in connection with this investigation are or will be available for inspection during official business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone (202) 205-2000. General information concerning the Commission may also be obtained by accessing its Internet server at <http://www.usitc.gov>. The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at <http://edis.usitc.gov>. Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on (202) 205-1810.

SUPPLEMENTARY INFORMATION: This investigation was instituted on October 26, 2005, based on a complaint filed by Symbol Technologies Inc. ("Symbol") of Holtsville, New York. The complaint, as amended, alleged violations of section 337 of the Tariff Act of 1930 (19 U.S.C. § 1337) in the importation into the United States, the sale for importation, and the sale within the United States after importation of certain laser bar code scanners or scan engines, components thereof, or products containing the same, by reason of infringement of various claims of United States Patent Nos. 5,457,308; 5,545,889; 6,220,514; 5,262,627 ("the '627

patent”); and 5,917,173 (“the ‘173 patent”). The complaint named two respondents: Metro Technologies Co., Ltd. of Suzhou, China, and Metrologic Instruments, Inc. of Blackwood, New Jersey (collectively, “Metrologic”).

On January 29, 2007, the presiding administrative law judge (ALJ) issued an initial determination (“ID”) finding a violation of section 337 in the importation of certain laser bar code scanners and scan engines, components thereof, and products containing the same, in connection with certain asserted claims. The Commission determined to review certain determinations made in the ID and, on May 30, 2007, issued a Commission Opinion modifying the ID in part, which did not affect the ALJ’s findings on validity, infringement, or domestic industry. The Commission therefore affirmed those findings. Consistent with its determination of violation, the Commission issued a Limited Exclusion Order and Cease and Desist Order related to claim 48 of the ‘627 patent and claims 17 and 18 of the ‘173 patent.

On February 7, 2008, Metrologic and Symbol filed a Joint Petition for Rescission of Limited Exclusion and Cease and Desist Orders under Commission Rule 210.76. The motion provided that Symbol and Metrologic have entered into a settlement agreement, and that the agreement constitutes changed circumstances under Rule 210.76 that warrant rescission of the May 30th orders. The Commission investigative attorney filed a response in support of the joint petition on February 19, 2008.

The Commission has reviewed the parties’ submissions and has determined to grant the parties’ request for rescission of the Limited Exclusion Order and Cease and Desist Order.

The authority for the Commission’s determination is contained in section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337), and in section 210.76 of the Commission’s Rules of Practice and Procedure (19 C.F.R. § 210.76).

By order of the Commission.

A handwritten signature in black ink, appearing to read "Marilyn R. Abbott", written in a cursive style.

Marilyn R. Abbott
Secretary to the Commission

Issued: March 10, 2008

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matter of

**CERTAIN LASER BAR CODE
SCANNERS AND SCAN ENGINES,
COMPONENTS THEREOF AND
PRODUCTS CONTAINING SAME**

Inv. No. 337-TA-551

ORDER

Upon consideration of the joint petition by Complainant Symbol Technologies, Inc. and Respondents Metro Technologies Co., Ltd., and Metrologic Instruments, Inc. to rescind the Commission's limited exclusion and cease-and-desist orders, and of the response to this petition filed by the Commission investigative attorney, the Commission hereby **ORDERS THAT**:

1. The joint petition for rescission of the limited exclusion order and cease-and-desist order previously issued in this investigation is *granted*.
2. The Secretary will serve this Order on the parties to this investigation and the Secretary of the Treasury, and publish notice thereof in the *Federal Register*.

By Order of the Commission.



Marilyn R. Abbott
Secretary

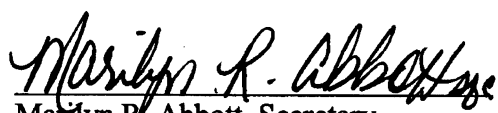
Issued: March 10, 2008

**CERTAIN LASER BAR CODE SCANNERS AND SCAN
ENGINES, COMPONENTS THEREOF, AND PRODUCTS
CONTAINING SAME**

337-TA-551

CERTIFICATE OF SERVICE

I, Marilyn R. Abbott, hereby certify that the attached **NOTICE OF RESCISSION OF LIMITED EXCLUSION ORDER AND CEASE-AND DESIST ORDER** has been served by hand upon the Commission Investigative Attorney, Anne Goalwin, Esq., and the following parties as indicated, on March 10, 2008.


Marilyn R. Abbott, Secretary
U.S. International Trade Commission
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**ON BEHALF OF RESPONDENTS METROLOGIC
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UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C. 20436

In the Matter of

**CERTAIN LASER BAR CODE
SCANNERS AND SCAN ENGINES,
COMPONENTS THEREOF, AND
PRODUCTS CONTAINING SAME**

Investigation No. 337-TA-551

**NOTICE OF COMMISSION FINAL DETERMINATION OF VIOLATION OF
SECTION 337; TERMINATION OF INVESTIGATION; ISSUANCE OF LIMITED
EXCLUSION ORDER AND CEASE AND DESIST ORDER**

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that the U.S. International Trade Commission has determined that there is a violation of 19 U.S.C. § 1337 by Metrologic Instruments, Inc. and Metro (Suzhou) Technologies Co., Ltd. in the above-captioned investigation. The investigation is terminated.

FOR FURTHER INFORMATION CONTACT: Paul M. Bartkowski, Esq., Office of the General Counsel, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone (202) 708-5432. Copies of non-confidential documents filed in connection with this investigation are or will be available for inspection during official business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone (202) 205-2000. General information concerning the Commission may also be obtained by accessing its Internet server at <http://www.usitc.gov>. The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at <http://edis.usitc.gov>. Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on (202) 205-1810.

SUPPLEMENTARY INFORMATION: This investigation was instituted on October 26, 2005, based on a complaint filed by Symbol Technologies Inc. ("Symbol") of Holtsville, New York. The complaint, as amended, alleged violations of section 337 of the Tariff Act of 1930 (19 U.S.C. § 1337) in the importation into the United States, the sale for importation, and the sale within the United States after importation of certain laser bar code scanners or scan engines, components thereof, or products containing the same, by reason of infringement of various claims of United States Patent Nos. 5,457,308 ("the '308 patent"); 5,545,889 ("the '889 patent"); 6,220,514 ("the '514 patent"); 5,262,627 ("the '627 patent"); and 5,917,173 ("the '173 patent").

The complaint named two respondents: Metro Technologies Co., Ltd. of Suzhou, China; and Metrologic Instruments, Inc. of Blackwood, New Jersey (collectively, "Metrologic").

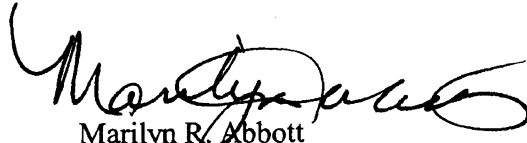
On January 29, 2007, the ALJ issued an initial determination ("ID") finding a violation of Section 337 in the importation of certain laser bar code scanners and scan engines, components thereof, and products containing the same, in connection with certain asserted claims. The ID also issued monetary sanctions against Respondents for discovery abuses. Complainant, Respondents, and the Commission investigative attorney (IA) each filed petitions for review of the ID on February 8, 2007. They each filed responses to each other's petitions on February 16, 2007.

On February 21, 2007, the Commission extended the deadline for determining whether to review the subject ID by fifteen (15) days, to March 30, 2007. On March 30, 2007, the Commission determined to review the final ID in part. Specifically, the Commission determined to review: (1) the construction of "single, unitary, flexural component" in the '173 patent, and related issues of infringement, domestic industry, and validity; (2) the construction of "oscillatory support means" in the '627 patent, and related issues of infringement, domestic industry, and validity; (3) the construction of claims containing the so-called "central area" limitations in the '889 patent, and related issues of infringement, domestic industry, and validity; (4) the construction of the "scan fragment" limitation in the '308 patent; and (5) the construction of the term "plurality" in the '308 patent.

Having examined the record of this investigation, including the ALJ's final ID, the Commission has determined to make the following modifications to the claim constructions set forth in the final ID: (1) the "single, unitary, flexural component" in the '173 patent must include "portions integral with each other;" (2) in the '627 patent, the "oscillatory support means" must oscillate; (3) limitations in the '889 patent containing requirements that the folding mirror be "near" or "adjacent" the central area of the collecting mirror allow for the folding mirror to be positioned close to, and either in front of or behind, the central area of the collecting mirror, but not mounted to the collecting mirror outside of the central area.; (4) "scan fragment," as used in the '308 patent, means "a scan that reads less than all of a bar code symbol and that would have been discarded before the advent of scan-stitching techniques;" and (5) the term "plurality" in the '308 patent means "two or more." These changes do not affect the ALJ's findings on validity, infringement, or domestic industry. The Commission therefore affirms those findings, as well as the finding of a violation of section 337 by Metrologic with regard to certain asserted claims of the '627 and '173 patents.

The authority for the Commission's determination is contained in section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337), and in section 210.45 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.45).

By order of the Commission.



Marilyn R. Abbott
Secretary to the Commission

Issued: May 30, 2007

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C. 20436

In the Matter of

**CERTAIN LASER BAR CODE
SCANNERS AND SCAN ENGINES,
COMPONENTS THEREOF AND
PRODUCTS CONTAINING SAME**

Inv. No. 337-TA-551

ORDER TO CEASE AND DESIST

IT IS HEREBY ORDERED THAT Metrologic Instruments, Inc., 90 Coles Road, Blackwood, New Jersey 08012, cease and desist from conducting any of the following activities in the United States: importing, selling, marketing, advertising, distributing, offering for sale, transferring (except for exportation), and soliciting U.S. agents or distributors for, laser bar code scanners that infringe one or more of claim 48 of U.S. Patent No. 5,262,627 and claims 17 and 18 of U.S. Patent No. 5,917,173, in violation of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337 .

I.

Definitions

As used in this Order:

(A) "Commission" shall mean the United States International Trade Commission.

(B) "Symbol" or "Complainant" shall mean Symbol Technologies, Inc., One Symbol Plaza, Holtsville, New York 11742-130.

(C) "Respondent" means Metrologic Instruments, Inc., 90 Coles Road, Blackwood, New Jersey 08012.

(D) "Person" shall mean an individual, or any non-governmental partnership, firm,

association, corporation, or other legal or business entity other than Respondent or its majority owned or controlled subsidiaries, successors, or assigns.

(E) “United States” shall mean the fifty States, the District of Columbia, and Puerto Rico.

(F) The terms “import” and “importation” refer to importation for entry for consumption under the Customs laws of the United States.

(G) The term “covered products” shall mean laser bar code scanners that infringe one or more of claim 48 of U.S. Patent No. 5,262,627 and claims 17 and 18 of U.S. Patent No. 5,917,173.

II.

Applicability

The provisions of this Cease and Desist Order shall apply to Respondent and to any of its principals, stockholders, officers, directors, employees, agents, licensees, distributors, controlled (whether by stock ownership or otherwise) and majority-owned business entities, successors, and assigns, and to each of them, insofar as they are engaging in conduct prohibited by Section III, *infra*, for, with, or otherwise on behalf of Respondent.

III.

Conduct Prohibited

The following conduct of Respondent in the United States is prohibited by the Order. For the remaining term of the respective patents, Respondent shall not:

(A) import or sell for importation into the United States covered products;

(B) market, distribute, offer for sale, sell, or otherwise transfer (except for exportation), in the United States imported covered products;

(C) advertise imported covered products;

(D) solicit U.S. agents or distributors for imported covered products; or

(E) aid or abet other entities in the importation, sale for importation, sale after importation, transfer, or distribution of covered products.

IV.

Conduct Permitted

Notwithstanding any other provision of this Order, specific conduct otherwise prohibited by the terms of this Order shall be permitted if, in a written instrument, the owner of U.S. Patent Nos. 5,262,627 and 5,917,173 licenses or authorizes such specific conduct, or such specific conduct is related to the importation or sale of covered products by or for the United States.

V.

Reporting

For purposes of this reporting requirement, the reporting periods shall commence on July 1 of each year and shall end on the subsequent June 30. However, the first report required under this section shall cover the period from the date of issuance of this Order through June 30, 2008. This reporting requirement shall continue in force until such time as Respondent will have truthfully reported, in two consecutive timely filed reports, that it has no inventory of covered products in the United States.

Within thirty (30) days of the last day of the reporting period, Respondent shall report to the Commission the quantity in units and the value in dollars of covered products that

Respondent have imported or sold in the United States after importation during the reporting period and the quantity in units and value in dollars of reported covered products that remain in inventory in the United States at the end of the reporting period.

Any failure to make the required report or the filing of any false or inaccurate report shall constitute a violation of this Order, and the submission of a false or inaccurate report may be referred to the U.S. Department of Justice as a possible criminal violation of 18 U.S.C. § 1001.

VI.

Record-keeping and Inspection

(A) For the purpose of securing compliance with this Order, Respondent shall retain any and all records relating to the sale, offer for sale, marketing, or distribution in the United States of covered products, made and received in the usual and ordinary course of business, whether in detail or in summary form, for a period of three (3) years from the close of the fiscal year to which they pertain.

(B) For the purpose of determining or securing compliance with this Order and for no other purpose, and subject to any privilege recognized by the federal courts of the United States, duly authorized representatives of the Commission, upon reasonable written notice by the Commission or its staff, shall be permitted access and the right to inspect and copy in Respondent's principal offices during office hours, and in the presence of counsel or other representatives if Respondent so choose, all books, ledgers, accounts, correspondence, memoranda, and other records and documents, both in detail and in summary form as are required to be retained by subparagraph VI(A) of this Order.

VII.

Service of Cease and Desist Order

Respondent is ordered and directed to:

(A) Serve, within fifteen (15) days after the effective date of this Order, a copy of this Order upon each of its respective officers, directors, managing agents, agents, and employees who have any responsibility for the importation, marketing, distribution, or sale of imported covered products in the United States;

(B) Serve, within fifteen (15) days after the succession of any persons referred to in subparagraph VII(A) of this Order, a copy of the Order upon each successor; and

(C) Maintain such records as will show the name, title, and address of each person upon whom the Order has been served, as described in subparagraphs VII(A) and VII(B) of this Order, together with the date on which service was made.

The obligations set forth in subparagraphs VII(B) and VII(C) shall remain in effect until the date of expiration of U.S. Patent Nos. 5,262,627 or 5,917,173, whichever is later.

VIII.

Confidentiality

Any request for confidential treatment of information obtained by the Commission pursuant to Sections V and VI of this Order should be in accordance with Commission Rule 201.6, 19 C.F.R. § 201.6. For all reports for which confidential treatment is sought, Respondent must provide a public version of such report with confidential information redacted.

IX.

Enforcement

Violation of this Order may result in any of the actions specified in section 210.75 of the Commission's Rules of Practice and Procedure, 19 C.F.R. § 210.75, including an action for civil penalties in accordance with section 337(f) of the Tariff Act of 1930, 19 U.S.C. § 1337(f), and any other action as the Commission may deem appropriate. In determining whether Respondent is in violation of this Order, the Commission may infer facts adverse to Respondent if Respondent fails to provide adequate or timely information.

X.

Modification

The Commission may amend this Order on its own motion or in accordance with the procedure described in section 210.76 of the Commission's Rules of Practice and Procedure, 19 C.F.R. § 210.76.

XI.

Bonding

The conduct prohibited by Section III of this Order may be continued during the sixty (60) day period in which this Order is under review by the United States Trade Representative as delegated by the President, 70 *Fed Reg* 43251 (July 21, 2005), subject to Respondent posting a bond of in the amount of \$10 per laser bar code scanner. This bond provision does not apply to conduct that is otherwise permitted by Section IV of this Order. Covered products imported on or after the date of issuance of this Order are subject to the entry bond as set forth in the limited exclusion order issued by the Commission, and are not subject to this bond provision.

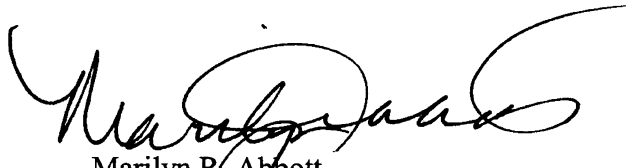
The bond is to be posted in accordance with the procedures established by the Commission for the posting of bonds by complainants in connection with the issuance of

temporary exclusion orders. *See* Commission Rule 210.68, 19 C.F.R. § 210.68. The bond and any accompanying documentation is to be provided to and approved by the Commission prior to the commencement of conduct which is otherwise prohibited by Section III of this Order.

The bond is to be forfeited in the event that the United States Trade Representative approves, or does not disapprove within the review period, this Order, unless the U.S. Court of Appeals for the Federal Circuit, in a final judgment, reverses any Commission final determination and order as to Respondent on appeal, or unless Respondent exports the products subject to this bond or destroys them and provides certification to that effect satisfactory to the Commission.

The bond is to be released in the event the United States Trade Representative disapproves this Order and no subsequent order is issued by the Commission and approved, or not disapproved, by the United States Trade Representative, upon service on Respondent of an order issued by the Commission based upon application therefore made by Respondent to the Commission.

By Order of the Commission.



Marilyn R. Abbott
Secretary to the Commission

Issued: May 30, 2007

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C. 20436

In the Matter of

**CERTAIN LASER BAR CODE
SCANNERS AND SCAN ENGINES,
COMPONENTS THEREOF AND
PRODUCTS CONTAINING SAME**

Inv. No. 337-TA-551

LIMITED EXCLUSION ORDER

The Commission has determined that there is a violation of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, in the unlawful importation and sale by Respondents Metrologic Instruments, Inc. of Blackwood, New Jersey and Metro Technologies Co., Ltd. of Suzhou, China of laser bar code scanners for reading bar code symbols, by reason of infringement of claim 48 of U.S. Patent No. 5,262,627 and claims 17 and 18 of U.S. Patent No. 5,917,173. Having reviewed the record in this investigation, including the written submissions of the parties, the Commission has made its determination on the issues of remedy, the public interest, and bonding. The Commission has determined that the appropriate form of relief is a limited exclusion order and a cease-and-desist order prohibiting the unlicensed entry of infringing laser bar code scanners manufactured by or on behalf of Respondents or any of their affiliated companies, parents, subsidiaries, licensees, or other related business entities, or their successors or assigns.

The Commission has determined that the public interest factors enumerated in 19 U.S.C. §§ 1337 (d) and (f) do not preclude issuance of the limited exclusion order. Finally, the Commission has determined that the bond during the Presidential review period shall be in the

amount of \$10 per bar code scanner unit.

Accordingly, the Commission hereby **ORDERS THAT:**

1. Laser bar code scanners for reading bar code symbols covered by one or more of claim 48 of U.S. Patent No. 5,262,627 and claims 17 and 18 of U.S. Patent No. 5,917,173 that are manufactured abroad or imported by or on behalf of Metro Technologies Co., Ltd., Metrologic Instruments, Inc., or any of their affiliated companies, parents, subsidiaries, or other related business entities, or their successors or assigns are excluded from entry for consumption into the United States, entry for consumption from a foreign trade zone, or withdrawal from a warehouse for consumption, for the remaining term of the patents, except under license of the patent owner or as provided by law.

2. Notwithstanding paragraph 1 of this Order, the aforesaid products are entitled to entry for consumption into the United States, entry for consumption from a foreign trade zone, or withdrawal from a warehouse for consumption, under bond in the amount of \$10 per unit for infringing laser bar code scanners, from the day after this Order is received by the United States Trade Representative as delegated by the President, 70 *Fed. Reg.* 43251 (July 21, 2005), until such time as the United States Trade Representative notifies the Commission that this action is approved or disapproved but, in any event, not later than sixty (60) days after the date of receipt of this Order.

3. At the discretion of U.S. Customs and Border Protection ("CBP") and pursuant to procedures it establishes, persons seeking to import laser bar code scanners that are potentially subject to this Order may be required to certify that they are familiar with the terms of this Order, that they have made appropriate inquiry, and thereupon state that, to the best of their knowledge

and belief, the products being imported are not excluded from entry under paragraphs 1 through 7 of this Order. At its discretion, CBP may require persons who have provided the certification described in this paragraph to furnish such records or analyses as are necessary to substantiate the certification.

4. In accordance with 19 U.S.C. § 1337(l), the provisions of this Order shall not apply to laser bar code scanners that are imported by and for the use of the United States, or imported for, and to be used for, the United States with the authorization or consent of the Government.

5. The Commission may modify this Order in accordance with the procedures described in Rule 210.76 of the Commission's Rules of Practice and Procedure, 19 C.F.R. § 210.76.

6. The Commission Secretary shall serve copies of this Order upon each party of record in this investigation and upon the Department of Health and Human Services, the Department of Justice, the Federal Trade Commission, and CBP.

7. Notice of this Order shall be published in the *Federal Register*.

By Order of the Commission.


Marilyn R. Abbott
Secretary to the Commission

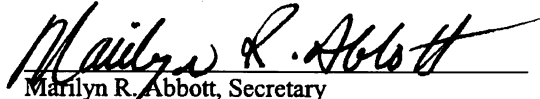
Issued: May 30, 2007

**CERTAIN LASER BAR CODE SCANNERS AND SCAN ENGINES,
COMPONENTS THEREOF AND PRODUCTS CONTAINING SAME**

337-TA-551

CERTIFICATE OF SERVICE

I Marilyn R. Abbott, hereby certify that the attached **NOTICE OF COMMISSION DETERMINATION OF VIOLATION OF SECTION 337; TERMINATION OF INVESTIGATION; ISSUANCE OF LIMITED EXCLUSION ORDER AND CEASE AND DESIST ORDER** was served upon the Commission Investigative Attorney, Kevin Baer, Esq., and all parties via first class mail and air mail where necessary on May 30, 2007.


Marilyn R. Abbott, Secretary
U.S. International Trade Commission
500 E Street, SW
Washington, DC 20436

**ON BEHALF OF COMPLAINANT
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PUBLIC VERSION

**UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.**

In the Matter of

**CERTAIN LASER BAR CODE
SCANNERS AND SCAN ENGINES,
COMPONENTS THEREOF AND
PRODUCTS CONTAINING SAME**

Inv. No. 337-TA-551

COMMISSION OPINION

Background

On January 29, 2007, the presiding administrative law judge (“ALJ”) (Judge Bullock) issued his final initial determination (“ID”) in the above-referenced investigation. The ALJ found a violation of Section 337 by Respondents Metrologic Instruments, Inc. and Metro (Suzhou) Technologies Co., Ltd. (collectively “Metrologic”) in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain laser bar-code scanners and scan engines, components thereof, and products containing same, in connection with certain asserted claims of two of Complainant Symbol Technologies, Inc.’s (“Symbol”) patents, and finding no violation of Section 337 in connection with certain asserted claims of two other patents.¹

¹ The final ID also granted Symbol’s motion for discovery sanctions, which alleged that Metrologic failed to comply with its discovery obligations by refusing to provide source code for two accused products, the OptimusS and OptimusSBT, and by falsely representing that such source code was not within its possession, custody, and/or control. The ALJ imposed monetary sanctions against Metrologic for recovery of Symbol’s reasonable attorneys’ fees and costs associated with the filing of Symbol’s motion to compel the source code, motion for sanctions, and its reasonable attorneys’ fees and costs associated with meeting and conferring with

Specifically, the ID found a violation of Section 337 by Metrologic's bar-code scanners and scan engines in connection with claim 48 of the '627 patent and claims 17 and 18 of the '173 patent. The ID found no violation of Section 337 in connection with claims 7, 8, 11, 13, 14, 17, and 18 of the '889 patent and no violation of Section 337 in connection with claims 2, 10, 11, and 21 of the '308 patent. Further, the ID found that a domestic industry in the United States exists that practices the '627 and '173 patents, but found that no domestic industry exists as to the '889 or '308 patents because Symbol did not show that it practices those patents.

Symbol, Metrologic, and the Commission investigative attorney ("IA") each filed petitions for review of the ID. Symbol requested review and reversal of the ALJ's findings of no violation with respect to the '889 and '309 patents. The IA petitioned for review of the ALJ's (1) finding that claim 17 of the '889 patent is indefinite, and (2) claim construction of the '308 patent. Metrologic sought review regarding the ALJ's imposition of discovery sanctions, and regarding findings and determinations made by the ALJ with respect to each of the '173, '627, '889, and '308 patents.

On March 30, 2007, the Commission determined to review the final ID in part and to deny Metrologic's motion to stay the ALJ's order of sanctions. The Commission determined to review: (1) the construction of "single, unitary, flexural component" in the '173 patent, and related issues of infringement, domestic industry, and validity; (2) the construction of "oscillatory support means" in the '627 patent, and related issues of infringement, domestic industry, and validity; (3) the construction of claims containing the so-called "central area" limitations in the

Metrologic in connection therewith, along with the reverse-engineering fees incurred due to Metrologic's alleged failure to comply with its discovery obligations. The Commission denied Metrologic's request for a stay of the sanction order.

'889 patent, and related issues of infringement, domestic industry, and validity; (4) the construction of the "scan fragment" limitation in the '308 patent; and (5) the construction of the term "plurality" in the '308 patent. In its notice of review, the Commission asked the parties to address the following questions:

Regarding the '173 patent:

- (1) What is the effect of Symbol's statement in the prosecution history that "[c]laim 70 [issued claim 17] also contains the feature of allowable claim 58" on a proper claim construction?
- (2) If Symbol's statement limited the scope of the claim, what is the effect on claim construction, infringement, domestic industry, and validity issues as they relate to the '173 patent?
- (3) If Symbol's statement limits the scope of the claim by providing that the component have "spring portions integral with each other," what would be the effect, if any, on the analysis? In other words, if a flexural component is "single," and "unitary," does it necessarily have "spring portions integral with each other"?

Regarding the '627 patent:

- (1) How should the modifier "oscillatory" be construed in the limitation "oscillatory support means"?
- (2) How does the construction of the word "oscillatory" affect infringement, domestic industry, and validity as those issues relate to the '627 patent?

Regarding the '889 patent:

- (1) What effect does Symbol's statements during prosecution history such that the smaller mirror is "centrally positioned" with respect to the larger mirror have on claim construction?
- (2) If such statements limit claim scope, what effect does that limitation have on claim construction, infringement, domestic industry, and validity as those issues relate to the '889 patent?

Symbol, Metrologic, and the IA each filed written submissions regarding the issues on review, as well as on remedy, bonding, and the public interest. For the reasons discussed below, the Commission hereby makes certain modifications to the constructions of claims under review. As discussed in greater detail below, the Commission's modifications have no impact on the ALJ's findings of violation of Section 337. The Commission's determinations regarding the appropriate remedy, whether the public interest precludes that remedy, and what bond should be set during the period of Presidential review are also set forth below.

Construction of "single, unitary, flexural component" in the '173 patent

As evidenced by its request for briefing, the Commission's review of the construction of this limitation focused on the patent applicants' statement during patent prosecution that "[c]laim 70 [issued claim 17] also contains the feature of allowable claim 58." The Commission requested that the parties provide briefing on the effect, if any, of the statement on a proper construction of "single, unitary, flexural component."

Symbol and the IA, in their written submissions, argue that the statement does not limit the claim's scope because it is ambiguous what the applicants meant by "the feature of allowable claim 58." Application claim 58, to which the applicants were referring, reads, "[t]he arrangement according to claim 52, wherein the spring portions are integral with each other."² Symbol contends that the most plausible interpretation is that the applicants were referring to was the use of a single spring, and not to integral spring portions. Similarly, the IA argues that if the statement limits claim scope at all, it merely requires that the element be singular.

Symbol also argues that construing "single, unitary, flexural component" to require the

² JX-12, MITC-101967.

element to have spring portions integral with each other would violate the doctrine of claim differentiation. The doctrine of claim differentiation presumes that different words or phrases used in separate claims indicate that the claims have different meanings and scope.³ Symbol argues that the doctrine supports the ALJ's construction because claim 21, which depends from three claims (18, 19, and 20), each of which depend from, and add limitations to, independent claim 17, requires a spring having "flexible, taut, spring portions integral with each other."

Metrologic argues that the applicants' statement supports its construction of "single, unitary, flexural component" as a "single, one-piece bent spring with flexible, taut spring portions that are integral with each other." Metrologic next argues that its products do not infringe under a "proper construction," which limits claim 17 to a "bent spring with integral spring portions."

Alternatively, Metrologic argues that its device does not have integral spring portions because a flat leaf spring such as the one in its device does not have portions. Metrologic asserts that the "portions" of the flexure must be delineated by a bend in the structure, by being fixed at both ends and bent around an axis. Metrologic argues that its [] element is not bent or taut in its resting position, and points to the ALJ's statement that, "in its resting state, the leaf spring is straight with no integral spring portions."⁴

The Commission concludes that the applicants' statement that "[c]laim 70 [issued claim 17] also contains the feature of allowable claim 58" is not ambiguous, as Symbol argues. Rather,

³ See *Andersen Corp. v. Fiber Composites, LLC*, 474 F.3d 1361, 1369 (Fed. Cir. 2007).

⁴ ID at 56.

the statement makes clear that the inventors either: (1) intended to limit the claim to explicitly include the single feature of claim 58 – spring portions integral with each other; or (2) understood the limitation “single, unitary flexural component” to necessarily include “spring portions integral with each other.” Under either interpretation, the statement makes clear that the claim includes the limitation, or feature, of claim 58, *i.e.*, that the “spring portions are integral with each other.”⁵

The parties’ respective arguments seem to misread the applicants’ statement made during the prosecution history. Symbol’s argument that the statement is ambiguous would be plausible if claim 58 listed more than one feature. But, as Symbol pointed out in its post-hearing briefs, claim 58 contains just one feature – integral spring portions. Metrologic’s argument that the statement requires that “single, unitary, flexural component” be interpreted to include all of claim 58’s *features*, including those on which claim 58 depended, is contradicted by the inventors’ statement that the claim includes the singular *feature* of claim 58. Finally, the IA’s argument that the statement meant only that the claim includes a single spring would be more plausible if the statement read that the claim “contains the allowable feature of claim 58.” But it does not; rather, it makes clear that issued claim 17 includes the single feature of claim 58 – integral spring portions.

We also find unavailing Symbol’s argument that the doctrine of claim differentiation prevents the limitation “single, unitary flexural component” from covering integral spring portions. Claim 21 does not merely add the limitation “portions integral with each other.”

⁵ See JX-12 at MITC0191967, MITC0191989.

Rather, claim 21 depends from three claims (18, 19, and 20), each of which depend from, and add limitations to, claim 17. Moreover, claim 21 requires that the spring have “flexible, taut, spring portions integral with each other.” The additional requirements that the portions be flexible and taut, in addition to the limitations added by claims 18, 19, and 20, sufficiently differentiate the two claims, and therefore render the doctrine of claim differentiation inapplicable to the analysis.

We therefore modify the ALJ’s construction of the “single, unitary, flexural component” to include “portions integral with each other.” This modification does not change any of the ALJ’s ultimate findings as to infringement, domestic industry, and validity. As pointed out by Symbol and the IA, the record demonstrates that Metrologic’s devices’ springs have three separate portions: two that are fixed and a third portion that flexes during operation.⁶ The parties do not contend that the ALJ’s domestic industry or validity findings would be different under the modified construction.

Construction of “oscillatory support means” in the ‘627 patent

Finding merit in Metrologic’s arguments that the ALJ’s construction of “oscillatory support means” effectively read the word “oscillatory” out of the claim, the Commission reviewed the ALJ’s construction to determine the effect of the word “oscillatory” in the limitation.

In its written submission, Symbol argues that the term “oscillatory” in “oscillatory

⁶ See, e.g., Allais Tr. 398:20-24; 446:20-447:2.

support means” is merely “descriptive.”⁷ According to Symbol, because the word “oscillatory” occurs before the word “means” in the claim, the term merely serves to distinguish the “oscillatory support means” from the other “means” in the claim.

Symbol contends that the ALJ did not ignore or “read out” the word “oscillatory” because the ALJ “correctly concluded that the phrase ‘for oscillating movement about an axis’ modifies ‘component’ (*i.e.*, scan mirror) such that it is the scanning mirror that oscillates.” Symbol’s reply submission notes that the claim expressly states that the “drive means” causes oscillating movement in claim 48.

Symbol, however, states that, “to the extent the term ‘oscillatory’ requires construction, the support means is ‘oscillatory’ because – as the ALJ recognized – ‘a means that prevents the scan mirror from oscillating will not meet the claim limitation.’”⁸ In any event, Symbol’s reply submission states that Metrologic’s products meet any limitation that the means must “oscillate.”

The IA argues that the ALJ correctly construed “oscillatory support means” in the ‘627 patent. The IA argues that the claimed function is “mounting a component of the emitting and optics means.” The IA, however, asserts that the “oscillatory support means” is distinct from a “stationary support means” in that the “oscillatory support means” moves. The IA notes, however, requiring that the support *oscillates* does not require that the support be the mechanism that *causes* the oscillation.

Metrologic argues that the ALJ erred and that the term “oscillatory” requires the means to

⁷ CS at 17.

⁸ See ID at 20.

provide oscillating movement about an axis. Although its arguments regarding the functions of the claim vary somewhat, Metrologic essentially argues that the functions associated with the limitation are: (1) for oscillating about an axis and (2) for supporting the scan mirror; Metrologic argues that the specification supports its construction because “[e]very reference to the ‘oscillatory support means’ describes the functions and corresponding structure of a means for supporting and providing for oscillating movement to the scan mirror.”

Based upon its proposed construction, Metrologic argues that none of the accused products infringe claim 48 of the ‘627 patent. Metrologic asserts that the “copper shim” in the accused products does not “define,” “provide for,” or “participate in” the oscillation, but rather is just “along for the ride.”

In our view, the ALJ’s syntactical analysis of the means-plus-function language amply demonstrates why the phrase “for oscillating movement about an axis” does not add an additional function to the limitation. Therefore, for the reasons given by the ALJ, the Commission rejects Metrologic’s arguments to the contrary.

But the Commission agrees with the IA that the modifier “oscillatory” requires that the support must oscillate. This construction appears consistent with Symbol’s argument that the terms “oscillatory” and “support” are merely descriptive. In effect, Symbol argues that the descriptive terms are not part of the means-plus-function limitation, “means for mounting a component of the emitting and optics means for oscillating movement about an axis.” Whether “oscillatory” adds the function of oscillating to “oscillatory support means” or merely requires that the “means for mounting a component of the emitting and optics means for oscillating

movement about an axis” must itself oscillate is of no moment. Under either interpretation, the means must oscillate.

The Commission therefore modifies the ALJ’s construction to require the “oscillatory support means” to oscillate. This modification does not change the ALJ’s conclusion that Metrologic’s “copper shim” meets the “oscillatory support means” limitation because the shim—found by the ALJ to meet the limitation—does oscillate.⁹ Furthermore, the parties agree that the proposed modification has no effect on the ALJ’s domestic industry or validity findings.

Construction of the “central area” limitations in the ‘889 patent

The Commission determined to review the ALJ’s construction of claims containing the so-called “central area” limitations in the ‘889 patent. The Commission requested briefing regarding the patent applicants’ statements that the smaller folding mirror was “centrally positioned” with respect to the larger collecting mirror.

Metrologic, in its written submission, argues that the ALJ’s construction was erroneous because he replaced subjective terms such as “near” and “central area” with even more subjective terms like “close to a region” and “near the center.”¹⁰ Metrologic asserts that the proper construction requires at least some portion of the folding mirror to overlap the center of the collecting mirror.

In responding to the Commission’s questions regarding the limitation, Metrologic notes

⁹ See CX-109C at Q.46-48, 140-48; CX-116; CX-118; CX-120; Palmer Tr. 854:2-15 (the shim is “along for the ride”).

¹⁰ RS at 23.

that the parties agree that claims 7 and 13, which contain the limitations that the folding mirror is “positioned near a central area of the collecting mirror” and “positioned adjacent a central area [of the collecting mirror]” respectively, require the same construction. Metrologic states that, when the patentees broadened the claims from requiring the folding mirror to be “at” or “in” the central area to requiring that it be “near” the central area, they argued that the claims avoided the prior art because the “folding mirror is centrally positioned with respect to” the collecting mirror. Metrologic further notes that Symbol specifically stated that the use of the term “near” encompassed a folding mirror fixed to the surface of, positioned in front of, or positioned behind the collecting mirror. Metrologic argues, therefore, that the use of the term “near” as opposed to “at” a central area did not affect the requirement that the folding mirror should reside in the central area of the collecting mirror. Rather, Metrologic argues, the change allowed the claims flexibility to encompass a folding mirror positioned in front of or behind the collecting mirror. Metrologic submits that Symbol’s arguments over the prior art confirm this conclusion. Therefore, Metrologic argues, a skilled artisan, after reviewing the intrinsic evidence, would define the “central area” limitations to require a folding mirror affixed to, in front of, or behind the collecting mirror such that some portion of the folding mirror, or a projection thereof, coincides with the center of the collecting mirror.

Regarding the effect of Symbol’s statements during prosecution on the ALJ’s infringement findings, Metrologic submits that its original and redesigned products—found not to infringe claims 7, 8, 11, 13, and 14 because they do not meet the “drive means” limitation—also do not infringe because no portion of the folding mirror in the original and redesigned products encompasses or coincides with the center of the collecting mirror.

Metrologic argues further that its original and redesigned products do not infringe claim 18—which does not contain the “drive means” limitation—because no part of the folding mirror in those products encompasses the center of the collecting mirror.

Symbol, in its written submission, argues that the ALJ correctly held that a disclaimer had taken place, and correctly recognized that the inventors had “defined ‘centrally positioned’ by explaining: ‘the folding mirror is centrally positioned in the concave fixed mirror (**rather than being mounted spaced from and offset with respect to the mirror 98 of Knowles**)”

Symbol’s position, therefore, is that its statement limited the claim’s scope, but that the ordinary meaning of “centrally positioned” should not apply to the disclaimer. Rather, Symbol contends that the parenthetical comment, “rather than being mounted spaced from and offset with respect to the [larger] mirror” constituted a “definition” of “centrally positioned.” Symbol asserts that Metrologic’s argument to construe “centrally positioned” to mean that “at least one point within the folding mirror coincides with the physical center of the collecting mirror” is contrary to the way the inventors defined “centrally positioned” in the public record.

Regarding the “central area” limitations, the IA argues that the prosecution history makes clear that the folding mirror must be in or near the interior of the collecting mirror, and the folding mirror cannot be positioned along the edge of the collecting mirror. The IA asserts that this construction is proper because it provides the broadest reasonable interpretation that is consistent with the claims, specification, and prosecution history.

We reject arguments by Symbol and the IA to reverse the ALJ’s conclusion that claim 17, which provides that the “folding mirror is mounted near a line intercepting a central area of the

collecting mirror,” is invalid. Although we agree that the applicants’ arguments and amendments during prosecution constitute a disclaimer of subject matter, the disclaimer relates only to what the claims do *not* cover. Moreover, as discussed below, the applicants made specific arguments clarifying claim scope regarding claims that include limitations that the smaller mirror be “near” the central area of the larger mirror, but made no such arguments concerning the “near a line intercepting” amendment. Because there is no way to determine where the “line intercepting a central area” begins or ends, we agree with the ALJ that claim 17 is insolubly ambiguous because it is impossible to determine what the claims cover. The Commission, however, modifies the ALJ’s decision regarding claim 17 only to make clear that, if the claim is not indefinite, it reads on prior art and disclaimed subject matter, and is therefore invalid as anticipated or obvious.

The Commission also modifies the ALJ’s construction of “positioned near a central area of the collecting mirror” in claims 7, 8, and 11 and “positioned adjacent a central area thereof” in claims 13 and 14 to give effect to the context in which these limitations were added, and to give effect to the disclaimer of subject matter that took place with respect to these limitations. The ALJ found, and the parties agreed, that the two limitations should be construed identically. Moreover, the amendments to the claims containing these limitations were made at the same time, and the same argument was made with respect to both limitations.

As discussed in the ID, in response to an obviousness rejection by the patent examiner, the applicants amended their claims to add new limitations as follows:

claim 7 - “wherein the folding mirror is smaller than and is mounted in a central area of the collecting mirror.”

claim 14 - “the folding mirror being smaller than the collecting

mirror and mounted in a central area thereof”

claim 21 - “wherein the collecting mirror is larger than the folding mirror and the folding mirror is mounted at a central area of the collecting mirror”¹¹

In the Remarks section of their response to the patent examiner’s rejection, the applicants stated, in pertinent part, that “the claims are distinguished from the primary reference by reciting [that] . . . (2) the folding mirror is centrally mounted in the concave fixed mirror (rather than being mounted spaced from and offset with respect to the mirror 98 of Knowles).”¹² With respect to Swartz et al., the applicants noted that the “mirror 66 [is] attached to an edge of the spherical mirror 76” so that even “assuming the combined mirror 76, 66 of Swartz et al. could be used in the Knowles structure in place of the mirrors 88 and 98, the claims would still not be met because . . . the folding mirror is not centrally located.”¹³ The applicants went on to state that the pending claims were “distinguishable from the proposed combination by reciting . . . a stationary collecting mirror having a smaller folding mirror centrally mounted thereon.”¹⁴

In light of the above claim amendments and written remarks, the examiner allowed the pending claims of the application that became the ‘889 patent.¹⁵ The amendments made to these claims had the effect of narrowing the scope of each of these three claims, and claims depending

¹¹ See JX-7 at SBL-0002210-12.

¹² *Id.* at SBL-00002213.

¹³ *Id.* at SBL-00002213.

¹⁴ *Id.* (emphasis in original).

¹⁵ *Id.* at SBL-0002215.

therefrom. Thus, under *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*,¹⁶ the applicants are presumed to have surrendered all territory between the original claim limitation and the amended claim limitation.

But after allowance, as discussed in the ID, the applicants filed a continuation application amending the pending claims as follows:

claim 7 - “wherein the folding mirror is smaller than and is [mounted in] positioned near a central area of the collecting mirror”

claim 14 - “the folding mirror being smaller than the collecting mirror and [mounted on] positioned adjacent a central area thereof”

claim 21 - “wherein the collecting mirror is larger than the folding mirror and the folding mirror is mounted [at] near a line intercepting a central area of the collecting mirror”¹⁷

While there is no guidance on what the “near a line intercepting” limitation was intended to mean, with respect to the new language requiring the folding mirror to be “near” the central area, the applicants stated:

The claims, as amended, differ from the allowed claims in that the folding mirror is said to be positioned “near” the central area of the curved mirror instead of “at” the central area; in the disclosed embodiment, the mirror 218 is seen to be slightly spaced away from the curved mirror and slightly below a centerline. Thus, it is submitted that the amended claims are more properly descriptive. The mirror 218 could be fixed to the surface of the curved mirror, or positioned in front of it, or indeed positioned behind it with a hole in the central area for light to pass

¹⁶ 344 F.3d 1359, 1367 (Fed. Cir. 2003).

¹⁷ JX-7 at SBL-0002219-20.

through.¹⁸

Additionally, the applicants stated the claims were allowable because “the folding mirror is centrally positioned with respect to the concave fixed mirror (rather than being mounted spaced from and offset with respect to the mirror 98 of Knowles)” and because in the ‘248 patent to Swartz et al. “the folding mirror is located at a side edge.”¹⁹

Given this context, the Commission agrees with Metrologic that the applicants’ remarks make clear that the use of the term “near” as opposed to “at” a central area do not affect the requirement that the folding mirror should reside in the central area of the collecting mirror. We disagree with Symbol that the applicants “defined” the phrase “centrally positioned” to mean only that “the folding mirror is not “mounted spaced from and offset with respect to” the larger mirror. Rather, the applicants were merely noting that a mirror that is “centrally positioned” with respect to the collecting mirror is *not* mounted spaced from and offset with respect to the collecting mirror. And as made clear by the applicants, the amended claims allowed for the folding mirror to be fixed to the surface of the curved mirror, positioned in front of it, or positioned behind it with a hole in the central area for light to pass through.

The Commission therefore modifies the ALJ’s construction of these limitations to reflect that the terms “near” and “adjacent” the central area allow for the folding mirror to be positioned close to, and either in front of or behind, the central area of the collecting mirror, but not mounted to the collecting mirror outside of the central area. The Commission, however, makes

¹⁸ *Id.*

¹⁹ *Id.* at SBL-0002222 (emphasis in original).

no change to the ALJ's construction of "central area," which he effectively construed to be "the region located at, in, or near the center of the collecting mirror."²⁰ Based on these modifications, the Commission rejects Metrologic's argument that the "central area" limitations require that at least one point within the folding mirror coincides with the physical center of the collecting mirror. Metrologic's proposed limitation is unsupported by the claims or the prosecution history.

The modified construction set forth above affects claims 7, 8, 11, 13, and 14 – claims the ALJ found not infringed by Metrologic. The revised construction does not impact the ALJ's construction of the limitation in claim 18 that the folding mirror must be "disposed in a light path of a central area thereof." That claim was not the subject of the narrowing amendments or clarifying arguments made by the applicants regarding the meaning of "near" and "adjacent" as used in claims 7, 8, 11, 13, and 14.

Because the ALJ determined that Metrologic's products do not infringe claims 7, 8, 11, 13, and 14 because they do not meet the "drive means" limitation, the modified construction of "near a central area" and "adjacent a central area" has no effect on the ALJ's findings of no violation with respect to those claims. The modified construction also does not affect the ALJ's conclusions regarding domestic industry or validity.

Construction of "scan fragment" in the '308 patent

The Commission also determined to review the ALJ's construction of "scan fragment." The Commission did not ask targeted questions regarding this limitation, but briefing was allowed under the Commission's notice, and such briefing was submitted by the parties.

²⁰ See ID at 137.

In its submissions, Symbol argues that the ALJ erred in construing “scan fragment.” Symbol first provides general background regarding the term “scan fragments.” In this background discussion, Symbol states that if a scanner does not read all the bars and spaces of a bar-code symbol in a single scan, the symbol cannot be decoded unless the missing data can be acquired on a subsequent scan. Symbol further provides that, if a complete scan of a symbol does not occur in a single sweep of the laser, this “partial scan” is called a “fragment” or “scan fragment.” Symbol notes, citing the ‘308 patent, that in the early days of bar-code scanners, such scan fragments were discarded until scan-stitching techniques were developed. Scan stitching, according to Symbol, allows such scan fragments to be saved and joined together to complete the data from a single symbol. Symbol also cites the ‘308 patent’s examples of scan fragments, noting that “[a]ll these scan fragments share a common characteristic: They do ‘not . . . entirely cross the bar code symbol,’ and therefore ‘[t]hese incomplete scan lines [are] called fragments.’”

Symbol next argues that multi-row bar codes are inapposite to construction of the term “scan fragment” in the ‘308 patent. Symbol states that multi-row bar codes, such as the accused Stacked RSS symbols, are split into two equal halves with the right half underneath the left. Symbol contends that the scan-stitching technique described in the ‘308 patent is quite useful for stitching the two halves of the stacked symbols together. Symbol therefore contends that the ALJ erred in excluding a line of multi-row code from the term “scan fragment.” Symbol also contends that the ALJ improperly defined the term in light of the accused multi-line code, and therefore erred.

Symbol then argues that the ALJ’s error in construing “scan fragment” caused the ALJ to commit another error by failing to find and address evidence that Metrologic’s accused products

infringe the '308 patent by decoding and combining partial scans or scan fragments "that would otherwise be discarded." Symbol contends that,[

] Symbol, however, does not address whether full scans of the top or bottom halves of a Stacked RSS bar code would have been discarded before the advent of scan-stitching techniques.²¹

Metrologic argues that the ALJ's construction of "scan fragment" correctly excluded scans of rows of multi-row bar-code symbols. Metrologic argues that the ALJ properly consulted the Background section of the '308 patent to identify the problem the '308 patent attempted to solve – that of "incomplete or partial scans that resulted in 'scan fragments,' which, according to the patent, were discarded prior to the development of prior art scan stitching techniques." Metrologic asserts that the ALJ recognized that multi-row bar codes existed for several years before the '308 patent was filed, and that scans of rows of those symbols were not discarded, and thus not "scan fragments" as used in the '308 patent. Metrologic therefore argues that the ALJ

²¹ Symbol also argues, as it did in its petition for review, that the ALJ failed to apply his claim construction to the evidence that Metrologic's accused products decode and combine scan fragments of single-row RSS-14 symbols. Symbol contends that, regardless of whether the Commission adopts the ALJ's construction of "scan fragment," it is entitled to a finding that both Symbol's and Respondents' products decode "scan fragments" in accordance with claims 2, 10, 11, and 21 when decoding RSS-14 single-line symbols. Because the ALJ made no finding regarding whether Symbol alleged infringement by Metrologic's products that read RSS-14 linear symbols, and did not address whether such products infringe, there is nothing for the Commission to review.

correctly concluded that its products that decode multi-row symbols do not infringe the '308 patent.

The IA contends that “scan fragment” should be construed to mean “a scan of less than all of the bar code elements in a given bar code symbol.” The IA argues that the ALJ improperly construed the limitation with an eye to infringement, and relied on a portion of the specification that was only a general discussion of “scan fragments,” but did not provide a definition thereof.

In view of the foregoing, we hereby modify the ALJ’s construction of “scan fragment” only to clarify that his original construction refers to scans that would have been discarded prior to the development of scan-stitching techniques. Therefore, the Commission construes “scan fragment” as “a scan that reads less than all of a bar code symbol that would have been discarded before the advent of scan-stitching techniques.”

Our construction is consistent with the '308 patent’s use of the term in its background section and is consistent with the ordinary meaning of the words “scan” and “fragment.”²² Moreover, the construction is consistent with Symbol’s use of the term in its background discussion portion of its written submission. Specifically, Symbol acknowledges that “scan fragments” arise when a scanner does not read all the bars and spaces of a bar-code symbol in a “single scan.” Symbol argues that the distinguishing characteristic of “scan fragments” is that they do not entirely cross the bar-code symbol. In our view, however, the distinguishing

²² Relevant definitions of “scan” are: “to cause a narrow beam of light to shine through (a sound track) or to traverse (an object) in order to translate light modulations into a corresponding electrical current,” Webster’s Third New International Dictionary (1981); or “[a] single line or traverse of a beam, detector, etc., forming part of a systematic scanning action. Also, an entire raster,” The New Shorter Oxford English Dictionary (1993).

characteristic of a “scan fragment” is that they retrieve only a portion (fragment) of the information being scanned. Because Symbol implicitly acknowledges that a single “scan” occurs with one sweep of the laser, it defies logic that a “scan” that retrieves all the information it is possible to retrieve (in the case of multi-row bar code, one entire row) could be a “scan fragment.”

Clarifying that the ALJ’s construction means “scans that would have been discarded before the development of scan-stitching techniques” also eliminates Symbol’s and the IA’s arguments for infringement under the ALJ’s construction. After all, complete scans of rows of multi-row bar codes were never meant to be discarded. Because such multi-row codes were in existence at the time the ‘308 patent was filed, it was up to the patent drafters to alert the public that “scan fragments” could include such complete scans. One way to do this would have been to use the term “bar-code fragment” in lieu of “scan fragment.” Because the patentees used the term “scan fragment,” however, the Commission cannot now rewrite the claims in a way that would cover complete scans of rows of multi-row bar codes.²³ The Commission therefore revises the construction of “scan fragment” to mean “a scan that reads less than all of a bar code symbol and that would have been discarded before the advent of scan-stitching techniques.” This revision has no effect on any of the ALJ’s findings associated with the “scan fragment” limitation.

Construction of “plurality” in the ‘308 patent

No party objects to the Commission’s review of the ALJ’s implicit construction of the

²³ See *SRAM Corp. v. AD-II Eng’g, Inc.*, 465 F.3d 1351, 1359 (Fed. Cir. 2006).

term “plurality” in the ID. We therefore revise the ALJ’s construction in accordance with its ordinary meaning, and in accordance with the parties’ agreed-upon construction, of “two or more.” This revision will have no impact on any of the findings in the ID.

Remedy, the public interest, and bonding

The Commission has “broad discretion in selecting the form, scope and extent of the remedy.”²⁴ A limited exclusion order is the usual remedy when a violation of Section 337 is found. The statute states that “[i]f the Commission determines, as a result of an investigation under this section, that there is a violation of this section, it shall direct that the articles concerned, imported by any person violating the provision of this section, be excluded from entry into the United States”²⁵ A general exclusion order, conversely, is available only in very limited circumstances.²⁶ Here, the parties agree that a limited exclusion order is the appropriate remedy in this investigation.

In addition to, or instead of, an exclusion order, the Commission may issue cease-and-desist orders to respondents violating or believed to be violating Section 337.²⁷ The Commission generally issues a cease-and-desist order only when a respondent maintains a commercially

²⁴ *Viscofan, S.A. v. United States Int’l Trade Comm’n*, 787 F.2d 544, 548 (Fed. Cir. 1986).

²⁵ 19 U.S.C. § 1337(d)(1).

²⁶ *Id.* § 1337(d)(2).

²⁷ *Id.* § 1337(f)(1).

significant inventory of infringing products in the United States.²⁸ Here, the private parties have stipulated that Respondent Metrologic maintains a commercially significant inventory of accused products.²⁹ Furthermore, the IA agrees that a cease-and-desist order is appropriate. The parties' agreement on this issue is consistent with Metrologic's discovery responses and the record evidence in this investigation, both of which indicate that Metrologic maintains a commercially significant inventory of infringing products in the United States.

The only dispute between the parties concerns whether the limited exclusion order and cease-and-desist order should be, as Metrologic argues, "narrowly drawn" to specify the specific products found to infringe. We reject Metrologic's invitation to deviate from the long-standing Commission practice of declining to limit exclusion orders to specific models. We note that the exclusion order contains a certification provision that gives U.S. Customs & Border Protection the authority to implement a certification procedure before goods would be imported. We feel that this certification provision is adequate to address Metrologic's concerns.

Before issuing relief against a respondent, however, the Commission must consider the effects of such relief on the public health and welfare, competitive conditions in the U.S. economy, the production of like or directly competitive articles in the United States, and U.S. consumers.³⁰

²⁸ See, e.g., *Certain Display Controllers and Products Containing Same*, Inv. No. 337-TA-491/481, Commission Opinion at 66 (Feb. 4, 2005); *Certain Integrated Repeaters, Switches, Transceivers and Products Containing Same*, Inv. No. 337-TA-435, Commission Opinion on Remedy, the Public Interest, and Bonding, at 27, USITC Pub. 3547 (Oct. 2002).

²⁹ See ID at 278.

³⁰ 19 U.S.C. § 1337(d), (f).

The parties agree that public-interest factors do not prohibit the contemplated relief. The products to be excluded are laser bar-code scanners, which do not have any major public health and welfare implications under the record created here. Thus, the exclusion of Metrologic's infringing scanners is unlikely to have any significant impact upon these public-interest considerations.³¹ Finally, the public interest favors the protection of U.S. intellectual property rights by excluding infringing imports.³² The Commission therefore determines that there are no public-interest concerns that would preclude issuance of a limited exclusion order and cease-and-desist order in this investigation.

Pursuant to Section 337(j), the accused products are entitled to entry under bond during the period of Presidential review. To the extent possible, the bond should be an amount that would be sufficient to protect the complainant from any injury.³³ The Commission has considerable discretion in setting an appropriate bond. Here, the parties request a bond rate of \$10 per unit, []³⁴

The Commission determines that \$10 per unit is an appropriate bond during the period of Presidential review.

³¹ See *Certain Compact Multipurpose Tools*, Inv. No. 337-TA-416, USITC Pub. No. 3239, Commission Opinion at 9 (September 1999).

³² *Certain Two-Handle Centerset Faucets and Escutcheons, and Components Thereof*, Inv. No. 337-TA-422, USITC Pub. No. 3332, Commission Opinion at 9 (July 2000).

³³ See 19 C.F.R. § 210.50(a)(3).

³⁴ See *Certain Integrated Circuit Telecommunication Chips and Products Containing Same, Including Dialing Apparatus*, Inv. 337-TA-337, Commission Op. at 41 (1995).

Conclusion

The Commission determines to make the modifications discussed above to the constructions of claims under review. As discussed, the Commission's modifications have no impact on the ALJ's findings of violation of Section 337. The Commission hereby affirms and adopts the ID's findings that are not inconsistent with this opinion. Finally, as discussed above, the Commission determines to enter a limited exclusion order and cease-and-desist order, issued herewith, and sets a bond of \$10 per unit during the period of Presidential review.

By Order of the Commission.

A handwritten signature in black ink, appearing to read "Marilyn R. Abbott", with a stylized, cursive script.

Marilyn R. Abbott

Secretary to the Commission

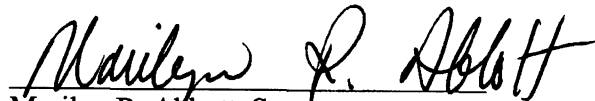
Issued: June 14, 2007

**CERTAIN LASER BAR CODE SCANNERS AND SCAN
ENGINES, COMPONENTS THEREOF AND PRODUCTS
CONTAINING SAME**

337-TA-551

CERTIFICATE OF SERVICE

I, Marilyn R. Abbott, hereby certify that the attached **COMMISSION OPINION** has been served by hand upon the Commission Investigative Attorney, Kevin Baer, Esq., and the following parties as indicated, on June 14, 2007.



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UNITED STATES INTERNATIONAL TRADE COMMISSION

Washington, D.C.

In the Matter of

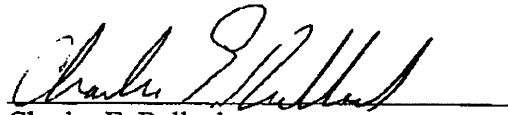
**CERTAIN LASER BAR CODE SCANNERS AND
SCAN ENGINES, COMPONENTS THEREOF AND
PRODUCTS CONTAINING SAME**

Inv. No. 337-TA-551

**NOTICE REGARDING ISSUANCE OF INITIAL DETERMINATION AND
RECOMMENDED DETERMINATION ON REMEDY AND BOND**

(January 29, 2007)

On January 29, 2007, the administrative law judge filed an Initial Determination and a Recommended Determination on Remedy and Bond in the above-referenced investigation. Attached are pages 1-2 and 273-276 from said filing, which are a matter of public record. A complete public version of the Initial Determination and Recommended Determination on Remedy and Bond will be issued when all the parties have submitted their redactions and the undersigned has had an opportunity to review the redactions.



Charles E. Bullock
Administrative Law Judge

PUBLIC VERSION

UNITED STATES INTERNATIONAL TRADE COMMISSION

Washington, D.C.

In the Matter of

**CERTAIN LASER BAR CODE SCANNERS AND
SCAN ENGINES, COMPONENTS THEREOF AND
PRODUCTS CONTAINING SAME**

Inv. No. 337-TA-551

**INITIAL DETERMINATION ON VIOLATION OF SECTION 337 AND
RECOMMENDED DETERMINATION ON REMEDY AND BOND**

Administrative Law Judge Charles E. Bullock

(January 29, 2007)

Pursuant to the Notice of Investigation¹ and Rule 210.42(a) of the Rules of Practice and Procedure of the United States International Trade Commission, this is the Administrative Law Judge's Initial Determination in the matter of Certain Laser Bar Code Scanners and Scan Engines, Components Thereof, and Products Containing Same, Investigation No. 337-TA-551.

The Administrative Law Judge hereby determines that a violation of Section 337 of the Tariff Act of 1930, as amended has been found in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain laser bar code scanners and scan engines, components thereof, and products containing same, in connection with claim 48 of U.S. Patent No. 5,262,627; and claims 17 and 18 of U.S. Patent No. 5,917,173; and has not been found in connection with claims 7, 8, 11, 13, 14, 17, and 18 of U.S. Patent No. 5,545,889; and claims

¹ 70 Fed. Reg. 61,841 (October 26, 2005).

2, 10, 11, and 21 of U.S. Patent No. 5,457,308. Furthermore, the Administrative Law Judge hereby determines that a domestic industry in the United States exists that practices U.S. Patent Nos. 5,262,627 and 5,917,173 and does not exist that practices U.S. Patent Nos. 5,545,889 and 5,457,308.

CONCLUSIONS OF LAW

1. The Commission has subject matter jurisdiction in this investigation.
2. The Commission has personal jurisdiction over Metrologic.

THE '173 PATENT

3. Metrologic's accused products infringe claims 17 and 18 of U.S. Patent No. 5,917,173 in violation of 35 U.S.C. § 271(a).
4. An industry in the United States exists with respect to Symbol's products that is protected by claim 17 of U.S. Patent No. 5,917,173, as required by 19 U.S.C. § 1337(a)(2) and (3).
5. Claims 17 and 18 of U.S. Patent No. 5,917,173 are not invalid under 35 U.S.C. § 102 for anticipation based on any of the following references:
 - a. U.S. Patent No. 4,632,501; and
 - b. U.S. Patent No. 4,732,440.
6. Claims 17 and 18 of U.S. Patent No. 5,917,173 are not invalid under 35 U.S.C. § 103 for single-reference obviousness based on the following references:
 - a. U.S. Patent No. 4,632,501; and
 - b. U.S. Patent No. 4,732,440.
7. Claims 17 and 18 of U.S. Patent No. 5,917,173 are not invalid under 35 U.S.C. § 112, ¶ 1 for lack of written description/enablement.

THE '627 PATENT

8. Metrologic's accused products infringe claim 48 of U.S. Patent No. 5,262,627 in violation of 35 U.S.C. § 271(a).
9. An industry in the United States exists with respect to Symbol's products that is protected

by claim 48 of U.S. Patent No. 5,262,627, as required by 19 U.S.C. § 1337(a)(2) and (3).

10. Claim 48 of U.S. Patent No. 5,262,627 is not invalid under 35 U.S.C. § 102 for anticipation based on any of the following references:

- a. U.S. Patent No. 4,632,501; and
- b. U.S. Patent No. 4,732,440.

11. Claim 48 of U.S. Patent No. 5,262,627 is not invalid under 35 U.S.C. § 103 for single-reference obviousness based on the following references:

- a. U.S. Patent No. 4,632,501; and
- b. U.S. Patent No. 4,732,440.

12. Claim 48 of U.S. Patent No. 5,262,627 is not invalid under 35 U.S.C. § 112, ¶ 1 for lack of written description/enableness.

THE '889 PATENT

13. Metrologic's accused products do not infringe claims 7, 8, 11, 13, and 14 of U.S. Patent No. 5,545,889 in violation of 35 U.S.C. § 271(a).
14. Metrologic's accused products infringe claim 18 of U.S. Patent No. 5,545,889 in violation of 35 U.S.C. § 271(a).
15. An industry in the United States does not exist with respect to Symbol's products that is protected by claims 7 and 8 of U.S. Patent No. 5,545,889, as required by 19 U.S.C. § 1337(a)(2) and (3).
16. Claims 7, 11, 13 and 14 of U.S. Patent No. 5,545,889 are not invalid under 35 U.S.C. § 102 for anticipation based on U.S. Patent No. 4,409,470.
17. Claims 7, 11, 13, and 14 of U.S. Patent No. 5,545,889 are not invalid under 35 U.S.C. § 102

for anticipation based on U.S. Patent No. 4, 971,410.

18. Claims 8 and 18 of U.S. Patent No. 5,545,889 are not invalid under 35 U.S.C. § 103 for single-reference obviousness based on U.S. Patent No. 4,409,470.
19. Claim 18 of U.S. Patent No. 5,545,889 is not invalid under 35 U.S.C. § 103 for single-reference obviousness based on U.S. Patent No. 4, 971,410.
20. Claims 7, 8, 11, 13, 14, and 18 of U.S. Patent No. 5,545,889 are not invalid under 35 U.S.C. § 103 for single-reference obviousness based on the MH-132/MS131 Products or SS-100 Product, or for obviousness based on the MH-132/MS131 Products in combination with its SS-100 product.
21. Claims 7, 8, 11, 13, 14, and 18 of U.S. Patent No. 5,545,889 are not invalid under 35 U.S.C. § 112, ¶ 2 for indefiniteness.
22. Claim 17 of U.S. Patent No. 5,545,889 is invalid under 35 U.S.C. § 112, ¶ 2 for indefiniteness.

THE '308 PATENT

23. Metrologic's accused products do not infringe claims 2, 10, 11, and 21 of U.S. Patent No. 5,457,308 in violation of 35 U.S.C. § 271(a).
24. An industry in the United States does not exist with respect to Symbol's products that is protected by claims 2, 10, 11, and 21 of U.S. Patent No. 5,457,308, as required by 19 U.S.C. § 1337(a)(2) and (3).
25. U.S. Patent No. 5,457,308 is not unenforceable by reason of equitable estoppel in connection with Symbol's conduct before AIM.

INITIAL DETERMINATION

Based on the foregoing opinion, findings of fact, conclusions of law, the evidence, and the record as a whole, and having considered all pleadings and arguments, including the proposed findings of fact and conclusions of law, it is the Administrative Law Judge's Initial Determination that a violation of Section 337 of the Tariff Act of 1930, as amended, has been found in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain laser bar code scanners and scan engines, components thereof, and products containing same, in connection with claim 48 of U.S. Patent No. 5,262,627; and claims 17 and 18 of U.S. Patent No. 5,917,173; and has not been found in connection with claims 7, 8, 11, 13, 14, 17, and 18 of U.S. Patent No. 5,545,889; and claims 2, 10, 11, and 21 of U.S. Patent No. 5,457,308. Furthermore, the Administrative Law Judge hereby determines that a domestic industry in the United States exists that practices U.S. Patent Nos. 5,262,627 and 5,917,173 and does not exist that practices U.S. Patent Nos. 5,545,889 and 5,457,308.

The Administrative Law Judge hereby CERTIFIES to the Commission this Initial Determination, together with the record of the hearing in this investigation consisting of the following: the transcript of the evidentiary hearing, with appropriate corrections as may hereafter be ordered by the Administrative Law Judge; and further the exhibits accepted into evidence in this investigation as listed in the attached exhibit lists.


Pursuant to 19 C.F.R. § 210.42(h), this Initial Determination shall become the determination of the Commission unless a party files a petition for review pursuant to 19 C.F.R. § 210.43(a) or the Commission, pursuant to 19 C.F.R. § 210.44, orders on its own motion a review of the Initial Determination or certain issues therein.

**IN THE MATTER OF CERTAIN LASER BAR CODE
SCANNERS AND SCAN ENGINES, COMPONENTS THEREOF
AND PRODUCTS CONTAINING SAME**

337-TA-551

CERTIFICATE OF SERVICE

I, Marilyn R. Abbott, hereby certify that the attached **ORDER** was served upon, **Kevin Baer, Esq.**, Commission Investigative Attorney, and the following parties via first class mail and air mail where necessary on January 29, 2007.



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**IN THE MATTER OF CERTAIN LASER BAR CODE
SCANNERS AND SCAN ENGINES, COMPONENTS THEREOF
AND PRODUCTS CONTAINING SAME**

337-TA-551

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PUBLIC VERSION

UNITED STATES INTERNATIONAL TRADE COMMISSION

Washington, D.C.

In the Matter of

**CERTAIN LASER BAR CODE SCANNERS AND
SCAN ENGINES, COMPONENTS THEREOF AND
PRODUCTS CONTAINING SAME**

Inv. No. 337-TA-551

**INITIAL DETERMINATION ON VIOLATION OF SECTION 337 AND
RECOMMENDED DETERMINATION ON REMEDY AND BOND**

Administrative Law Judge Charles E. Bullock

(January 29, 2007)

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LIST OF ABBREVIATIONS

CDX	Complainant's demonstrative exhibit
CFF	Complainant's proposed findings of fact
CIB	Complainant's initial post-hearing brief
CORFF	Complainant's objections to Respondents' proposed findings of fact
COSFF	Complainant's objections to Staff's proposed findings of fact
CPX	Complainant's physical exhibit
CRB	Complainant's reply post-hearing brief
CX	Complainant's exhibit
Dep	Deposition
JX	Joint Exhibit
RDX	Respondents' demonstrative exhibit
RFF	Respondents' proposed findings of fact
RIB	Respondents' initial post-hearing brief
ROCFF	Respondents' objections to Complainant's proposed findings of fact
ROSFF	Respondents' objections to Staff's proposed findings of fact
RPX	Respondents' physical exhibit
RRB	Respondents' reply post-hearing brief
RX	Respondents' exhibit
SFF	Staff's proposed findings of fact
SIB	Staff's initial post-hearing brief
SOCFF	Staff's objections to Complainant's proposed findings of fact
SORFF	Staff's objections to Respondents' proposed findings of fact
SRB	Staff's reply post-hearing brief
Tr.	Transcript

PUBLIC VERSION

UNITED STATES INTERNATIONAL TRADE COMMISSION

Washington, D.C.

In the Matter of

**CERTAIN LASER BAR CODE SCANNERS AND
SCAN ENGINES, COMPONENTS THEREOF AND
PRODUCTS CONTAINING SAME**

Inv. No. 337-TA-551

**INITIAL DETERMINATION ON VIOLATION OF SECTION 337 AND
RECOMMENDED DETERMINATION ON REMEDY AND BOND**

Administrative Law Judge Charles E. Bullock

(January 29, 2007)

Pursuant to the Notice of Investigation¹ and Rule 210.42(a) of the Rules of Practice and Procedure of the United States International Trade Commission, this is the Administrative Law Judge's Initial Determination in the matter of Certain Laser Bar Code Scanners and Scan Engines, Components Thereof, and Products Containing Same, Investigation No. 337-TA-551.

The Administrative Law Judge hereby determines that a violation of Section 337 of the Tariff Act of 1930, as amended has been found in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain laser bar code scanners and scan engines, components thereof, and products containing same, in connection with claim 48 of U.S. Patent No. 5,262,627; and claims 17 and 18 of U.S. Patent No. 5,917,173; and has not been found in connection with claims 7, 8, 11, 13, 14, 17, and 18 of U.S. Patent No. 5,545,889; and claims

¹ 70 Fed. Reg. 61,841 (October 26, 2005).

2, 10, 11, and 21 of U.S. Patent No. 5,457,308. Furthermore, the Administrative Law Judge hereby determines that a domestic industry in the United States exists that practices U.S. Patent Nos. 5,262,627 and 5,917,173 and does not exist that practices U.S. Patent Nos. 5,545,889 and 5,457,308.

DISCUSSION

I. Introduction

A. Procedural History

1. In General

On September 23, 2005, Complainant Symbol Technologies, Inc. (“Symbol”) filed a complaint with the Commission pursuant to Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337. The complaint was amended on October 14, 2005. The complaint, as amended, asserts unfair methods of competition and unfair acts in violation of Section 337 by Respondents Metrologic Instruments, Inc. and Metro (Suzhou) Technologies Co., Ltd. (collectively “Metrologic”) in connection with the importation, sale for importation, and sale within the United States after importation of certain laser bar code scanners and scan engines, components thereof, and products containing same.

The complaint, as amended, accuses Metrologic’s products of infringing various claims of the following five U.S. Patents owned by Symbol: claim 48 of U.S. Patent No. 5,262,627 (“the ‘627 patent”); claims 7, 13, 14, 17, and 18 of U.S. Patent No. 5,545,889 (“the ‘889 patent”); claims 17 and 18 of U.S. Patent No. 5,917,173 (“the ‘173 patent”); claims 2 and 21 of U.S. Patent No. 5,457,308 (“the ‘308 patent”); and claims 1, 2, and 4-6 of U.S. Patent No. 6,220,514 (“the ‘514 patent”). The complaint further alleges that there exists a domestic industry with respect to the patents-at-issue. Symbol seeks, among other things, a limited exclusion order of the infringing laser bar code scanners and scan engines, components thereof, and products containing same. On October 20, 2005, the Commission issued a notice of investigation that was subsequently published in the

Federal Register on October 26, 2005.² On October 26, 2005, the undersigned set a fourteen-month target date for the investigation, or December 26, 2006.³ Metrologic filed a response to the complaint and notice of investigation on November 14, 2005.

On March 9, 2006, Symbol filed a motion for leave to amend the Complaint and Notice of Investigation, which was granted by initial determination in Order No. 9, issued on March 22, 2006. On April 14, 2006, the Commission issued a notice not to review the initial determination. Specifically Symbol moved to add two additional claims from the '308 patent (claims 10 and 11), two additional claims from the '889 patent (claims 8 and 11), and four additional claims from the '514 patent (claims 3, 7, 9, and 10), substitute Confidential Exhibit 24A to the Complaint regarding domestic industry, and to correct several citations to Symbol Bates numbers that are referenced within the Complaint.

On March 9, 2006, Metrologic filed a motion to extend the target date and to amend the procedural schedule, which was granted in part by Order No. 10, issued on March 22, 2006. That order extended the target date to fifteen-months, or January 26, 2007.

On March 21, 2006, Metrologic filed a motion for partial summary determination that U.S. Patent No. 6,220,514 is invalid, which was granted by initial determination in Order No. 14, issued on April 17, 2006, terminating the '514 patent from the investigation. On May 12, 2006, the Commission issued a notice not to review the initial determination.

On May 30, 2006, Symbol filed a motion for summary determination that Symbol has satisfied the economic prong of the domestic industry requirement under 19 U.S.C. § 1337(a)(3) with

² See Notice of Investigation, 70 Fed. Reg. 61,841 (October 26, 2005).

³ See Order No. 2 (October 26, 2005).

respect to the '627 patent, the '889 patent, the '173 patent, and the '308 patent, which was granted in part by initial determination in Order No. 25, issued on July 17, 2006. Specifically, the order found that Symbol sufficiently satisfied the requirements for economic prong under Sections 337(a)(3)(B) and (a)(3)(C) for products SE 800, SE 923, SE 950, SE 1200, and SE 1500 and that the economic prong for the '308 and '889 patents was satisfied under Sections 337(a)(3)(B) and (a)(3)(C). On August 25, 2006, the Commission issued a notice of decision to review and modify the initial determination. The Commission modified the initial determination "to the extent necessary to clarify that the Commission relies not only on Symbol's engineering investments in adopting the ALJ's determination with regard to the economic prong of the domestic industry requirement, but also on that portion of Symbol's service and repair investments which Metrologic concedes are associated with the products allegedly covered by the '627 patent and the '173 patent."⁴

On October 10, 2006, the undersigned issued Order No. 29, an initial determination extending the target date of the investigation by four months, to May 29, 2007. On October 24, 2006, the Commission issued a notice not to review the initial determination.

The parties have stipulated as to certain material facts.⁵ Particular stipulated facts that are relevant to this Initial Determination are cited accordingly.

An evidentiary hearing on liability was conducted before the undersigned from July 25-August 1, 2006. In support of its case-in-chief and rebuttal case, Symbol called the following witnesses:

⁴ See Commission Notice at 2 (August 25, 2006).

⁵ See CX-147, CX-148.

- Frederick Schuessler (Symbol employee and Fellow);⁶
- Glenn Spitz (named inventor of the '308 patent and current president of Webscan, Inc.);⁷
- Edward Barkan (Symbol employee and Senior Fellow);⁸
- David Allais (Symbol's expert on the '173, '627, and '889 patents);⁹
- Thomas Payne (Symbol's expert on the '308 patent);¹⁰
- Gerald Concannon (Symbol's vice president for finance of the global products group).¹¹

In support of its case-in-chief and rebuttal case, Metrologic called the following witnesses:

- Roger Palmer (Metrologic's expert on the '173 and '627 patents);¹²
- Jay Eastman (Metrologic's expert on the '889 patent);¹³
- Robert Blake (Metrologic employee - research and development engineer);¹⁴
- Mark Schmidt (Metrologic's executive vice president of strategic initiatives);¹⁵
- Donald Chandler (Metrologic's expert on the '308 patent);¹⁶
- Benjamin Hejl (employee of Omniplanar, Inc, a wholly owned subsidiary of

⁶ CX-113C (Schuessler Direct); CX-154C (Schuessler Supplemental Direct); CX-167C (Schuessler Rebuttal); RX-63C (Schuessler Dep).

⁷ CX-114C (Spitz Direct); RX-67C (Spitz Dep).

⁸ CX-110C (Barkan Direct); CX-192C (Barkan Rebuttal); RX-31C (Barkan Dep Day 1); RX-32C (Barkan Dep Day 2).

⁹ CX-109C (Allais Direct); CX-166C (Allais Rebuttal); CX-208C (Allais Supplemental Direct).

¹⁰ CX-112C (Payne Direct).

¹¹ CX-193 (Concannon Rebuttal); RX-38C (Concannon Dep).

¹² RX-1C (Palmer Direct); RX-761C (Palmer Rebuttal).

¹³ RX-2C (Eastman Direct); RX-762C (Eastman Rebuttal).

¹⁴ RX-6C (Blake Direct); CX-040C (Blake Dep); RX-35C (Blake Dep).

¹⁵ RX-5C (Schmidt Direct); RX-770C (Schmidt Rebuttal); CX-050C (Schmidt Dep Day 1); CX-210C (Schmidt Dep Day 2); RX-62C.

¹⁶ RX-3C (Chandler Direct); RX-763C (Chandler Rebuttal).

Metrologic.);¹⁷ and

- Sprague Ackley (Intermec Technologies staff technologist).¹⁸

In addition, the following deposition testimony was received into evidence in lieu of direct witness statements or live testimony:

- Thomas Amundsen;¹⁹
- Gregory DiNoia;²⁰
- Joseph Sawitsky;²¹
- Andrew Longacre;²²
- Boris Metlitsky;²³
- Daniel Mullen;²⁴
- George A. Plesko;²⁵
- Howard Shepard;²⁶ and
- Aaron Bernstein.²⁷

After the hearing, post-hearing briefs and reply briefs, together with proposed findings of fact, conclusions of law and rebuttals to the same, were filed on August 15, 2006²⁸ and August 22,

¹⁷ RX-7C (Hejl Direct); CX-045C (Hejl Dep); RX-45C (Hejl Dep).

¹⁸ No direct witness statement submitted for Mr. Ackley, who is a third-party.

¹⁹ CX-038C (Amundsen Dep); RX-27C (Amundsen Dep).

²⁰ CX-044C (DiNoia Dep); RX-42C (DiNoia Dep).

²¹ CX-051C (Sawitsky Dep); RX-61C (Sawitsky Dep).

²² CX-175C (Longacre Dep); RX-51C (Longacre Dep).

²³ CX-177C (Metlitsky Dep); RX-55C (Metlitsky Dep).

²⁴ CX-178C (Mullen Dep); RX-56C (Mullen Dep).

²⁵ CX-179C (Plesko Dep).

²⁶ CX-211C (Shepard Dep); RX-64C (Shepard Dep).

²⁷ RX-34C (Bernstein Dep).

²⁸ On August 18, 2006, Staff filed a motion [551-058] for leave to file its findings of facts
(continued...)

2006,²⁹ respectively.

2. Motion for Sanctions

On May 23, 2006, Symbol filed a motion (551-022) for sanctions. On June 2, 2006, Metrologic filed an opposition to the motion. On June 2, 2006, the Staff filed a response in partial support of the motion. On June 5, 2005, Metrologic filed an unopposed motion (551-031) for leave to file a reply to the Staff's response to Symbol's motion for sanctions, which is hereby granted.

Symbol alleges that Metrologic has failed to comply with their discovery obligations by refusing to provide source code for two accused products, the OptimusS and OptimusSBT, and by falsely representing that such source code was not within its possession, custody, and/or control. Symbol also alleges that the status report that was filed in compliance with Order No. 11 contained several inaccuracies and omissions. Symbol moves for Metrologic to be sanctioned with both monetary sanctions to reimburse Symbol for the expenses incurred related to Metrologic's discovery misconduct, and non-monetary sanctions in the form of preventing Metrologic from presenting any evidence of non-infringement of the relevant asserted claims of the '308 patent for the OptimusS and OptimusSBT products.

Symbol alleges that, through discovery, it has learned that Metrologic had the source code in its possession as of March 27th and actually exchanged source code in the ordinary course of business with Syntech Information Co. a.k.a. CipherLab. Symbol bases its allegations on certain emails between a Metrologic employee, John Deal, and CipherLab employee. Symbol asserts that, Metrologic and CipherLab have a history of sharing source code and software and that Metrologic's

²⁸(...continued)
out of time, which is hereby granted.

²⁹ Staff's reply was due on August 24, 2006. Bullock, Tr. 1685.

representation that it could not obtain the source code to the undersigned was false and that Metrologic didn't even ask CipherLab for the software and source code prior to Order No. 11. Symbol asserts that Metrologic's discovery misconduct has made the investigation more difficult and expensive, including hiring a reverse-engineering firm to attempt to extract the source code and software from Optimus products sold in the United States, filing a subpoena with CipherLab, performing additional discovery, including depositions, and filing the motion to compel and motion for sanctions. Symbol requests that, if monetary sanctions are warranted, it will provide an itemized listing of expenses within ten days.

Staff agrees that it appears that Metrologic's statements in response to the motion to compel that was the subject of Order No. 11 "do not appear to be accurate," which supports a finding of discovery misconduct.³⁰ Staff agrees that monetary sanctions are warranted under 19 C.F.R. § 210.27(d)(3) for discovery abuse and for inaccurate and unfounded statements in Metrologic's response memorandum. Staff does not agree that non-monetary sanctions are warranted because the purpose of Order No. 11 was to have the source code produced, which has been accomplished.

Metrologic opposes the motion, asserting that there is a fundamental misunderstanding between non-proprietary source code, which is publicly available via a CD or website, and proprietary Reduced Space Symbology ("RSS") decoding source code, which was the subject of the motion to compel. According to Metrologic, it did have possession of non-proprietary source code, which it produced, but it did not produce the RSS decoding source code because it never had possession of it, or any practical ability to access it because the decoding source code is proprietary to CipherLab. Metrologic asserts that, ultimately, CipherLab produced the decoding source code

³⁰ See Staff's Response at 4-5.

under the subpoena *duces tecum* and under the protections of the Protective Order in Order No. 1, and not based on any business relationship between Metrologic and CipherLab.

A review of the relevant events is helpful. On February 15, 2006, Symbol served its Third Set of Interrogatories (51-66) directed to Metrologic and its Second Set of Document Requests.³¹ On February 26, 2006, Metrologic provided written responses to the interrogatories and document requests.³² Through these requests, Symbol sought production of the source code used to decode RSS barcode symbologies. Metrologic refused to produce the source code and Symbol filed a motion to compel on March 15th. On March 27, 2006, Metrologic filed an opposition to the motion, asserting that it “does not have the Optimus source code in its possession, custody, or control.” The undersigned granted the motion in Order No. 11, issued on March 29, 2006, which required

Metrologic to produce the requested code within ten days from the date of this order. If it is not possible to obtain the code, Metrologic shall submit a report to the undersigned (and serve the other parties as well) providing a detailed explanation as to all steps taken in trying to obtain the code. If Metrologic has not provided an adequate explanation of its attempt to obtain the code, the undersigned may prevent Metrologic from presenting any evidence of non-infringement of the relevant asserted claims of the ‘308 patent for the OptimusS and OptimusSBT accused products.³³

On April 10, 2006, Metrologic filed a report with the undersigned, stating that “Syntech has agreed to produce the Optimus source code pursuant to the terms of the Protective Order in this investigation.”³⁴ This motion (551-022) for sanctions was filed on May 23, 2006. Apparently, the source code has been produced, so the actual production of the source code is not at issue. What is at issue is if Metrologic made misrepresentations throughout discovery regarding the decoding

³¹ See Exhibits B & C to Symbol’s Motion to Compel.

³² See Exhibits E & F to Symbol’s Motion to Compel.

³³ See Order No. 11 (March 29, 2006).

³⁴ See Respondents’ Report Pursuant to Order Number 11 Regarding Syntech Information Co., Ltd.’s Agreement to Produce Optimus Source Code at 3.

source code, and in particular, in its March 27th opposition to the motion to compel and April 10th report.

The Commission's Rules allow for the imposition of monetary and non-monetary sanctions for a party's refusal to comply with discovery.³⁵ In this instance, the undersigned finds that monetary sanctions are warranted in light of Metrologic's actions, which have served to delay and frustrate the Commission's processes and Symbol's discovery. A review of numerous documents and pleadings supports a finding that Metrologic has been less than forthcoming with regards to the ability to obtain the RSS decoding source code. While Metrologic asserts that the CipherLab decoding source code is as important to Metrologic as it is to Symbol because the source code is necessary to Metrologic's proof on non-infringement and that Metrologic has nothing to gain by thwarting the production of the code,³⁶ the undersigned finds that, if this were true, Metrologic should have filed its own subpoena to CipherLab requesting the decoding source code, which it did not. The undersigned finds that, based on Metrologic's business relationship with CipherLab, Metrologic had the possession of the non-proprietary source code and most likely had the ability to obtain the RSS decoding source code. It is unclear to the undersigned whether Metrologic ever requested the RSS source code before Order No. 11, but it appears unlikely that such a request was ever made. Regardless, had Metrologic requested CipherLab provide the RSS source code when Symbol first requested it in discovery, there is a good chance that it would have been unnecessary for the motion to compel and motion for sanctions to be filed. Instead, numerous judicial resources have been wasted. Such discovery tactics cannot be tolerated, especially for investigations with tight

³⁵ See 19 C.F.R. §§ 210.27(d)(3); 210.27(d)(4); 210.33(b); 210.33(c)(1).

³⁶ See Metrologic's Reply at 4.

discovery deadlines where cooperation between parties is essential. In order to deter such future conduct, the undersigned finds that monetary sanctions are warranted.

Accordingly, the undersigned will impose monetary sanctions against Metrologic for recovery of Symbol's reasonable attorneys' fees and costs incurred in the filing of its original motion to compel the source code, along with filing the motion for sanctions, and for other expenses, such as hiring the reverse engineering firm regarding the Optimus source code. The undersigned does not, however, find that monetary sanctions are warranted for additional discovery time taken, such as for depositions.

As for Metrologic's actions after Order No. 11 was issued, the undersigned does not find evidence of discovery misconduct. The undersigned finds that Metrologic complied with the undersigned's order. The order required production of the source code within ten days. If the source code could not be produced within ten days, a report was to be filed. Metrologic filed the report and subsequently produced the source code. Accordingly, the undersigned does not find that non-monetary sanctions are warranted against Metrologic because the source code has now been produced.

Accordingly, Symbol's motion (551-022) is hereby granted in part as detailed above. Symbol shall file and serve on Metrologic, the Staff and the undersigned, within ten (10) days following the issuance of this initial determination, an accounting of its reasonable attorneys' fees and costs associated with the filing of its motion to compel the source code and motion for sanctions, and its reasonable attorneys' fees and costs associated with meeting and conferring with Metrologic in connection therewith, along with the fees incurred from the reverse engineering firm. Metrologic shall then reimburse Symbol in full for said amount within ten (10) days following the filing of

Symbol's accounting.

B. The Parties

1. Complainant

Complainant Symbol Technologies, Inc. ("Symbol") is a Delaware corporation with its headquarters in Holtsville, New York.

2. Respondents

Respondent Metrologic Instruments, Inc. is a New Jersey corporation located in Blackwood, New Jersey. Respondent Metro (Suzhou) Technologies Co., Ltd. is a Chinese corporation and is a wholly-owned subsidiary of Metrologic Instruments, Inc.

C. Overview of the Technology

At issue in this investigation are certain laser bar code scanners and scan engines, along with the computer software used by these laser bar code scanners to decode bar code symbols. Bar code are patterns of black bars and white spaces used to encode information according to the rules of a particular symbology, or bar code language. In the retail business, the most common symbology is the Uniform Product Code ("UPC"), which encodes a ten-digit number, where the first five numbers designate the manufacturer, while the last five numbers designate the specific product. A more recent symbology is Reduced Space Symbology ("RSS"). The technology at issue in this investigation relates to RSS-14 and RSS-14 stacked, which decode into a 14-digit final value.

The '627 and '173 patents disclose a novel scanning motor using a flexural component for oscillating a mirror. The '889 patent discloses a novel optical system that includes a light source, a stationary folding mirror, a scanning mirror, a stationary collecting mirror, a drive for causing the scanning mirror to move, and a photosensor for detecting the variations in the returning light and

converting them into electrical signals. The '308 patent is a software patent regarding combining scan fragments of bar code symbols.

D. The Patents at Issue

1. The Mechanical Patents

a. The '627 Patent

The '627 patent is entitled "Scanning Arrangement and Method" and was issued to inventor Howard Shepard on November 16, 1993. The '627 patent is directed to a scanning arrangement for use in a laser scanning device. The patent is assigned to Symbol Technologies, Inc. The '627 patent application, App. No. 812,923, was filed on December 24, 1991, and is a continuation-in-part of App. No. 520,464, which is itself a continuation-in-part of App. No. 428,770. Application No. 520,464, was filed on May 8, 1990, and issued as U.S. Patent No. 5,168,749 on December 1, 1992. Application No. 428,770, was filed on October 30, 1989, and issued as U.S. Patent No. 5,099,110 on March 24, 1992. The '627 patent has forty-eight claims. Of the forty-eight claims, only independent claim 48 is asserted against Metrologic.³⁷

b. The '173 Patent

The '173 patent is entitled "Electromagnetically Activated Scanner with Shock-Protected Scanner Component" which was issued on June 29, 1999, based on Application No. 08/812,401, filed on March 5, 1997. The named inventors are Paul Dvorkis, Howard Shepard, Simon Bard, Joseph Katz, and Edward Barkan, and the patent was assigned to Symbol, the current owner of the '173 patent. The '173 patent has a total of 29 claims. One independent claim, claim 17 is at issue

³⁷ See JX-1 (the '627 patent); JX-5 (the '627 prosecution history).

here. Also at issue is dependent claim 18, which depends from claim 17.³⁸

c. The '889 Patent

The '889 patent is titled "Portable Laser Diode Scanning Head" and was issued to inventors Jerome Swartz, Howard M. Shepard, Mark J. Krichever, Boris Metlitsky, and Edward Barkan on August 13, 1996.³⁹ The patent is assigned to Symbol Technologies, Inc.⁴⁰ The '889 patent application, App. No. 163,580, was filed on December 7, 1993, and is a continuation of App. No. 784,619 (abandoned), which is itself a continuation of App. No. 562,037 (abandoned), which is a continuation-in-part of App. No. 454,144 (Pat. No. 5,021,641), which is a division of App. No. 295,151 (Pat. No. 4,897,532), which is a division of App. No. 148,669 (Pat. No. 4,825,057), which is a division of App. No. 706,502 (abandoned).⁴¹ The '889 patent has eighteen claims.⁴² Of the eighteen claims, Symbol asserts claims 7, 8, 11, 13, 14, 17, and 18 against Metrologic.⁴³ Claims 7, 13, 17 and 18 are independent claims.⁴⁴ Claims 8 and 11 depend from claim 7, and claim 14 depends from claim 13.⁴⁵

2. The '308 Patent

The '308 patent is entitled "Bar Code Scan Stitching" which was issued on October 10, 1995, based on Application No. 127,900, filed on September 14, 1993. The named inventors are Glen Spitz and Nelson Saenz, and the patent was assigned to Symbol, the current owner of the '308

³⁸ See JX-4 (the '173 patent); JX-8 (the '173 prosecution history).

³⁹ JX-3 (the '889 patent) at cover page (items 54, 76).

⁴⁰ See CX-3 (the '889 patent assignment) at SBL0007037-41.

⁴¹ JX-3 (the '889 patent) at cover page (item 63).

⁴² JX-3 (the '889 patent).

⁴³ CX-109C (Allais Direct) at Q. 32.

⁴⁴ See JX-3 (the '889 patent) at col. 22:64-26:37; JX-7 (the '889 prosecution history).

⁴⁵ *Id.*

patent. The '308 patent has a total of 21 claims. Three independent claims, claims 2, 10 and 21 are at issue here. Also at issue is dependent claim 11, which depends from claim 10.⁴⁶

E. The Products at Issue

1. Symbol's Products

Symbol manufactures and sells bar code scanners for reading bar codes. Symbol asserts that the following products satisfy the technical prong of the domestic industry requirement for the asserted patents:

Patent	Claim(s)	Product(s)
The '627 patent	48	SE1200, SE1224, SE800, SE824, SE900, SE923, SE1524
The '173 patent	17	SE1200, SE1224, SE800, SE824, SE900, SE923, SE1524
The '889 patent	7, 8, 11, 13 and 14	SE1200
	17	SE1200, SE1224, SE950, SE955
The '308 patent	2, 10 and 11	DS660x, Corona/SE2223, MC9000, MC3000, MC1000, MC70, MC50, SE950, SE440, SE1500, SE923, SE800, SE1200, LS2208, LS40xx, LS42x8, LS5800, LS9208, LS/DS34xx, LS7708, LS1900, MS2000, MSx2xx, PDT6800, PDT7200, PDT7500, PDT8000, PDT8100/2800, PPT8800, and PSS

2. Metrologic's Products

Metrologic manufactures and sells bar code scanners for reading bar codes. Symbol accuses the following Metrologic products as infringing the asserted patents:

Patent	Claim(s)	Products
--------	----------	----------

⁴⁶ See JX-2 (the '308 patent); JX-6 (the '308 prosecution history).

The '627 patent	48	MS9500 Voyager series (including MS9540 VoyagerCG® [including the redesigned version of MS9540 Voyager CG] and MS9535 VoyagerBT®)
		MS5145 Eclipse™ (including the redesigned version of the MS5145 Eclipse)
The '173 patent	17, 18	MS9500 Voyager series (including MS9540 VoyagerCG® [including the redesigned version of MS9540 Voyager CG] and MS9535 VoyagerBT®)
		MS5145 Eclipse™ (including the redesigned version of the MS5145 Eclipse)
The '889 patent	7, 8, 11, 13, 14, 17, 18	MS9500 Voyager series (including MS9540 VoyagerCG® [including the redesigned version of MS9540 Voyager CG] and MS9535 VoyagerBT®)
		MS5145 Eclipse™ (including the redesigned version of the MS5145 Eclipse)
The '308 patent	2	MS9500 Voyager series (including MS9540 VoyagerCG® [including the redesigned version of MS9540 Voyager CG] and MS9535 VoyagerBT®)
		MS5145 Eclipse™ (including the redesigned version of the MS5145 Eclipse)
		MS7320 InVista®
		MS3580 QuantumT™
		OptimusS™ and OptimusSBT™
		MS7120 Orbit®
		IS3480 QuantumE™
		MS7600 Horizon ®, MS7620 Horizon ®, and MS7625 Horizon ®
The '308 patent	10	OptimusS™ and OptimusSBT™
The '308 patent	11	OptimusS™ and OptimusSBT™
The '308 patent	21	MS9500 Voyager series (including MS9540 VoyagerCG® [including the redesigned version of MS9540 Voyager CG] and MS9535 VoyagerBT®)

		MS5145 Eclipse™ (including the redesigned version of the MS5145 Eclipse)
		MS3580 QuantumT™
		OptimusS™ and OptimusSBT™
		IS3480 QuantumE™

II. Jurisdiction and Importation

Section 337 confers subject matter jurisdiction on the International Trade Commission to investigate, and if appropriate, to provide a remedy for, unfair acts and unfair methods of competition in the importation of articles into the United States. In order to have the power to decide a case, a court or agency must have both subject matter jurisdiction, and jurisdiction over either the parties or the property involved.⁴⁷

A. Subject Matter Jurisdiction

The complaint alleges that Metrologic has violated Subsection 337(a)(1)(A) and (B) in the importation and sale of products that infringe the asserted patents. The parties have stipulated that Metrologic has imported into the United States, has sold to third parties who later imported into the United States, and/or has sold within the United States after importation the accused products, including certain “redesigned” products manufactured by or on behalf of Metrologic.⁴⁸ Accordingly, the Commission has subject matter jurisdiction over Metrologic in this investigation.⁴⁹

⁴⁷ 19 U.S.C. § 1337; *also see Certain Steel Rod Treating Apparatus and Components Thereof*, Inv. No. 337-TA-97, Commission Memorandum Opinion, 215 U.S.P.Q. 229, 231 (1981) (“*Steel Rod*”).

⁴⁸ CIB 4 citing CX-209C (Stipulation) at ¶ 2; RIB 31; SIB 8-9.

⁴⁹ *See Amgen, Inc. v. U.S. Int’l Trade Comm’n*, 902 F.2d 1532, 1536 (Fed. Cir. 1990) (“*Amgen*”).

B. Personal Jurisdiction

Metrologic has responded to the complaint and notice of investigation, participated in the investigation, including participating in discovery, made an appearance at the hearing, and submitted post-hearing briefs, thereby submitting to the personal jurisdiction of the Commission.⁵⁰

III. Relevant Law

A. Claim Construction

Analyzing whether a patent is infringed “entails two steps. The first step is determining the meaning and scope of the patent claims asserted to be infringed. The second step is comparing the properly construed claims to the device or process accused of infringing.”⁵¹ The first step is a question of law, whereas the second step is a factual determination.⁵² Concerning the first step of claim construction, “[i]t is well-settled that, in interpreting an asserted claim, the court should look first to the intrinsic evidence of record, *i.e.*, the patent itself, including the claims, the specification and, if in evidence, the prosecution history Such intrinsic evidence is the most significant source of the legally operative meaning of disputed claim language.”⁵³

“In construing claims, the analytical focus must begin and remain centered on the language of the claims themselves, for it is that language that the patentee chose to use to ‘particularly point

⁵⁰ See *Certain Miniature Hacksaws*, Inv. No. 337-TA-237, U.S.I.T.C. Pub. No. 1948, Initial Determination (unreviewed by Commission in relevant part) at 4, 1986 WL 379287 (U.S.I.T.C., October 15, 1986) (“*Miniature Hacksaws*”).

⁵¹ *Dow Chem. Co. v. United States*, 226 F.3d 1334, 1338 (Fed. Cir. 2000) (“*Dow Chemical*”), citing *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995) (*en banc*), *aff’d*, 517 U.S. 370 (1996) (“*Markman*”).

⁵² *Markman*, *supra*.

⁵³ *Bell Atlantic Network Serv., Inc. v. Covad Communications Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001) (“*Bell Atlantic*”). See also *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-17 (Fed. Cir. 2005) (“*Phillips*”), *cert. denied*, 126 S.Ct. 1332.

[] out and distinctly claim [] the subject matter which the patentee regards as his invention.”⁵⁴

“Quite apart from the written description and the prosecution history, the claims themselves provide substantial guidance as to the meaning of particular claim terms.”⁵⁵ Usage of a term in both the asserted and unasserted claims is “highly instructive” in determining the meaning of the same term in other claims.⁵⁶ “Furthermore, a claim term should be construed consistently with its appearance in other places in the same claim or in other claims of the same patent.”⁵⁷

“While not an absolute rule, all claim terms are presumed to have meaning in a claim.”⁵⁸ If the claim language is not clear on its face, “[t]hen we look to the rest of the intrinsic evidence, beginning with the specification and concluding with the prosecution history, if in evidence” for the purpose of “resolving, if possible, the lack of clarity.”⁵⁹

There is a “heavy presumption” that claim terms are to be given “their ordinary and accustomed meaning as understood by one of ordinary skill in the art,” and in aid of this interpretation, “[d]ictionaries and technical treatises, which are extrinsic evidence, hold a ‘special place’ and may sometimes be considered along with the intrinsic evidence when determining the ordinary meaning of claim terms.”⁶⁰ Caution must be used, however, when referring to non-

⁵⁴ *Interactive Gift Express, Inc. v. Compuserve Inc.*, 256 F.3d 1323, 1331 (Fed. Cir. 2001) (“*Interactive Gift Express*”), citing 35 U.S.C. § 112, ¶ 2.

⁵⁵ *Phillips*, 415 F.3d at 1314 citing *Vitronics Corp. v. Conceptronic Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 2003) (“*Vitronics*”).

⁵⁶ *Id.*

⁵⁷ *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342 (Fed. Cir. 2001) (“*Rexnord*”) citing *Phonometrics Inc. v. Northern Telecom Inc.*, 133 F.3d 1459, 1465 (Fed. Cir. 1998) (“*Phonometrics*”).

⁵⁸ *Innova/Pure Water, Inc. v. Safari Water Filtration Sys.*, 381 F.3d 1111, 1119 (Fed. Cir. 2004) (“*Innova*”).

⁵⁹ *Id.*

⁶⁰ *Bell Atlantic*, 262 F.3d at 1267-68.

scientific dictionaries “lest dictionary definitions . . . be converted into technical terms of art having legal, not linguistic significance.”⁶¹

The presumption in favor of according a claim term its ordinary meaning is overcome “(1) where the patentee has chosen to be his own lexicographer, or (2) where a claim term deprives the claim of clarity such that there is ‘no means by which the scope of the claim may be ascertained from the language used.’”⁶² In this regard, “[t]he specification acts as a dictionary ‘when it expressly defines terms used in the claims or when it defines terms by implication.’”⁶³

The specification is considered “always highly relevant” to claim construction and “[u]sually, it is dispositive; it is the single best guide to the meaning of a disputed term.”⁶⁴ The prosecution history is also examined for a claim’s scope and meaning “to determine whether the patentee has relinquished a potential claim construction in an amendment to the claim or in an argument to overcome or distinguish a reference.”⁶⁵

“[I]f the meaning of the claim limitation is apparent from the intrinsic evidence alone, it is improper to rely on extrinsic evidence other than that used to ascertain the ordinary meaning of the claim limitation. [citation omitted] However, in the rare circumstance that the court is unable to determine the meaning of the asserted claims after assessing the intrinsic evidence, it may look to additional evidence that is extrinsic to the complete document record to help resolve any lack of clarity.”⁶⁶

⁶¹ *Id.* at 1267 (internal quotation marks omitted).

⁶² *Id.* at 1268.

⁶³ *Id.* See also *Phillips*, 415 F.3d at 1316.

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ *Id.* at 1268-69.

“Extrinsic evidence consists of all evidence external to the patent and prosecution history”⁶⁷ It includes “such evidence as expert testimony, articles, and inventor testimony.”⁶⁸ But, “[i]f the intrinsic evidence resolves any ambiguity in a disputed claim, extrinsic evidence cannot be used to contradict the established meaning of the claim language.”⁶⁹ “What is disapproved of is an attempt to use extrinsic evidence to arrive at a claim construction that is clearly at odds with the claim construction mandated by the claims themselves, the written description, and the prosecution history, in other words, with the written record of the patent.”⁷⁰

In interpreting particular limitations within each claim, “adding limitations to claims not required by the claim terms themselves, or unambiguously required by the specification or prosecution history, is impermissible.”⁷¹ Usually, a patent is not limited to its preferred embodiments in the face of evidence of broader coverage by the claims.⁷² A claim construction that excludes the preferred embodiment in the specification of a patent, however, is “rarely, if ever, correct.”⁷³

On the other hand, “there is sometimes ‘a fine line between reading a claim in light of the

⁶⁷ *Markman*, 52 F.3d at 980.

⁶⁸ *Bell Atlantic*, 262 F.3d at 1269.

⁶⁹ *DeMarini Sports, Inc. v. Worth, Inc.*, 239 F.3d 1314, 1322-23 (Fed. Cir. 2001) (“*DeMarini*”).

⁷⁰ *Markman*, 52 F.3d at 979.

⁷¹ *Dayco Prod., Inc. v. Total Containment, Inc.*, 258 F.3d 1317, 1327 (Fed. Cir. 2001) (“*Dayco Products*”), citing *Laitram Corp. v. NEC Corp.*, 163 F.3d 1342, 1347 (Fed. Cir. 1998) (“*Laitram*”) (“a court may not import limitations from the written description into the claims”).

⁷² *Acromed Corp. v. Sofamor Danek Group, Inc.*, 253 F.3d 1371, 1382-83 (Fed. Cir. 2001) (“*Acromed*”); *Electro Med. Sys. S.A. v. Cooper Life Sci., Inc.*, 34 F.3d 1048, 1054 (Fed. Cir. 1994) (“*Electro Med*”) (“particular embodiments appearing in a specification will not be read into the claims when the claim language is broader than such embodiments”).

⁷³ *Vitronics*, 90 F.3d at 1583-34.

specification, and reading a limitation into the claim from the specification.”⁷⁴ In order to negotiate this “fine line,” one guideline is that features of embodiments in the specification do not restrict patent claims “unless the patentee has demonstrated a clear intention to limit the claim scope using ‘words or expressions of manifest exclusion or restriction.’”⁷⁵ Another guideline is that features of an embodiment in the specification do not restrict claims unless the specification defines the claim terms “by implication” as may be “found in or ascertained by a reading of the patent documents.”⁷⁶ For the specification to limit the claims, there must be “a clear case of the disclaimer of subject matter that, absent the disclaimer, could have been considered to fall within the scope of the claim language.”⁷⁷

Claims amenable to more than one construction should, when it is reasonably possible to do so, be construed to preserve their validity.⁷⁸ A claim cannot, however, be construed contrary to its plain language.⁷⁹ Claims cannot be judicially rewritten in order to fulfill the axiom of preserving

⁷⁴ *Bell Atlantic*, 262 F.3d at 1270.

⁷⁵ *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004) (“*Liebel-Flarsheim*”).

⁷⁶ *Irdeto Access, Inc. v. Echostar Satellite Corp.*, 383 F.3d 1295, 1300 (Fed. Cir. 2004) (“*Irdeto*”).

⁷⁷ *Liebel-Flarsheim*, 358 F.3d at 907. The Federal Circuit “has expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment.” *Liebel-Flarsheim, supra*, 358 F.3d at 906 (emphasis added); also see, e.g., *Golight, Inc. v. Wal-Mart Stores, Inc.*, 355 F.3d 1327, 1331 (Fed. Cir. 2004) (“*Golight*”); *Bio-Technology General Corp. v. Duramed Pharmaceuticals, Inc.*, 325 F.3d 1356, 1362 (Fed. Cir. 2003) (“*Bio-Technology*”) (aspects of only embodiment described in specification not read into claims). The *Liebel-Flarsheim* panel further held that even where a patent describes only a single embodiment, claims will not be “read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using ‘words or expressions of manifest exclusion or restriction.’” *Id.*

⁷⁸ *Karsten Mfg. Corp. v. Cleveland Golf Co.*, 242 F.3d 1376, 1384 (Fed. Cir. 2001) (“*Karsten*”).

⁷⁹ See *Rhine v. Casio, Inc.*, 183 F.3d 1342, 1345 (Fed. Cir. 1999) (“*Rhine*”).

their validity; “if the only claim construction that is consistent with the claim’s language and the written description renders the claim invalid, then the axiom does not apply and the claim is simply invalid.”⁸⁰

Pursuant to 35 U.S.C. § 112, ¶ 6, “[a]n element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.” An applicant may therefore “claim an element of a combination functionally, without reciting structures for performing those functions.”⁸¹ To invoke this rule, “a claim limitation that actually uses the word ‘means’ will invoke a rebuttable presumption that § 112, ¶ 6 applies. By contrast, a claim term that does not use ‘means’ will trigger the rebuttable presumption that § 112, ¶ 6 does not apply.”⁸² In general, the words “circuit” and “circuitry” connote sufficient structure in and of themselves so as not to be deemed as “means-plus-function” elements.⁸³

B. Infringement

1. Literal Infringement

Literal infringement is a question of fact.⁸⁴ Literal infringement requires the patentee to prove that the accused device contains each limitation of the asserted claim(s). Each element of a

⁸⁰ *Id.*

⁸¹ *Apex Inc. v. Raritan Computer, Inc.*, 325 F.3d 1364, 1371 (Fed. Cir.), *cert. denied*, 540 U.S. 1073 (2003) (“*Apex*”).

⁸² *Linear Technology Corp. v. Impala Linear Corp.*, 379 F.3d 1311, 1319 (Fed. Cir. 2004) (“*Linear*”).

⁸³ *See Linear, supra*; *Apex*, 325 F.3d at 1374.

⁸⁴ *Tegal Corp. v. Tokyo Electron Am., Inc.*, 257 F.3d 1331, 1350 (Fed. Cir. 2001) (“*Tegal*”), *cert. denied*, 535 U.S. 927 (2002).

claim is considered material and essential, and in order to show literal infringement, every element must be found to be present in the accused device.⁸⁵ If any claim limitation is absent from the accused device, there is no literal infringement of that claim as a matter of law.⁸⁶

2. Infringement Under the Doctrine of Equivalents

Under the doctrine of equivalents, infringement may be found if the accused product performs substantially the same function in substantially the same way to obtain substantially the same result.⁸⁷

C. Domestic Industry - Technical Prong

In a patent-based complaint, a violation of Section 337 can be found “only if an industry in the United States, relating to the articles protected by the patent . . . concerned, exists or is in the process of being established.”⁸⁸ This “domestic industry requirement” has an “economic” prong and a “technical” prong.

A complainant in a patent-based Section 337 investigation must demonstrate that it is practicing or exploiting the patents at issue.⁸⁹ In order to find the existence of a domestic industry exploiting a patent at issue, it is sufficient to show that the domestic industry practices any claim of

⁸⁵ *London v. Carson Pirie Scott & Co.*, 946 F.2d 1534, 1538 (Fed. Cir. 1991) (“*London*”).

⁸⁶ *Bayer AG v. Elan Pharm. Research Corp.*, 212 F.3d 1241, 1247 (Fed. Cir. 2000) (“*Bayer*”).

⁸⁷ *Graver Tank & Mfg. Co. v. Linde Air Products Co.*, 339 U.S. 605, 608 (1950) (“*Graver Tank*”).

⁸⁸ 19 U.S.C. § 1337(a)(2).

⁸⁹ See 19 U.S.C. § 1337(a)(2) and (3); also see *Certain Microsphere Adhesives, Process for Making Same, and Products Containing Same, Including Self-Stick Repositionable Notes*, Inv. No. 337-TA-366, Commission Opinion at 8, 1996 WL 1056095 (U.S.I.T.C., January 16, 1996) (“*Microsphere Adhesives*”), *aff’d sub nom. Minnesota Mining & Mfg. Co. v. U.S. Int’l Trade Comm’n*, 91 F.3d 171 (Fed. Cir. 1996) (Table) (“*3M*”); *Certain Plastic Encapsulated Integrated Circuits*, Inv. No. 337-TA-315, U.S.I.T.C. Pub. No. 2574 (November 1992), Commission Opinion at 16, 1992 WL 813959 (“*Encapsulated Circuits*”).

that patent, not necessarily an asserted claim of that patent.⁹⁰ Fulfillment of this so-called “technical prong” of the domestic industry requirement is not determined by a rigid formula, but rather by the articles of commerce and the realities of the marketplace.⁹¹

The test for claim coverage for the purposes of the technical prong of the domestic industry requirement is the same as that for infringement.⁹² “First, the claims of the patent are construed. Second, the complainant’s article or process is examined to determine whether it falls within the scope of the claims.”⁹³ As with infringement, the first step of claim construction is a question of law, whereas the second step of comparing the article to the claims is a factual determination.⁹⁴ To prevail, the patentee must establish by a preponderance of the evidence that the domestic product practices one or more claims of the patent either literally or under the doctrine of equivalents.⁹⁵

D. Validity

A patent is presumed valid.⁹⁶ The party challenging a patent’s validity has the burden of overcoming this presumption by clear and convincing evidence.⁹⁷ Since the claims of a patent

⁹⁰ *Microsphere Adhesives*, Commission Opinion at 7-16.

⁹¹ *Certain Diltiazem Hydrochloride and Diltiazem Preparations*, Inv. No. 337-TA-349, U.S.I.T.C. Pub. No. 2902, Initial Determination at 138, 1995 WL 945191 (U.S.I.T.C., February 1, 1995) (unreviewed in relevant part) (“*Diltiazem*”); *Certain Double-Sided Floppy Disk Drives and Components Thereof*, Inv. No. 337-TA-215, 227 U.S.P.Q. 982, 989 (Commission Opinion 1985) (“*Floppy Disk Drives*”).

⁹² *Certain Doxorubicin and Preparations Containing Same*, Inv. No. 337-TA-300, Initial Determination at 109, 1990 WL 710463 (U.S.I.T.C., May 21, 1990) (“*Doxorubicin*”), *aff’d*, Views of the Commission at 22 (October 31, 1990).

⁹³ *Id.*

⁹⁴ *Markman*, 52 F.3d at 976.

⁹⁵ *See Bayer*, 212 F.3d at 1247.

⁹⁶ 35 U.S.C. § 282; *Richardson-Vicks Inc. v. Upjohn Co.*, 122 F.3d 1476, 1480 (Fed. Cir. 1997) (“*Richardson-Vicks*”).

⁹⁷ *Richardson-Vicks Inc., supra*; *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044 (Fed. Cir.) (“*Uniroyal*”), *cert. denied*, 488 U.S. 825 (1988).

measure the invention at issue, the claims must be interpreted and given the same meaning for purposes of both validity and infringement analyses. As with an infringement analysis, an analysis of invalidity involves two steps: the claim scope is first determined, and then the properly construed claim is compared with the prior art to determine whether the claimed invention is anticipated and/or rendered obvious.⁹⁸

1. Anticipation, 35 U.S.C. §§ 102 (a), (b) and (e)

A patent may be found invalid as anticipated under 35 U.S.C. § 102(a) if “the invention was known or used by others in this country, or patented or described in a printed publication in this country, or patented or described in a printed publication in a foreign country, before the invention thereof by the applicant for patent.” 35 U.S.C. § 102(a). A patent may be found invalid as anticipated under 35 U.S.C. § 102(b) if “the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States.”⁹⁹ Under 35 U.S.C. § 102(e), a patent is invalid as anticipated if “the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent.”¹⁰⁰ Anticipation is a question of fact.¹⁰¹

Under the foregoing statutory provision, a claim is anticipated and therefore invalid when “the four corners of a single, prior art document describe[s] every element of the claimed invention,

⁹⁸ *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1351 (Fed. Cir. 2001) (“*Amazon.com*”).

⁹⁹ 35 U.S.C. § 102(b).

¹⁰⁰ 35 U.S.C. § 102(e).

¹⁰¹ *Texas Instruments, Inc. v. U.S. Int’l Trade Comm’n*, 988 F.2d 1165, 1177 (Fed. Cir. 1993) (“*Texas Instruments II*”).

either expressly or inherently, such that a person of ordinary skill in the art could practice the invention without undue experimentation.”¹⁰² To be considered anticipatory, the prior art reference must be enabling and describe the applicant’s claimed invention sufficiently to have placed it in possession of a person of ordinary skill in the field of the invention.¹⁰³ But, the degree of enabling detail contained in the reference does not have to exceed that contained in the patent at issue.¹⁰⁴

Further, the disclosure in the prior art reference does not have to be express, but may anticipate by inherency where the inherency would be appreciated by one of ordinary skill in the art.¹⁰⁵ To be inherent, the feature must necessarily be present in the prior art.¹⁰⁶ Inherency may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient. If, however, the disclosure is sufficient to show that the natural result flowing from the operation as taught would result in the performance of the questioned function, it seems to be well settled that the disclosure should be regarded as sufficient. This modest flexibility in the rule that “anticipation” requires that every element of the claims appear in a single reference accommodates situations where the common knowledge of technologists is not recorded in the reference; that is, where technological facts are known to those in the field of the invention, albeit not known to judges.¹⁰⁷

¹⁰² *Advanced Display Sys., Inc. v. Kent State Univ.*, 212 F.3d 1272, 1282 (Fed. Cir. 2000), *cert. denied*, 532 U.S. 904 (2001) (“*Advanced Display Systems*”).

¹⁰³ *Helifix Ltd. v. Blok-Lok, Ltd.*, 208 F.3d 1339, 1346 (Fed. Cir. 2000) (“*Helifix*”); *In re Paulsen*, 30 F.3d 1475, 1478 (Fed. Cir. 1994) (“*Paulsen*”).

¹⁰⁴ *Paulsen*, 30 F.3d at 1481 n.9.

¹⁰⁵ *Glaxo Inc. v. Novopharm Ltd.*, 52 F.3d 1043, 1047 (Fed. Cir.), *cert. denied*, 516 U.S. 988 (1995) (“*Glaxo*”).

¹⁰⁶ *See Finnigan Corp. v. U.S. Int’l Trade Comm’n*, 180 F.3d 1354, 1365-66 (Fed. Cir. 1999) (“*Finnigan*”).

¹⁰⁷ *See Cont’l Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1268-69 (Fed. Cir. 1991)
(continued...)

2. Obviousness, 35 U.S.C. § 103 (a)

Under 35 U.S.C. § 103(a), a patent is valid unless “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.”¹⁰⁸ The ultimate question of obviousness is a question of law, but “it is well understood that there are factual issues underlying the ultimate obviousness decision.”¹⁰⁹

Once claims have been properly construed, “[t]he second step in an obviousness inquiry is to determine whether the claimed invention would have been obvious as a legal matter, based on underlying factual inquiries including : (1) the scope and content of the prior art, (2) the level of ordinary skill in the art, (3) the differences between the claimed invention and the prior art ; and (4) secondary considerations of non-obviousness” (also known as “objective evidence”).¹¹⁰ In order to prove obviousness, the patent challenger must demonstrate, by clear and convincing evidence, that “there is a reason, suggestion, or motivation in the prior art that would lead one of ordinary skill in the art to combine the references, and that would also suggest a reasonable likelihood of success.”¹¹¹ When an obviousness determination relies on the combination of two or more references, “[t]he

¹⁰⁷(...continued)
 (“*Continental Can* ”); *Finnigan*, 180 F.2d at 1365.

¹⁰⁸ 35 U.S.C. § 103(a).

¹⁰⁹ *Richardson-Vicks Inc.*, 122 F.3d at 1479; *Wang Lab., Inc. v. Toshiba Corp.*, 993 F.2d 858, 863 (Fed. Cir. 1993) (“*Wang Laboratories*”).

¹¹⁰ *Smiths Indus. Med. Sys., Inc. v. Vital Signs, Inc.*, 183 F.3d 1347, 1354 (Fed. Cir. 1999) (“*Smiths Industries*”), citing *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966) (“*Graham*”).

¹¹¹ *Smiths Industries*, 183 F.3d at 1356; also see *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1564 (Fed. Cir. 1997) (“*U.S. Surgical*”), cert. denied, 522 U.S. 950 (1997); *Certain Integrated Circuit Telecommunication Chips and Products Containing Same, Including Dialing Apparatus*, Inv. No. 337-TA-337, Commission Opinion at 18 (August 3, 1993) (“*Integrated Circuit Telecommunication Chips*”).

suggestion to combine may be found in explicit or implicit teachings within the references themselves, from the ordinary knowledge of those skilled in the art, or from the nature of the problem to be solved . . . the question is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination.”¹¹²

“Secondary considerations,” also referred to as “objective evidence of non-obviousness,” such as “commercial success, long felt but unsolved needs, failure of others, etc.” may be used to understand the origin of the subject matter at issue, and may be relevant as indicia of obviousness or non-obviousness.¹¹³ Secondary considerations may also include copying by others, prior art teaching away, and professional acclaim.¹¹⁴

Evidence of “objective indicia of non-obviousness,” also known as “secondary considerations,” must be considered in evaluating the obviousness of a claimed invention, but the existence of such evidence does not control the obviousness determination. A court must consider all of the evidence under the *Graham* factors before reaching a decision on obviousness.¹¹⁵ In order to accord objective evidence substantial weight, its proponent must establish a nexus between the evidence and the merits of the claimed invention, and a *prima facie* case is generally made out “when the patentee shows both that there is commercial success, and that the thing (product or method) that

¹¹² *WMS Gaming, Inc. v. Int’l Game Tech.*, 184 F.3d 1339, 1355 (Fed. Cir. 1999) (“*WMS Gaming*”).

¹¹³ *Graham*, 383 U.S. at 17-18.

¹¹⁴ See *Perkin-Elmer Corp. v. Computervision Corp.*, 732 F.2d 888, 894 (Fed. Cir. 1984) (“*Perkin-Elmer*”), *cert. denied*, 469 U.S. 857 (1984); *Avia Group Int’l, Inc. v. L.A. Gear California*, 853 F.2d 1557, 1564 (Fed. Cir. 1988) (“*Avia*”) (copying by others); *In re Hedges*, 783 F.2d 1038, 1041 (Fed. Cir. 1986) (“*Hedges*”) (prior art teaching away; invention contrary to accepted wisdom); *Kloster Speedsteel AB v. Crucible Inc.*, 793 F.2d 1565 (Fed. Cir. 1986) (“*Kloster*”), *cert. denied*, 479 U.S. 1034 (1987) (wide acceptance and recognition of the invention).

¹¹⁵ *Richardson-Vicks Inc.*, 122 F.3d at 1483-84.

is commercially successful is the invention disclosed and claimed in the patent.”¹¹⁶ Once the patentee has made a *prima facie* case of nexus, the burden shifts to the challenger to show that the commercial success was caused by “extraneous factors other than the patented invention, such as advertising, superior workmanship, etc.”¹¹⁷

3. Written Description/Enablement, 35 U.S.C. § 112, ¶ 1

Section 112, ¶ 1 of Title 35 requires that the specification describe the manner and process of making and using the invention “in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same.”

The issue of whether a disclosure is enabling is a matter of law.¹¹⁸ “To be enabling, the specification of a patent must teach those skilled in the art how to make and use the full scope of the claimed invention without ‘undue experimentation.’”¹¹⁹ “Patent protection is granted in return for an enabling disclosure of an invention, not for vague, intimations of general ideas that may or may not be workable.”¹²⁰ Although a specification need not disclose minor details that are well known in the art, “[i]t is the specification, not the knowledge of one skilled in the art, that must supply the novel aspects of an invention in order to constitute adequate enablement,” and in so doing the

¹¹⁶ *In re GPAC Inc.*, 57 F.3d 1573, 1580 (Fed. Cir. 1995) (“GPAC”); *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1392 (Fed. Cir. 1988), *cert. denied*, 488 U.S. 956 (1988) (“Demaco”); *Certain Crystalline Cefadroxil Monohydrate*, Inv. No. 337-TA-293, Commission Opinion (March 15, 1990), 15 U.S.P.Q.2d 1263, 1270 (“*Crystalline Cefadroxil Monohydrate*”).

¹¹⁷ *Id.* at 1393.

¹¹⁸ *Applied Materials, Inc. v. Advanced Semiconductor Materials America, Inc.*, 98 F.3d 1563, 1575 (Fed. Cir. 1996) (“*Applied Materials*”).

¹¹⁹ *Genentech, Inc. v. Novo Nordisk, A/S*, 108 F.3d 1361, 1365 (Fed. Cir. 1997) (“*Genentech*”).

¹²⁰ *Id.* at 1366.

specification cannot merely provide “only a starting point, a direction for further research.”¹²¹ On the other hand, “[i]t is not fatal if some experimentation is needed, for the patent document is **not** intended to be a production specification.”¹²² “Undue experimentation” is “a matter of degree” **and** “not merely quantitative, since a considerable amount of experimentation is permissible, if it is merely routine, or if the specification in question provides a reasonable amount of guidance with respect to the direction in which the experimentation should proceed”¹²³

It is well-settled that in order to be enabling under Section 112, “the patent must contain a description sufficient to enable one skilled in the art to make and use the full scope of the **claimed** invention.”¹²⁴ Section 112 requires that the scope of the claims must bear a reasonable correlation to the scope of enablement provided by the specification to such persons.¹²⁵

4. Indefiniteness, 35 U.S.C. § 112, ¶ 2

Claims must “. . . particularly point[] out and distinctly claim[] the subject matter which **the** applicant regards as his invention.” 35 U.S.C. § 112, ¶ 2. When “means plus function” language is used in the claims, the specification must set forth “adequate disclosure showing what is meant **by** that language.”¹²⁶ Claim indefiniteness under Section 112, ¶ 2 is a question of law.¹²⁷

¹²¹ *Id.*

¹²² *Northern Telecom, Inc. v. Datapoint Corp.*, 908 F.2d 931, 941 (Fed. Cir. 1990) (“*Northern Telecom*”).

¹²³ *PPG Industries, Inc. v. Guardian Industries Corp.*, 75 F.3d 1558, 1564 (Fed. Cir. 1996) (“*PPG Industries*”).

¹²⁴ *United States v. Teletronics, Inc.*, 857 F.2d 778, 785 (Fed. Cir. 1988) (“*Teletronics*”); *see also Amgen, Inc. v. Chugai Pharmaceutical Co., Ltd.*, 927 F.2d 1200, 1213 (Fed. Cir. 1991) (“*Chugai*”) (inventor’s disclosure must be “sufficient to enable on skilled in the art to carry out **the** invention commensurate with the scope of his claims”).

¹²⁵ *Application of Fischer*, 427 F.2d 833, 839 (C.C.P.A. 1970) (“*Fischer*”).

¹²⁶ *In re Donaldson*, 16 F.3d 1189, 1195 (Fed. Cir. 1994) (“*Donaldson*”).

¹²⁷ *Exxon Research and Engineering Co. v. U.S.*, 265 F.3d 1371, 1376 (Fed. Cir. 2001)
(continued...)

“[I]f the claims, read in light of the specification, reasonably apprise those skilled in the art both of the utilization and scope of the invention, and if the language is as precise as the subject matter permits, the courts can demand no more.”¹²⁸ Further in this connection, the Federal Circuit has observed:

We have not insisted that claims be plain on their face in order to avoid condemnation for indefiniteness; rather, what we have asked is that the claims be amenable to construction, however difficult that task may be. If a claim is insolubly ambiguous, and no narrowing construction can properly be adopted, we have held the claim indefinite. If the meaning of the claim is discernible, even though the task may be formidable and the conclusion may be one over which reasonable persons will disagree, we have held the claim sufficiently clear to avoid invalidity on indefiniteness grounds.¹²⁹

“By finding claims indefinite only if reasonable efforts at claim construction prove futile,” the Federal Circuit continued in *Exxon Research*, “we accord respect to the statutory presumption of patent validity.”¹³⁰ In this regard, where claims on their face cover various methods that produce widely varying and non-overlapping results such that they “fail to put competitors on notice of the limits of the claimed invention, so that they may fairly know the point at which their activities may begin to pose a serious risk of infringement,” those claims are indefinite under Section 112, ¶ 2.¹³¹

¹²⁷(...continued)

(“*Exxon Research*”); *Union Pacific Resources Co. v. Chesapeake Energy Corp.*, 236 F.3d 684, 692 (Fed. Cir. 2001) (“*Union Pacific*”).

¹²⁸ *Shatterproof Glass Corp. v. Libby-Owens-Ford Co.*, 758 F.2d 613, 624 (Fed. Cir. 1985), *cert. dismissed*, 474 U.S. 976 (1985) (“*Shatterproof Glass*”); *accord*, *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1385 (Fed. Cir. 1986), *cert. denied*, 480 U.S. 947 (1987) (“*Hybritech*”).

¹²⁹ *Exxon Research*, *supra*, 265 F.3d at 1375.

¹³⁰ *Id.*

¹³¹ *Certain Polyethylene Terephthalate Yarn and Products Containing Same*, Inv. No. 337-TA-457, Commission Opinion at 18, 2002 WL 1349938 (U.S.I.T.C., June 18, 2002) (“*PET Yarn*”).

E. Other Defenses - Equitable Estoppel

“A party raising equitable estoppel must prove, by a preponderance of the evidence, three elements: ‘(1) The [patentee], who usually must have knowledge of the true facts, communicates something in a misleading way, either by words, conduct or silence. (2) The [accused infringer] relies upon that communication. (3) And the [accused infringer] would be harmed materially if the [patentee] is later permitted to assert any claim inconsistent with his earlier conduct.’”¹³²

IV. The ‘173 Patent

A. Prosecution History

U.S. Patent No. 5,917,173 (“the ‘173 patent”) entitled “Electromagnetically Activated Scanner With Shock-Protected Scanner Component” issued from U.S. Patent Application No. 08/812,401 filed on March 5, 1997.¹³³ Through a series of continuation-in-part and continuation applications, the ‘173 patent claims a U.S. filing date of October 30, 1989. The invention disclosed in the ‘173 patent is a predecessor to the invention of the ‘627 patent, and likewise discloses and claims a specific and narrowly drawn scanning arrangement for use in a bar code scanner.

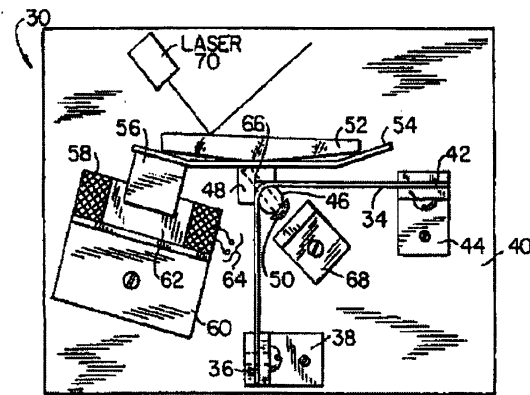
1. The U.S. Disclosure of the ‘173 Patent

As stated in the abstract and as shown in the drawings, the ‘173 patent is directed to an oscillating mirror component attached to a holder, that’s suspended by flexible, resilient spring portions, which extend away from the mirror in different paths to a pair of support members. A stop is fixed to the support, for abutting the holder in the event that the arrangement is subjected to

¹³² *Vanderlande Indus. Nederland BV v. Int’l Trade Comm’n*, 366 F.3d 1311, 1324 (Fed. Cir. 2004) (“*Vanderlande*”), citing *A.C. Aukerman Co. V. R.L. Chaides Constr. Co.*, 960 F.2d 1020, 1041 (Fed. Cir. 1992) (“*A.C. Aukerman*”) (*en banc*).

¹³³ JX-4 (the ‘173 patent).

external shock forces. Referring in more detail to Figure 2 of the patent:



a scanning mirror (52) is mounted to a support (54) which is attached to a V-block (48). A leaf spring (34) is formed at a 90° angle via the attached V-block (48), clamping pin (46) and screw (50). The two ends of the leaf springs are fixedly attached to the base plate (40) by upright brackets (38, 44). Periodic pulses of electric current flow through an electromagnetic coil (58) causing it to either attract or repel a permanent magnet (56) mounted on the mirror support (54), thereby causing the spring to flex and the mirror and its holder to move. Due to the combined mass of the mirror, support and magnet, in conjunction with the resilience of the leaf spring, the whole assembly oscillates about an axis (66) near the center of pin (46). The resulting oscillating motion of the mirror causes the laser beam striking the mirror to scan in a plane parallel to the support plate (40).¹³⁴ As stated in the patent, “[b]y providing a well-defined center of rotation at axis 66 that is close to the scan component, image translation is minimized.”¹³⁵

¹³⁴ JX-4 (the ‘173 patent), col. 4:23-5:5; RX-1C (Palmer Direct) at Q. 51; RDX-90 (Fig. 2 of the ‘173 patent).

¹³⁵ JX-4 (the ‘173 patent), col. 5:21-24.

2. U.S. Patent Application No. 07/520,464

U.S. Patent Application No. 07/520,464 (“the ‘464 application”), filed May 8, 1990, is a continuation-in-part (“CIP”) of the ‘770 application.¹³⁶ The ‘464 application contained several figures and associated descriptions depicting various structures by which one could cause a laser beam to oscillate to produce a scan line.¹³⁷ Upon initial examination of the ‘464 application the Examiner determined that the application presented eight patentably distinct inventions and therefore required Symbol to elect to prosecute only one of these inventions on the merits.¹³⁸ In response to the Examiner’s rejection, Symbol elected to prosecute one of the inventions in the ‘464 application and through a series of separate divisional and continuation applications pursued the other distinct inventions identified by the Examiner. The applicants elected Group IV, corresponding to Figure 5, defined by claims 1, 10, 24, 51 and 52 for prosecution on the merits.¹³⁹ Subsequent to receiving the restriction requirement filed in the ‘464 application, the applicants filed U.S. Patent Application No. 07/868,401 as a divisional application of the ‘464 application on April 14, 1992.¹⁴⁰ U.S. Patent Application No. 07/868,401 lead to the issuance of United States Patent No. 5,280,165 (“the ‘165 patent”) on January 18, 1994. The descendants of this ‘401 application led ultimately to the ‘173

¹³⁶ JX-13 (the ‘149 prosecution history) at SPL0197611-660. As filed, the ‘770 application contained eleven figures depicting various embodiments of invention directed to scanning components. In an Office Action dated February 6, 1991, the Examiner indicated that claims 1-28 and 30-39 were withdrawn from consideration pursuant to a restriction requirement. RX-509 (the ‘110 prosecution history) at MITC0198203 - 214. Subsequently applicants selected claims 29 and 40-50 for prosecution on the merits. The Examiner, however, rejected claims 29 and 40-50 based on several United States patents, including United States Patent No. 4,632,501 to Paul Glynn. *See* JX-166 (the ‘501 patent).

¹³⁷ JX-13 (the ‘149 prosecution history) at SBL0197607-659.

¹³⁸ JX-13 (the ‘149 prosecution history) at SBL0197682-685.

¹³⁹ JX-13 (the ‘149 prosecution history) at SBL0197687-688.

¹⁴⁰ JX-15 (the ‘165 prosecution history).

patent.

3. U.S. Patent Application No. 08/589,761

On January 22, 1996, Symbol filed U.S. Patent Application No. 08/589,761 (“the ‘761 application”) - one of the ‘401 descendants - directed to the invention disclosed in Figure 2 of the original application which, as will be shown below, forms the basis for the claimed invention which is asserted in this present investigation.¹⁴¹ Consistent with the Examiner’s restriction requirement in the ‘464 application, Symbol filed a Preliminary Amendment which deleted Figures 3-9 from the earlier patent application and their associated description, thereby leaving only the embodiment of Figure 2.¹⁴² In that same Preliminary Amendment, Symbol added new claims 51 - 75, which Symbol stated were drawn to the embodiment of Figure 2.¹⁴³ In a Second Preliminary Amendment dated March 26, 1996, Symbol added additional claims 76-79, which, again as stated by Symbol, were all directed to the embodiment of Figure 2.¹⁴⁴

In the first Office Action, the Examiner objected to the term “resilient spring elements” contained in the abstract on the basis that “the current invention has only a single bent spring.”¹⁴⁵ Additionally, the Examiner objected to the specification for failing to provide proper support for the claimed subject matter (spring elements) as the specification only “supports a single bent spring” and further that the specification discloses a single spring that is “bent and clamped between pin 46 and

¹⁴¹ JX-16 (the ‘013 prosecution history) at SBL 0204042-4049.

¹⁴² JX-16 (the ‘013 prosecution history) at SBL0203986-4035; Allais, Tr. 358-360; RX-1C (Palmer Direct) at Q. 76.

¹⁴³ JX-16 (the ‘013 prosecution history) at SBL0203986-4035.

¹⁴⁴ JX-16 (the ‘013 prosecution history) at SBL0204050-56.

¹⁴⁵ JX-16 (the ‘013 prosecution history) at SBL0204057-66, SBL0204058-60; Allais, Tr. 364-65.

block 48.”¹⁴⁶

In this Office Action, the Examiner went on to state that claims 51-58, 62-75 and 77 covered plural springs and therefore, were objectionable under 35 U.S.C. § 112 “as the disclosure is enabling only for claims limited [to] the single leaf spring bent around pin 46.”¹⁴⁷ The Examiner’s statement, that remaining claims 76, 78 and 79 “are silent as to the specific spring but in light of the specification, these claims, although very broad, are not contrary to the disclosed invention” simply indicated that these claims (76, 78 and 79) were not *per se* objectionable under § 112, in that they were not expressly contrary to the specification disclosure (*i.e.*, they did not expressly require plural spring elements).¹⁴⁸ However, notwithstanding the fact that these claims were not objectionable under § 112, the Examiner rejected these claims under 35 U.S.C. § 103 as unpatentable over the prior art.¹⁴⁹

In response, Symbol cancelled all pending claims and added new claims 80-108 replacing the term “spring elements” with “spring portions” throughout the claims and the abstract.¹⁵⁰ In doing so, Symbol not only conformed the claims to the disclosure of a single bent spring but also avoided the prior art that disclosed multiple springs, *i.e.*, spring elements. In view of this amendment, the Examiner allowed certain claims stating:

[t]he prior art of record fails to reasonably teach or suggest the single flexure or spring means which is in two portions. These two portions being generally orthogonal to each other as they are bent at the [sic] an axis. It is about this axis

¹⁴⁶ JX-16 (the ‘013 prosecution history) at SBL204059-60; Allais, Tr. 366-67; RX-1C (Palmer Direct) at Q. 77.

¹⁴⁷ JX-16 (the ‘013 prosecution history) at SBL204060.

¹⁴⁸ JX-16 (the ‘013 prosecution history) at SBL204060.

¹⁴⁹ JX-16 (the ‘013 prosecution history) at SBL204060, SBL204063-64; Allais, Tr. 371-72.

¹⁵⁰ JX-16 (the ‘013 prosecution history) at SBL0204076-87; RX-1C (Palmer Direct) at Q. 78; Allais, Tr. 373-75.

which the mirror generally oscillates.¹⁵¹

Despite the Examiner's allowance of certain claims in the '761 application, Symbol abandoned the application and filed two new applications. One of those applications was the '401 application which led to the issuance of the '173 patent-in-suit.

4. U.S. Patent Application No. 07/868,401

Similar to the '761 application, by Preliminary Amendment Symbol again canceled Figures 3-9 and associated description and added claims 51-69 stating that these claims were "directed to the embodiment of Fig. 2."¹⁵² Added claims 51, 52 and 58 read as follows:

51. In a scanner for reading indicia having parts of different light reflectivity by directing light toward the indicia and by collecting reflected light returning from the indicia, an arrangement comprising:
 - a. a support;
 - b. a scanner component;
 - c. a holder for supportably mounting the scanner component for oscillating movement;
 - d. an electromagnetic drive for oscillating the holder and the scanner component about an axis to direct light from the scanner component in a scan pattern over the indicia, and
 - e. means for shock protecting the scanner component, including a stop fixed to the support and operative for abutting the holder in the event that the arrangement is subjected to external shock forces.
52. The arrangement according to claim 51, wherein the holder includes flexible, taut, spring portions operatively connected to the scanner component.

¹⁵¹ JX-16 (the '013 prosecution history) at SBL0204088-93, 91; Allais, Tr. 375-76, 380.

¹⁵² JX-12 (the '173 prosecution history) at MITC191964-970 (including the deletion of Figures 6a and 6b and the description thereof) and MITC191911-960; Allais, Tr. 382-83; RX-1 C (Palmer Direct) at Q. 79.

58. The arrangement according to claim 52, wherein the spring portions are integral with each other.¹⁵³

In an Office Action dated April 13, 1998, the Examiner rejected claims 51-54, 57, 60-69 under 35 U.S.C. §103 (a) as unpatentable in light of U.S. Patent No. 4,902,083 ("the '083 patent").¹⁵⁴ As stated by the Examiner, the '083 patent disclosed "a support 36 for mirror 30 which is attached by two flexures 32 and 34 to a base 21."¹⁵⁵

The '083 patent, which issued to B. Wells on February 20, 1990 and forms part of the prior art to the '173 patent, discloses a scanning mirror (30) mounted to a base by crossed flexure springs (32) and (34). Springs (32) and (34) are generally planer and intersect at a 90° angle.¹⁵⁶ Figure 2 of the '083 patent is reproduced herein:

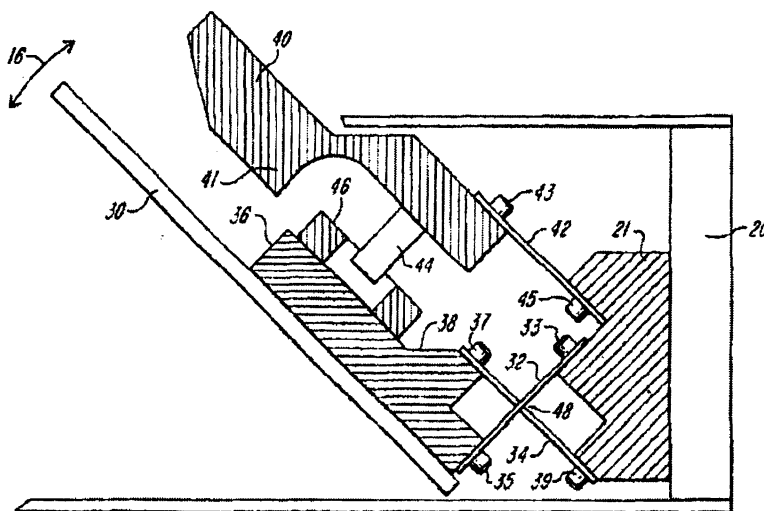


FIG. 2

¹⁵³ JX-12 (the '173 prosecution history) at MITC191966-67 (emphasis added).

¹⁵⁴ JX-12 (the '173 prosecution history) at MITC 191975-981, 977-978.

¹⁵⁵ JX-170 (the '083 patent), Figure 2, springs 32 and 34 and col. 4:48-5:10 (emphasis added).

¹⁵⁶ JX-170 (the '083 patent), col. 4:48-5:10.

As can be seen from the figure, mirror (30) is directly attached to a mirror support (36). One end of spring (32) is attached to a mirror support (36) and the other end is attached to base (21). A second spring (34) is also attached to mirror support (36) by fastener (37) and to base (21) by fastener (39). Two springs (32) and (34) act together so that mirror (30) and mirror support (36) effectively pivot around point (48) at which springs (32) and (34) cross.¹⁵⁷ As described in the patent, the oscillating motion of mirror (30) is obtained by the interaction of a permanent magnet (44) with a coil (46). Circuitry (not shown) supplies an alternating current to coil (46) which produces a fluctuating magnetic field which causes magnet (44) and coil (46) to be alternately attracted and repelled at the frequency of the current.¹⁵⁸ Under the influence of the driving motor, the mirror oscillates in the direction of arrow (16) around point (48), thereby causing the laser beam, reflected from mirror (30) to form a scan line.¹⁵⁹

Although the Examiner rejected claims 51-54, 57 and 60-69 because the language of the claims encompassed the constrained spring system disclosed in Figure 2 of the '083 patent, he noted that some of the dependent claims (claims 55, 56, 58 and 59) distinguished over the spring arrangement disclosed in the '083 patent because:

... the prior art of record ['083 patent] would fail to teach or fairly suggest the pair of upright leg brackets for attachment to the flexure members (claim 55) or that the two portions of the flexures are part of one integral spring (claim 58) or the holder including the block, cylindrical clamping pin and fastener to which the flexures are attached (Claim 59) in conjunction with all the other limitations of these claims and any claim they are dependent upon. Claim 56 is dependent upon claim 55 and would

¹⁵⁷ JX-170 (the '083 patent); JX-12 (the '173 prosecution history) at MITC 191975-981.

¹⁵⁸ JX-170 (the '083 patent) at col. 5:18-47.

¹⁵⁹ JX-170 (the '083 patent) at col. 5:5-10.

be allowable for the same reasons.¹⁶⁰

According to the Examiner, claim 58 included the requirement that the spring portions be **integral** with each other in conjunction with the limitation contained in claims 52 (spring portions be **flexible** and taut) and claim 57 (arrangement). In response to the Examiner's objections, Symbol **acquiesced** and re-wrote claim 51 to include the limitations of claim 52 (*i.e.*, that the holder includes **flexible**, taut spring portions), and claim 58 (*i.e.*, that two spring portions of the spring are integral with each other).¹⁶¹ This amendment took the form of the language that now appears in issued claim **1** :

...said spring having flexible, taut, spring portions integral with each other.¹⁶²

In addition to the amendment to claim 51, Symbol added new claim 70 which described the flexural components as: "a single, unitary, flexural component for supportably mounting the scan mirror and the holder for reciprocally oscillating movement."¹⁶³ With respect to this newly added claim 70, Symbol represented to the Examiner

... new independent claim 70 ... contains the feature of allowable claim 58, [*i.e.* that the two portions of the flexures are part of one integral spring] and with additional elements recited with more specificity than allowable claim 51.¹⁶⁴

Accordingly, by incorporating the features of claims 52 and 58 into claim 70, Symbol **limited** that claim to include only a spring that has two taut portions of flexures that are part of one **integral** spring as shown and described in the patent. Based on these amendments, the Examiner **allowed** the claims and United States Patent No. 5,917,173 issued on June 29, 1999.

¹⁶⁰ JX-12 (the '173 prosecution history) at MITC191975-981, 979 (indicating the **allowability** of claims 55, 56, 58 and 59), MITC 191966-967 (showing pending claim 58 depends from **claim** 52 which depends from claim 51) (emphasis added); Allais, Tr. 383-385.

¹⁶¹ JX-12 (the '173 prosecution history) at MITC191985-990.

¹⁶² JX-4 (the '173 patent).

¹⁶³ JX-12 (the '173 prosecution history) at MITC0191989.

¹⁶⁴ JX-12 (the '173 prosecution history) at MITC0191989.

B. Claim Construction

1. Asserted Claims

The asserted claims read as follows (with the first instance of the disputed terms highlighted in *italics*):

17. An arrangement in a scanner for reading bar code symbols, comprising:
- a) a *support*;
 - b) a laser diode on the support for generating a laser light;
 - c) a generally planar scan mirror for reflecting the light beam toward a bar code symbol located exteriorly of the apparatus;
 - d) a holder for holding the scan mirror;
 - e) a *single, unitary, flexural component* for supportably mounting the scan mirror and the holder for reciprocally oscillating movement;
 - f) a drive including an energizable electro-magnetic coil and a permanent magnet, for imparting a force to the holder, thereby resulting in movement of the scan mirror and the holder in an oscillating manner, and in flexing of the flexural component, and thereby causing the light beam reflected off the scan mirror to sweep over the symbol to be read; and
 - g) a stop for limiting flexing movement of the flexural component in the event that the arrangement is subjected to external shock forces.
18. The arrangement according to claim 17, wherein the support includes a generally planar base, and wherein the oscillating movement is about an axis that extends generally orthogonally to the base.

2. Disputed Claim Terms

a. “Single, unitary, flexural component”

(1) Position of the parties

Symbol argues that the term “single, unitary, flexural component” in claim 17 of the ‘173

patent should be defined as follows. Symbol states that “single” should be defined as “one” and this is said to be supported by the claims, the specification, and by the plain meaning as set forth in a dictionary definition. Symbol asserts that “unitary” should be defined as “relating to or consisting of a unit.” It is asserted that this construction is supported by the intrinsic record and the ordinary and plain meaning of “unitary.”

Symbol asserts that “flexural component” means “a flexible piece of material that functions like a leaf spring.” Symbol states that the construction is supported by the intrinsic record, including the claims, the specification, and the prosecution history. Symbol rejects Metrologic’s argument that in the prosecution history the Examiner limited the claim language such that the disclosure only enabled a bent spring. Symbol argues that what the Examiner did do was to indicate that the specification did not enable *plural* springs. Symbol also rejects Metrologic’s effort to limit the claim to an embodiment disclosed in Figure 2 of the specification, stating that this is an improper attempt to limit the claim to the specific embodiments described in the specification.

Symbol also argues that Metrologic’s citation of the Examiner’s requirement that in a predecessor application that the application be divided into several “species” based upon different figures does not support Metrologic’s position. Symbol states that there is no evidence that, because the Examiner identified the “species” that led to the issuance of the ‘173 patent by reference to a figure, that the Examiner intended that the ‘173 patent would be limited to only that specific figure.

Symbol also opposes Metrologic’s argument that claim 17 incorporates all of the limitations of non-asserted claim 1. Symbol notes that claim 17 is not a dependent claim to claim 1 and further that the applicant never said that all of the limitations of claim 1 were incorporated into claim 17. Staff supports Symbol’s position. In conclusion, Symbol supports a definition of “a flexible piece

of material that functions like a leaf spring.”¹⁶⁵

Metrologic argues for a different claim construction. Metrologic defines “single, unitary, flexural component” as “a single, one-piece bent spring with flexible, taut spring portions that are integral with each other.” Metrologic states that, as construed by one of ordinary skill in the art, its claim construction is supported by the intrinsic evidence of the ‘173 patent and is consistent with the plain and ordinary meaning of the claim language “single, unitary, flexural component.” Metrologic cites the dictionary definition of “flexural” as “of, relating to, or resulting from flexure” and “characterized by flexure.” Metrologic argues that the dictionary goes on to define “flexure” as “the quality or state of being flexed: flexion” and “turn, bend, fold.”¹⁶⁶ Thus, Metrologic asserts, the plain meaning of “flexural” requires that the single unitary component be flexed or bent as described and shown in Figure 2 of the ‘173 patent.

Metrologic also argues that the specification supports its claim construction. While Metrologic notes that the specification does not specifically define the phrase “single, unitary, flexural component,” the specification describes only a single embodiment which is shown in Figure 2 of the ‘173 patent. Metrologic states that the single embodiment shown in Figure 2 depicts the “single, unitary, flexural component” as a bent leaf spring (34), which is fixedly attached at two ends to a support. Metrologic notes that the patent specification describes leaf spring 34, which is guided around a pin, bent at a 90° angle and fixed at both ends to the base. Metrologic argues that this configuration causes the leaf spring to be taut between the two end mountings. Therefore, Metrologic concludes that the specification’s description of the leaf spring supports the plain meaning that

¹⁶⁵ Complainant’s Proposed Conclusion of Law 39.

¹⁶⁶ Metrologic cites to Webster’s Ninth Collegiate Dictionary (1983). RIB 38.

requires the flexural component to be “flexed or bent.”

Thus, it is argued by Metrologic that the claim language should be construed in light of the specification in instances such as the present one, where there is only one embodiment described and enabled by the ‘173 patent specification and this embodiment is a single bent spring with flexible, taut spring portions that are integral with each other, as shown in Figure 2.

Metrologic also asserts that the prosecution history supports its claim construction. Metrologic states that the Examiner noted during the prosecution of the ‘761 application (the parent application to the ‘173 patent), that by electing to remove all figures other than Figure 2 in response to the restriction requirement, Symbol’s disclosure only enables claims directed to a single bent spring. Metrologic argues that because Symbol itself stated that the ‘173 patent is directed to the embodiment of Figure 2, Symbol cannot now argue for an expanded claim scope that encompasses embodiments that it removed and separately prosecuted in response to a restriction requirement and that it did not disclose and describe.

Metrologic also notes that in numerous instances during the prosecution history, Symbol amended the claims and made arguments to overcome the Examiner’s rejections. Metrologic states that during the prosecution of the ‘761 patent application, the Examiner issued a number of rejections based upon written description, enablement and the ‘083 prior art patent. In response, it is alleged, Symbol cancelled all pending claims and added new claims 80-108 replacing “spring elements” with “spring portions.” Metrologic notes that the Examiner allowed certain of these amended claims stating:

The following is a statement of reasons for the indication of allowable subject matter:
The prior art of record fails to reasonably teach or suggest the single flexure or spring means which is in two portions. These two portions being generally orthogonal to

each other as they are bent at the [sic] an axis.¹⁶⁷

Thus, it is argued, Symbol had to limit the claimed invention to a single spring with two spring portions in order to overcome the two separate flexures disclosed in the '083 prior art patent.

Metrologic asserts that during the prosecution of the '173 patent application, in the April 3, 1998 Office Action, the Examiner again rejected Symbol's claims (*i.e.*, claims 51-54, 57, 60-69) as unpatentable over the '083 prior art patent. Metrologic notes that the Examiner stated that claims 55, 56, 58 and 59 are objected to as dependent upon a rejected base claim [51], but would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims. Metrologic also states that the Examiner further noted that the prior art record of record [the '083 patent] would fail to teach or fairly suggest that the two portions of the flexures are part of one integral spring (claim 58).¹⁶⁸

Metrologic asserts that in response to the Examiner's objections, Symbol acquiesced and rewrote claim 51 to include the limitations of claim 52 (*i.e.*, that the holder includes flexible, taut spring portions), and claim 58 (*i.e.*, that the spring portions are integral with each other). Metrologic also notes that Symbol added new claim 70 (which ultimately issued as claim 17) and represented to the Examiner:

. . . new independent claim 70 . . . contains the feature of allowable claim 58, and with additional elements recited with more specificity than allowable claim 51.¹⁶⁹

Therefore, Metrologic concludes that the claim limitation of "single, unitary, flexural component" as it appears in claim 70 (which issued as claim 17) has incorporated the feature of intervening

¹⁶⁷ RIB 40 (emphasis in original).

¹⁶⁸ RIB 41 citing JX-12 (the '173 prosecution history) at MITC191975-981, 979-980.

¹⁶⁹ RIB 41 citing JX-12 (the '173 prosecution history) at MITC0191989.

claims 52 and 58. Metrologic argues that Symbol was required to incorporate these features (*i.e.*, flexible taut portions integral with each other) in order to obtain allowance.

Metrologic rejects Symbol's argument that construing claim 70 (issued claim 17) to cover "flexible taut portions" violates the doctrine of claim differentiation because dependent claim 74 (issued claim 21) includes this limitation. Metrologic argues that the doctrine of claim differentiation creates only a rebuttable presumption that each claim in a patent has a different scope. Metrologic asserts that it is well established that the written description and the prosecution history overcome any presumption that may arise. More specifically, Metrologic asserts that Symbol's allegedly express incorporation of these limitations into claim 17 during the prosecution history overcomes any presumption of claim differentiation. In any event, Metrologic states that Symbol's allegedly express statement requires that, at a minimum, claim 17 include the limitations of claim 58 and therefore should be construed to cover a single spring with integral spring portions. Therefore, Metrologic argues that Symbol's claim construction is overly broad and should be rejected. In conclusion, Metrologic supports the following claim construction: "a single, one-piece bent spring with flexible, taut spring portions that are integral with each other."¹⁷⁰

(2) Discussion

(a) General Arguments

The plain meanings of the claim terms "single" and "unitary" support the claim construction proposed by Symbol and Staff. "Single" means one.¹⁷¹ Metrologic has advanced no plain meaning argument to refute this conclusion. "Unitary" means "of or relating to a unit." Again, Metrologic has

¹⁷⁰ Respondents' Proposed Conclusion of Law 8.

¹⁷¹ CX-140 (Merriam-Webster's Collegiate Dictionary) at 1095. Merriam-Webster's Collegiate Dictionary (10th ed. 1995) states that "single" means "consisting of only one number."

advanced no plain meaning argument to refute this conclusion.

With respect to “flexural component,” it must be interpreted in accordance with its ordinary meaning, as understood by one of ordinary skill in the art.¹⁷² Symbol’s expert Dr. Allais construed the term to mean “a component that functions like a leaf spring.”¹⁷³ Staff supports Symbol’s position. By contrast, Metrologic’s expert, Mr. Palmer, proposes that the term “flexural” means “bent.”¹⁷⁴ Metrologic cites the dictionary definition of “flexural” as “of, relating to or resulting from flexure” and “characterized by flexure.”¹⁷⁵ Metrologic notes that the dictionary goes on to define the term “flexure” as “the quality or state of being flexed: FLEXION. 2: TURN, BEND, FOLD.”¹⁷⁶

Part of the dispute among the parties is whether flexural means bent or capable of being bent. As the Federal Circuit has stated, adherence to dictionary definitions without reference to the context and meaning provided by the specification can lead to an incorrect result.¹⁷⁷ Clause (f) of claim 17 provides for a:

drive including an energizable electro-magnetic coil and a permanent magnet, for imparting a force to the holder, thereby imparting a force to the holder, thereby resulting in movement of the scan mirror and the holder in an oscillating manner, and *in flexing of the flexural component*,...¹⁷⁸

In addition, the specification states that the laser scanner “of the present invention includes a flexible beam, *e.g.* a generally planar leaf spring 34.”¹⁷⁹ The specification also provides:

Once bent, the leaf spring 20 releases its stored energy, thereby displacing the

¹⁷² *Phillips*, 415 F.3d at 1313.

¹⁷³ CX-109C (Allais Direct) at Q. 112.

¹⁷⁴ RX-1C (Palmer Direct) at Q.106.

¹⁷⁵ CX-140 (Merriam-Webster’s Collegiate Dictionary) at 445.

¹⁷⁶ CX-140 (Merriam-Webster’s Collegiate Dictionary) at 445.

¹⁷⁷ *Phillips*, 415 F.3d at 1321-22.

¹⁷⁸ JX-4 (the ‘173 patent) at col. 6:64-7:1 (emphasis added).

¹⁷⁹ JX-4 (the ‘173 patent) at col. 4:23 -26.

magnetic/reflector assembly back to and past the rest position. The entire assembly oscillates in a damped manner, until eventually coming to a halt in the rest position.¹⁸⁰

Thus using the dictionary definitions in conjunction with the context of the specification requires that the definition of flexural component must reflect the ability of the component to be bent, turned, or folded, not that the component be in a bent, turned or folded position at all times. In light of this, and the aforementioned discussion, the definition of flexural component is determined to be “a flexible piece of material that functions like a leaf spring.”¹⁸¹ Accordingly, Mr. Palmer’s definition is rejected.

In addition, Metrologic’s proposal to limit the term “flexural component” to the embodiment of Figure 2 will not be adopted.

(b) Metrologic’s Figure 2 Argument

U.S. Patent Application No. 07/520,564 (the ‘464 application), filed on May 8, 1990, is a continuation-in-part of the ‘770 application.¹⁸² The ‘464 application contained several figures and associated descriptions depicting various structures by which one could cause a laser beam to oscillate to produce a scan line. The Examiner determined that the application contained eight “patentably distinct” inventions and therefore required Symbol to elect to prosecute only one of these inventions on the merits.¹⁸³ In the words of the Examiner, applicant was directed to include “an identification of the species that is elected ... and a listing of all claims readable thereon, including

¹⁸⁰ JX-4 (the ‘173 patent) at col. 5:6-11.

¹⁸¹ In addition, the testimony of Dr. Allais cited above does supports this result. *See also the* testimony of Metrologic’s employee, George Plesko, CX-179C (Plesko Dep) at 128-30, cited by Symbol at CIB 9.

¹⁸² JX-13 (the ‘149 prosecution history) at SBL0197607-659.

¹⁸³ JX-13 (the ‘149 prosecution history) at SBL019682-685.

any claims subsequently added.”¹⁸⁴ In response to the Examiner’s action, Symbol elected to pursue “... the invention of Group IV, claims 1, 10, 24, 51, and 52 ...”¹⁸⁵ The Examiner referred to this invention as “Group IV, drawn to Figure 5, includes claims 1, 10, 24, 51, 52.”¹⁸⁶ There is nothing in the language of the Examiner or the applicant regarding applicant’s election to proceed with the invention of Group IV that supports Metrologic’s contention that the claim language in question is limited to Figure 2 in the ‘173 patent.

Subsequent to receiving the restriction requirement in the ‘464 application, the applicants filed U.S. Patent Application No. 07/868,401 (“the ‘401 application”) as a divisional application of the ‘464 application on April 14, 1992.¹⁸⁷ The ‘401 application lead to the issuance of United States Patent No. 5,280,165 (“the ‘165 patent”) on January 18, 1994.¹⁸⁸ The descendants of this ‘401 application lead ultimately to the issuance of the ‘173 patent.

On January 22, 1996, Symbol filed U.S. Patent Application No. 08/589,761 (“the ‘761 application”), which is one of the descendants of the ‘401 application. However, while the Examiner noted that “... figures 3-9 have been cancelled ...,” nowhere does the Examiner in the language cited by Metrologic state that the language limits the scope of the claim language to that set forth in Figure 2 of the ‘173 patent.¹⁸⁹

In that same Preliminary Amendment which deleted Figures 3-9 from the earlier patent

¹⁸⁴ JX-13 (the ‘149 prosecution history) at SBL019683.

¹⁸⁵ JX-13 (the ‘149 prosecution history) at SBL019687-88. In addition, through a series of separate divisional and continuation applications, Symbol pursued the other distinct inventions identified by the Examiner.

¹⁸⁶ JX-13 (the ‘149 prosecution history) at SBL019683.

¹⁸⁷ JX-15 (the ‘165 prosecution history).

¹⁸⁸ JX-15 (the ‘165 prosecution history).

¹⁸⁹ JX-16 (the ‘013 prosecution history) at SBL0204057-4066, 58.

application, Symbol stated the following:

In the proposed amendments, applicant has canceled all original claims and replaced them with a new set of claims 51-75 *which are directed to the embodiment of Fig. 2.*¹⁹⁰

However, an applicant must in clear and unambiguous terms give up a portion of the scope a claim.¹⁹¹ Symbol's statement cited above that the claims are "directed to the embodiment of Fig. 2" does not reflect such clear and unambiguous language, *i.e.* manifest exclusion or express disclaimer. Accordingly, Metrologic's argument that the prosecution history limits the scope of the claim to Figure 2 of the '173 patent is rejected.

Nor does the specification support Metrologic's argument that "flexural component" is limited to leaf spring (34) of Figure 2. The specification does not provide a definition for the term "flexure" or "flexural." As noted above, those terms must be defined by their plain meaning. Also, in the specification, the following language "[a]s shown in Figure 2, one embodiment 30..."¹⁹² is set forth. It clearly demonstrates that Figure 2 is but one embodiment of the '173 patent.

The language of the specification clearly supports this conclusion. After describing in detail the Figure 2 embodiment,¹⁹³ the specification goes on to state the following:

While the invention has been illustrated and described as embodied in a power-saving scanning arrangement, *it is not intended to be limited to the details shown*, since various modifications and structural changes may be made without departing from the spirit of the present invention.¹⁹⁴

Much argument has been presented that the Examiner's actions in rejecting certain of the claims

¹⁹⁰ JX-16 (the '013 prosecution history) at SBL0204049 (emphasis added).

¹⁹¹ CIB 11 citing *Playtex Prods., Inc. v. Procter & Gamble Co.*, 400 F.3d 901, 907-08 (Fed. Cir. 2005) ("*Playtex*").

¹⁹² JX-4 (the '173 patent) at col. 4:24-25.

¹⁹³ JX-4 (the '173 patent) at col.4:24-5:28.

¹⁹⁴ JX-4 (the '173 patent) at col. 5:29-33 (emphasis added).

presented by Symbol support a particular type of flexural component. In all of these instances, the Examiner rejected multiple springs or spring portions because the patent disclosure showed only a single spring.¹⁹⁵ When the applicant modified the claims to require a single spring, the rejections concerning written description support were withdrawn by the Examiner.

Accordingly, Symbol's and Staff's proposed definition of "flexural component" as "a flexible piece of material that functions like a leaf spring" is adopted.

(3) Conclusion

Accordingly, the phrase "**single, unitary, flexural component**" in claim 17 is construed as follows: "**single**" refers to "**one**"; "**unitary**" refers to "**of or relating to a unit**"; and "**flexural component**" refers to "**a flexible piece of material that functions like a leaf spring.**"

b. "Support"

Metrologic argues that the term "support" as claimed in claims 17 and 18, is "a base structure to which the other components may be mounted." Metrologic states that there is no requirement that all of the components be mounted to a single base structure, as long as there is a fixed physical relationship between them. Metrologic asserts that it is not necessary that the scanning motor be mounted to the same structure.¹⁹⁶

¹⁹⁵ JX-16 (the '013 prosecution history) at SBL0204058. "However, there is no support for plural elements with the disclosure." *Id.* at SBL0204059. "The written description supports a single bent spring...therefore a single spring is essential to the operation of the disclosed invention." *Id.* at SBL0204060.

¹⁹⁶ RIB 42. Metrologic also makes an argument that the importance of this definition is not relevant to the question of infringement, but rather to the question of validity and that Symbol's definition is an effort to avoid the prior art. This is an inappropriate argument to be made in the context of claim construction. Claim construction is not to be determined with an eye toward how it may affect subsequent issues in the case such as infringement or validity, but should be determined on the basis of such considerations as plain meaning, intrinsic evidence and, in appropriate (continued...)

Symbol and Staff argue for a definition of support as “a component upon which another component is mounted.” Staff, like Metrologic, asserts that the only relevance of the definition of support is with regard to prior art. As with Metrologic, this argument is inappropriate within the context of claim construction and will not be considered here.¹⁹⁷ Staff also states that it becomes clear that the claimed support must be a structure that holds a laser diode when claim term (a) of claim 17 is read in conjunction with claim term (b) of claim 17, “a laser diode *on the support* for generating laser light.”¹⁹⁸ Symbol states that the claim is not limited to any particular support, and the specification describes both a “base support 40” and “a rear support 54,” which supports the conclusion that the term “support” is not limited to a particular type or location of support except as further described in the claim itself.

Symbol’s arguments are persuasive. The definition supported by Symbol and Staff comports with the plain meaning of support, unlike the more narrow definition suggested by Metrologic. The specification is replete with references to various types of supports: “base support 40,”¹⁹⁹ “rear support 54,”²⁰⁰ and “flexible support.”²⁰¹ Clearly “support” encompasses more than a base support.

Accordingly, “support” is defined as **“a component upon which another component is**

¹⁹⁶(...continued)

circumstances, extrinsic evidence. See *Union Carbide Chemicals & Plastics Technology Corp. v. Shell Oil Co.*, 425 F.3d 1366, 1373 (Fed. Cir. 2005) (“*Union Carbide*”) (“Although often difficult to distinguish claim construction and infringement, this courts case law requires the distinction.”); *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996) (holding that construing patent claims is a question of law for the judge, separate from determining whether infringement occurred which is a question of fact to be submitted to the jury). Accordingly, this argument of Metrologic is rejected.

¹⁹⁷ See previous footnote above.

¹⁹⁸ SRB 4 (emphasis in original).

¹⁹⁹ JX-4 (the ‘173 patent) at col. 4:28.

²⁰⁰ JX-4 (the ‘173 patent) at col. 4:39-40, 60.

²⁰¹ JX-4 (the ‘173 patent) at col. 5:3.

mounted.”

C. Infringement

1. Claim 17

Symbol alleges that Metrologic’s Voyager and Eclipse products, MS5145, MS9535, and MS9540, infringe claim 17 of the ‘173 patent.²⁰² Symbol states that the Voyager and Eclipse products have a single, unitary, flexural component that supports the scan mirror and holder for reciprocally oscillatory movement. Symbol argues that that component is the Kapton® component labeled (9) in CX-116, CX-118, CX-119 and CX-120. Symbol alleges that there is no dispute that this component is “single” and “unitary” and that it bends in operation. Symbol argues that Metrologic’s only argument is based upon its allegedly erroneous claim construction which would require “a spring with integral portions.” Symbol states that under Symbol’s proposed claim construction, the accused products infringe and that Metrologic does not contend otherwise. Further, Symbol states that under Metrologic’s claim construction, Metrologic’s products still infringe.²⁰³ Staff agrees with Symbol.²⁰⁴

Metrologic states that the primary issue before the Court is the proper claim construction of claim limitation (e), “single, unitary, flexural component.” As support for its allegation that its products do not infringe, Metrologic restates its arguments regarding claim construction of this claim term.²⁰⁵

For the reasons set forth below, Metrologic’s products are found to infringe claim 17 of the

²⁰² CIB 55-56 citing CFF 4.143.

²⁰³ CIB 56.

²⁰⁴ SIB 38-39.

²⁰⁵ RIB 77-78; RRB 10-18.

‘173 patent. In the previous section on claim construction, the claim term “single, unitary, flexural component” means a flexible piece of material that functions like a leaf spring. Metrologic’s scan element includes a Kapton® polymer that, among other things, is neither bent nor taut in its resting position.²⁰⁶ In its resting state, the leaf spring is straight with no integral spring portions. As the permanent magnet interacts with the varying magnetic field from the electromagnet, the leaf spring bends one way or the other. The Kapton® polymer in Metrologic’s products is covered by the claim term “single, unitary, flexural component.” Additionally, all of the parties agree that the products in question infringe all of the other claim terms of claim 17 of the ‘173 patent.²⁰⁷ Accordingly, Metrologic’s products directly infringe claim 17 of the ‘173 patent.

2. Claim 18

Complaint states that there is no dispute that the accused products meet the additional limitation of claim 18 of the ‘173 patent, which reads: “[t]he arrangement according to claim 17, wherein the support includes a generally planar base, and wherein the oscillating movement is about an axis that extends generally orthogonally to the base.” Symbol cites as support the following references: CFF 4.162-4.166; RX-1C (Palmer Direct) at Q. 94; CX-109C (Allais Direct) at Q. 122-24; CX-116 (MS9540 scan board), CX-120 (MS9540 scanning mirror motion), and CDX-15C (MS9540 flipper). A review of the evidence cited, and the briefs of the parties indicates that Symbol’s assertion is reasonable. Accordingly, Metrologic’s products cited above also infringe claim 18.

²⁰⁶ RPX-14 (MS9535 VoyagerBT); RPX-17 (MS9540 Voyager CG); RPX-19 (MS5145 Eclipse); RPX-32 (MS9540 Voyager CG scan board); RPX-33 (MS5145 Eclipse scan board); RX-503C (Drawing); RDX-96 (MITC).

²⁰⁷ RX-1C (Palmer Direct) at Q. 91-92; RIB 10; SIB 38-39; CIB 55-56.

D. Domestic Industry - Technical Prong

Symbol asserts that, based on its claim construction, the following products satisfy all of the limitations of claim 17 of the '173 patent: SE1200, SE1224, SE1524, SE900, SE923, SE800 and SE824.²⁰⁸ Symbol also asserts that, based on its discussion regarding how Symbol's SE1200, SE1224, SE800, SE824, SE900 and SE923 products satisfies the "planar, resilient non-metallic element" limitation of claim 48 of the '627 patent, it also shows that these products satisfy the "single, unitary, flexural component" limitation of claim 17 of the '173 patent.²⁰⁹ Staff agrees that the evidence shows that Symbol practices claim 17 of the '173 patent.²¹⁰

According to Symbol, Metrologic does not contest that under Symbol's proposed claim construction, these products practice claims 17 and 18.²¹¹ According to Symbol, Metrologic's expert, Mr. Palmer, even agrees that the SE1524 meets all of the limitations of claim 17 under Metrologic's claim construction.²¹²

Metrologic asserts that the SE1200 product does not practice either claim 17 or 18 of the '173 patent because it does not contain a single spring having integral portions defined by either a bend or some other structure.²¹³ This position is based on Metrologic's claim construction, which was rejected above, and does not need to be addressed any further.

Because there is no dispute that Symbol's SE1524 product exploits or practices claim 17 of

²⁰⁸ CIB 86 citing CX-109C (Allais Direct) at Q. 125-33; CDX-2 (SE800 and SE824), CDX-5 (SE1524); CDX-7 (SE900 and SE923); CDX-26 (SE800/824); CDX-27 (SE900/923); CDX-29 (SE1200/1224); and CDX-30 (SE1524).

²⁰⁹ CIB 87.

²¹⁰ SIB 50.

²¹¹ CIB 86-87.

²¹² RX-1C (Palmer Direct) at Q.107-09.

²¹³ RIB 101-02; RX-1C (Palmer Direct) at Q.112.

the '173 patent-at-issue, the undersigned finds that Symbol has satisfied the technical prong requirement of 19 U.S.C. §1337 with respect to the '173 patent. Accordingly, the undersigned need not undertake an analysis of Symbol's SE1200, SE1224, SE900, SE923, SE800 and SE824 products to see whether those products also practice claim 17 of the '173 patent. The fact that Symbol's SE1524 product practices the '173 patent is sufficient to satisfy the technical prong requirement.

According, the undersigned finds that the technical prong of the domestic industry requirement is met with respect to the '173 patent.

E. Validity

1. A Person of Ordinary Skill in the Art

Symbol's expert witness Dr. Allais testified that the level of ordinary skill in the art for the '173 patent is some combination of education and experience equivalent to a B.S. degree in mechanical engineering or optical engineering and two years experience in bar code scanner design, where "equivalent" means that neither the degree nor the time in the industry is a minimum such that greater experience and lesser education or greater education and lesser experience could also qualify someone as a person of ordinary skill in the art.²¹⁴ This definition is not opposed by Metrologic or Staff. A review of this definition indicates that it is reasonable when modified to read as follows. One of ordinary skill in the art is one who has some combination of education and experience equivalent to a B.S. degree in mechanical engineering or optical engineering and two years experience in bar code scanner design.

²¹⁴ CX-166C (Allais Rebuttal) at Q. 17.

2. Anticipation

a. U.S. Patent No. 4,632,501

Metrologic argues that claims 17 and 18 of the '173 patent are anticipated by the '501 patent because the '501 patent meets all of the limitations of the asserted claims of the '173 patent. Metrologic states that the '501 patent is a highly relevant reference because it discloses an oscillator that can be used in “portable devices such as laser-type bar code scanning readers.”²¹⁵ Element (a) of claim 17 requires a “support.” Metrologic asserts that this element is found within the '501 patent as this disclosed device, when placed in a portable type bar code scanner, would have a support to hold the components. Metrologic argues that a person of ordinary skill in the art would understand that components of a laser bar code scanner would be mounted to some type of a base or chassis so that the relationship of these components would be fixed relative to each other, and so the scanner would operate. Metrologic also argues that one of ordinary skill in the art would understand that the scanning mirror and laser diode need not be attached to the same support.²¹⁶

Metrologic states that element (b) of claim 17 requires “a laser diode on the support for generating a laser light.” Metrologic argues that one of ordinary skill in the art would understand a laser bar code scanner would use a laser diode as its light source.²¹⁷

Metrologic states that element (c) of claim 17, “a generally planar scan mirror for reflecting the light beam toward a bar code symbol located exteriorly of the apparatus,” is disclosed in the '501 patent, as mirror 14 is a “planar mirror” and the oscillator that is the subject of the '501 patent is “of

²¹⁵ RIB 115 citing to, among other things, JX-166 (the '501 patent) at col. 1:20-21.

²¹⁶ RIB 115-16.

²¹⁷ RIB 116.

the type useful for scanning ... a light beam.”²¹⁸

Metrologic argues that the next element (d) of claim 17, “a holder for holding the scan mirror” is defined by Symbol as a “supporting component.” Metrologic asserts that this element is disclosed in the ‘501 patent as “mirror support 24”²¹⁹ which holds the “scanning mirror 14.”²²⁰

Metrologic states that element (e) of claim 17 requires “a single, unitary, flexural component for supportably mounting the scan mirror and the holder for reciprocally oscillating movement.” Metrologic notes that Symbol construes this claim term as a component that functions as a leaf spring. Metrologic states that the ‘501 patent discloses a “flexural suspension” 18 in Figures 2, 8 and 9 which is a leaf spring that supports the mirror for reciprocally oscillating movement of the mirror.²²¹

Metrologic asserts that the next element (f) of claim 17 requires a “drive including an energizable electro-magnetic coil and a permanent magnet, for imparting a force to the holder, thereby resulting in movement of the scan mirror and the holder in an oscillating manner, and in flexing the flexural component, and thereby causing the light beam reflected off the scan mirror to sweep over the symbol to be read” which is disclosed as “the electromagnetic coil 54 and permanent magnet 34 impart a force on the holder (mirror support 24), thereby moving or oscillating the scan mirror and the holder, causing the leaf spring 18 to flex.”²²²

Metrologic argues that the next element (g) of claim 17 is “a stop for limiting flexing movement of the flexural component in the event that the arrangement is subjected to external shock

²¹⁸ RIB 116 citing JX-166 (the ‘501 patent) at col. 1:5-8; col. 2:43-44, and col. 3:51-52.

²¹⁹ RIB 116 citing JX-166 (the ‘501 patent) at Fig. 2, Fig.8, and col. 2: 51- 54.

²²⁰ RIB 116.

²²¹ RIB 116 citing to JX-166 (the ‘501 patent) at col. 3:51-4: 8.

²²² RIB 117 citing to JX-166 (the ‘501 patent) at col. 2:51-3:20.

forces” which is disclosed as stop surfaces 78 in the ‘501 patent, and which are designed to limit buckling forces on the flexure 18. Metrologic asserts that these stops allow the scanner to withstand shock loads “up to 1,000 or more.”²²³

Metrologic states that Symbol’s argument that the ‘501 patent does not explicitly reference standard components, *e.g.*, a laser diode or sensor, is unsupportable as the Examiner continually rejected pending claims of the ‘173 patent over the ‘083 patent (which cites the ‘501 patent as prior art). Yet, Metrologic asserts, Symbol never argued, in response to the Examiner’s rejections, that the ‘083 patent was insufficient for lack of components, such as lasers.

Metrologic states that the thrust of Symbol’s argument is that certain terms of claim 17 are not specifically disclosed in the ‘501 patent. In response, Metrologic asserts that anticipation may be established if a missing claim element is within the knowledge of one of ordinary skill in the art.²²⁴ Metrologic also argues that “it is well settled that prior art under 102(b) must sufficiently describe the claimed invention to have placed the public in possession of it - such possession is effected if one of ordinary skill in the art could have combined the publications description of the invention with his own knowledge to make the claimed invention.”²²⁵

Metrologic argues that the “anticipation rule” “accommodates situations where the common knowledge of technologists is not recorded in the reference; that is where technological facts are known to those in the field of invention, albeit not to judges.”²²⁶ Metrologic asserts that where an anticipating reference is silent about a particular characteristic, reference can be made to extrinsic

²²³ RIB 117 citing to JX-166 (the ‘501 patent) at col. 4:18-35.

²²⁴ RRB 58 citing *In re Graves*, 69 F.3d 1147, 1152 (Fed. Cir. 1995) (“*Graves*”).

²²⁵ RRB 58 citing *In re Donahue*, 766 F.2d 531, 533 (Fed. Cir. 1985) (“*Donahue*”).

²²⁶ RIB 119 citing *Continental Can*, 948 F.2d at 1269.

evidence, as a skilled artisan can take the reference's teachings and his or her knowledge of the particular art in order to possess the invention. Therefore, Metrologic states that individuals of ordinary skill in the art of laser bar code technology could take their knowledge of the availability of laser diodes and how a scanning device would be mounted within a laser scanner, together with the teaching of the '501 patent, and possess the invention of claim 17 of the '173 patent.

More specifically, Metrologic states that the '501 patent, when read from the point of view of one of ordinary skill in the art, discloses each and every limitation of claim 17 of the '173 patent. Metrologic argues that Symbol disputes only whether two elements of claim 17 are disclosed in the '501 prior art patent, namely, elements (a) "a support;" and (b) "a laser diode on the support for generating a laser light."²²⁷ Metrologic asserts that "it is undisputed" that the '501 patent discloses an oscillator or scanning component that can be used in "portable devices such as laser-type bar code scanning readers," a point, it is alleged, that even Dr. Allais concedes.²²⁸

Metrologic also argues that the '501 patent discloses elements (a) and (b) of claim 17. Metrologic asserts that Dr. Allais conceded that one of ordinary skill in the art in 1989 would know that, in order to operate the device in the '501 patent when placed in a portable laser type bar code scanner, it would have to have a support to hold the components, *i.e.*, the components would be mounted to some type of base or chassis. Similarly, Metrologic states that Dr. Allais conceded that one of ordinary skill in the art in 1989 would understand that a laser bar code scanner as disclosed in the '501 patent would use a laser diode as its light source.²²⁹ For all of the above-stated reasons, Metrologic asserts that the '501 patent anticipates claim 17 of the '173 patent.

²²⁷ RRB 58.

²²⁸ RRB 58.

²²⁹ RRB 58.

Symbol states initially that, because the Examiner considered the '501 patent in his consideration of the application leading up to the issuance of the '173 patent, the presumption of validity for the issued patent, the '173 patent, is greater. Symbol also notes that neither "a support" nor "a laser diode on the support for generating a laser light," both of which are claim terms in claim 17 of the '173 patent, are specifically disclosed in the '501 patent. Metrologic states that Symbol's expert witness Mr. Palmer's allegedly conclusory statements cannot make up for the lack of disclosure in an allegedly anticipatory reference. Therefore, Symbol states that at least one of the limitations of claim 17 is not disclosed in the '501 patent and therefore Metrologic has failed to show that the '501 patent anticipates claim 17 of the '173 patent.²³⁰ Staff supports Symbol's position.

Metrologic's position is not persuasive. Clause "b)" of claim 17 requires "a laser diode on the support for generating a laser light."²³¹ Metrologic's witness Mr. Palmer states that although such a laser diode is not specifically disclosed in the '501 patent, "[o]ne of ordinary skill in the art would understand that a laser bar code reader would include the use of a laser diode. The laser diode would be attached to the support."²³² In addition, Metrologic argues that Symbol's witness Dr. Allais agreed with Mr. Palmer on this point.²³³

Without directly stating this, Metrologic is asserting the proposition of inherency. That is, when determining under 35 U.S.C. § 102(b) whether a prior art document causes a claim in a later patent to be anticipated, "the four corners of a single, prior art document describe[s] every element

²³⁰ CIB 108-09; CRB 47-48. In addition, Symbol alleges that Metrologic's witness Mr. Palmer admitted that, in addition to the two claim terms discussed above, the following additional claims terms are not disclosed in the '501 patent: reflecting a light beam toward a bar code symbol, axis of rotation perpendicular to the base of the laser diode support, and stop. CRB 47-48.

²³¹ JX-4 (the '173 patent) at col. 6:55.

²³² RX-1C (Palmer Direct) at Q. 123.

²³³ Allais, Tr. 1520-21.

of the claimed invention, either expressly or inherently, such that a person of ordinary skill in the art could practice the invention without due experimentation.”²³⁴ Among other things, the disclosure in the prior art reference does not have to be express, but *may anticipate by inherency* where the inherency would be appreciated by one of ordinary skill in the art.²³⁵ To be inherent, the feature must necessarily be present in the prior art, “... that is where technological facts are known to those in the field of the invention, albeit not known to judges.”²³⁶ Inherency may not be established by probabilities or possibilities.²³⁷ The “... presumed knowledge [of one of ordinary skill in the art] does not grant a license to read into the prior art reference teachings that are not there. An expert’s conclusory testimony, unsupported by documentary evidence, cannot supplant the requirement of anticipatory disclosure in the prior art itself.”²³⁸

The cited testimony of Mr. Palmer, cited in Metrologic’s briefs and which is referenced above,²³⁹ standing alone does not meet the test of inherency set forth by the Federal Circuit precedents discussed above. It is “... conclusory testimony, unsupported by documentary evidence...”²⁴⁰ The cited testimony of Dr. Allais also does not support Metrologic’s arguments. While Dr. Allais, in the testimony cited by Metrologic, indicates that in 1989 one of ordinary skill in the art would have “available to him ... the use of laser diodes ...,” Dr. Allais goes on to say that “[one of ordinary skill in the art] would not apply the device in the ‘501 patent to the scanning

²³⁴ *Advanced Display Systems*, 212 F.3d at 1282.

²³⁵ *Glaxo*, 52 F.3d at 1047 (emphasis added).

²³⁶ See *Finnigan*, 180 F.3d at 1365-1366 citing *Continental Can*, *supra*.

²³⁷ *Id.*

²³⁸ *Motorola, Inc. v. Interdigital Technology Corp.*, 121 F.3d 1461, 1473 (Fed. Cir. 1997) (“*Motorola*”).

²³⁹ RX-1C (Palmer Direct) at Q. 122; Palmer, Tr. 758-59.

²⁴⁰ *Motorola*, 121 F.3d at 1473.

component in a scanner using a solid state laser code.”²⁴¹ For all of these reasons, Metrologic has not shown by clear and convincing evidence that the claim term “b) a laser diode on the support for generating a laser light” of claim 17 is disclosed in the ‘501 patent.

Since clause “b)” of claim 17 is not disclosed in ‘501 patent, the ‘501 patent does **not** anticipate each and every element of claim 17 of the ‘173 patent. Therefore, there is no need to discuss the other arguments raised by the parties with regard to whether or not the ‘501 patent anticipates claim 17 of the ‘173 patent, or whether or not the ‘501 patent anticipates dependent claim 18 of the ‘173 patent. In conclusion, the ‘501 patent does not anticipate claims 17 and 18 of the ‘173 patent.

b. U.S. Patent No. 4,732,440

Metrologic argues that each and every element of claims 17 and 18 are disclosed in the ‘440 patent. While arguments are made by all parties with respect to many of the claim terms of these two claims, it is necessary to discuss only one of the claim terms at issue to resolve this matter. Metrologic asserts that the second limitation of claim 17, “b) a laser diode on the support for generating a laser light,” is disclosed by the ‘440 patent. Metrologic states that the ‘440 patent expressly states that the scanning element can be used in laser scanning equipment, including laser bar code scanners. Metrologic states that the above-referenced claim term would be well known to a person of ordinary skill in the art at that time, as a laser diode would be an obvious choice for a light source in a bar code scanner.²⁴² Metrologic claims that Symbol’s own expert witness supports

²⁴¹ Allais, Tr. 1521-22.

²⁴² RIB 118-19.

Metrologic's view.²⁴³

Symbol states that Metrologic's witness, Mr. Palmer, admitted that the '440 patent does not teach about lasers or laser diodes. Also, it is alleged, Mr. Palmer's assertion that a person of ordinary skill in the art would understand a laser diode from the '440 patent is not persuasive.²⁴⁴ Staff supports Symbol's position on this matter.

The position of Symbol and Staff is persuasive. As support for its position, Metrologic cites the testimony of Mr. Palmer as follows: "[t]he '440 patent indicates that the invention can be used in laser scanners. One of ordinary skill in the art would therefore understand that a laser bar code reader would include the use of a laser as its light source. The laser diode would be attached to the support."²⁴⁵ Metrologic also cites to the identical testimony of Dr. Allais that they cited to above with respect to the '501 patent²⁴⁶ as well as additional testimony by Dr. Allais concerning the mounting of the laser diode on a particular base. As is the case with the testimony of Mr. Palmer with respect to clause "b)" of claim 17, the unsubstantiated, conclusory testimony of Mr. Palmer, standing alone, is insufficient to meet the test of inherency under section 102 (b).²⁴⁷ The testimony of Dr. Allais referenced at Tr. 1520-21 is rejected as support for Metrologic's position for the reasons cited in the previous section discussing the '501 patent. The testimony of Dr. Allais²⁴⁸ discusses the location of a laser diode on a base and therefore does not support Metrologic's inherency argument. Accordingly, the '440 patent has not been shown by clear and convincing evidence to anticipate

²⁴³ RIB 118-19; RRB 59.

²⁴⁴ CIB 108-09.

²⁴⁵ RX-1C (Palmer Direct) at Q. 140.

²⁴⁶ RIB 119 citing Allais, Tr., 1520-21, 1534.

²⁴⁷ *Motorola, supra*.

²⁴⁸ Allais, Tr. 1534-35.

clause “b)” of claim 17. Therefore there is no need to discuss the other arguments raised by the parties with regard to whether or not the ‘440 patent anticipates claim 17 of the ‘173 patent, or whether or not the ‘440 patent anticipates dependent claim 18 of the ‘173 patent. Therefore, the ‘440 patent does not disclose each and every element of claim 17 of the ‘173 patent. In conclusion, the ‘440 patent does not anticipate claims 17 and 18 of the ‘173 patent.

3. Obviousness

a. U.S. Patent No. 4,632,501

Metrologic makes essentially the same arguments in support of the ‘501 patent rendering claims 17 and 18 of the ‘173 patent obvious as they do for arguing anticipation by the ‘501 patent. In fact the discussion is under that same heading in it’s briefs.²⁴⁹

Symbol asserts that the ‘501 patent lacks at least two separate elements of claim 17, the support and the laser diode on the support, and the additional limitation of claim 18. Symbol argues that Mr. Palmer referred to the early part of the specification of the ‘501 patent, which observes that “[i]f these drawbacks were overcome, such oscillators would be increasingly useful, for instance in portable devices such as laser-type barcode readers.”²⁵⁰ Symbol states that this is the only mention of lasers or bar codes in the ‘501 patent.²⁵¹ Symbol notes that Metrologic asserts that because laser diodes (at least infra-red laser diodes) were known in the art in 1989 and because the mechanical components of a bar code scanner cannot simply rattle around inside the housing, Metrologic’s expert witness, Mr. Palmer, concluded that it would have been obvious to one of ordinary skill in

²⁴⁹ RIB 115, see heading entitled “**1. Anticipation under 35 U.S.C. § 102 and Obviousness Under 35 U.S.C. § 103**” and the discussion that follows. *See also* RRB 57-60.

²⁵⁰ CIB 111 and citations therein.

²⁵¹ CIB 111.

the art to add the missing limitations of claim 17 to the ‘501 device.²⁵²

Symbol asserts, however, that its own expert witness, Dr. Allais, testified that a person of ordinary skill in the art designing bar code scanners in 1989 who reviewed the ‘501 patent would conclude that the resonant oscillator was impractical for use in a hand held laser bar code scanner utilizing a laser diode. Symbol also argues that when the ‘501 device was invented in 1984, the only way to make a laser bar code scanner was to use a helium-neon laser tube, not a laser diode.²⁵³ Furthermore, Symbol states that Metrologic has not presented persuasive evidence that the missing limitation of dependent claim 18 would have been obvious to one of ordinary skill in the art.

Symbol also presents arguments in support of its secondary considerations of non-obviousness; *i.e.* commercial success of its invention and long-felt, but unmet need, and failure of others.²⁵⁴ Symbol also asserts that Metrologic did not use the proper analysis to show obviousness.²⁵⁵

Staff agrees with Symbol’s position. Staff argues that there is no convincing evidence to suggest why a person skilled in the art would want to modify the ‘501 patent. Staff also asserts that it would require undue experimentation to modify the ‘501 patent to make the claimed invention of the ‘173 patent.²⁵⁶

The arguments of Symbol and Staff are persuasive. Metrologic is arguing for single reference obviousness. A single reference can render a claim obvious. Motivation to combine, however, is still required when obviousness is based upon a single reference.²⁵⁷ The motivation, suggestion or

²⁵² CIB 111-12.

²⁵³ CIB 112.

²⁵⁴ CIB 113.

²⁵⁵ CRB 48-49.

²⁵⁶ SIB 60.

²⁵⁷ *In re Kotzab*, 217 F.3d 1365, 1370 (Fed. Cir. 2000) (“Even when obviousness is based on
(continued...)”)

teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, in some cases the nature of the problem to be solved.²⁵⁸ In addition, the teaching, motivation or suggestion may be implicit from the prior art as a whole, rather than expressly stated in the references.²⁵⁹ The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art.²⁶⁰ Broad conclusory statements, standing alone, are not “evidence.”²⁶¹

Metrologic’s evidence does not support a finding of single reference obviousness. Metrologic states that the ‘501 patent discloses an oscillator or scanning component that can be used, for instance, in “portable devices such as laser barcode readers.”²⁶² Metrologic also cites to Mr. Palmer’s testimony that “[o]ne of ordinary skill in the art would understand that a laser bar code reader would include the use of a laser diode.”²⁶³

The specification of the ‘501 patent cited by Metrologic is not persuasive when looking at the complete context of the language quoted above. After citing to various problems with resonant electromechanical oscillators, the specification continues as follows:

Such electromechanical oscillators also are typically difficult and expensive to manufacture. *If these drawbacks were overcome*, such oscillators would be

²⁵⁷(...continued)

a single prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference.” (“Kotzab”). See also *B.F. Goodrich Co. v. Aircraft Braking Sys. Corp.*, 72 F.3d 1577, 1582, 37 USPQ2d 1314, 1318 (Fed. Cir.1996) (“*B.F. Goodrich*”).

²⁵⁸ *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999) (“*Dembiczak*”).

²⁵⁹ *WMS Gaming*, 184 F.3d at 1355.

²⁶⁰ *In re Keller*, 642 F.2d 413, 425 (Fed. Cir. 1981) (“*Keller*”).

²⁶¹ *Dembiczak*, 175 F.3d at 999.

²⁶² RRB 59 citing JX-166 (the ‘501 patent) at col.1:18-26.

²⁶³ RRB 59 citing RX-1C (Palmer Direct) at Q. 123.

increasingly useful, for instance in portable devices such as laser barcode scanning readers.²⁶⁴

The conclusory statement cited above by Mr. Palmer, along with the speculative reference in the ‘501 patent specification cited above, does not meet the test of obviousness. There has not been shown to be “a reason, suggestion, or motivation in the prior art that would lead one of ordinary skill in the art to combine the references, and *that would suggest a reasonable likelihood of success.*”²⁶⁵ A review of the testimony of Dr. Allais cited by Metrologic does not support Metrologic’s arguments with respect to disclosure of a laser diode. As was discussed in the previous section on anticipation and the ‘501 patent, while Dr. Allais, in the testimony cited by Metrologic, indicates that in 1989 one of ordinary skill in the art would have “available to him ... the use of laser diodes ...,” Dr. Allais goes on to say that [one of ordinary skill in the art] would not apply the device in the ‘501 patent to the scanning component in a scanner using a solid state laser code.”²⁶⁶ Accordingly, Metrologic has not shown by clear and convincing evidence that term “b)” of claim 17 is disclosed in the ‘501 patent. Accordingly, claim 17 of the ‘173 patent is not rendered obvious by the ‘501 patent. It follows, therefore, that dependent claim 18 is not rendered obvious by the ‘501 patent. In light of these findings, there is no need to discuss the remaining arguments of the parties regarding obviousness and the ‘501 patent.

b. U.S. Patent No. 4,732,440

Metrologic argues that the ‘440 patent is an improved scanning device often used in laser scanning equipment. Metrologic argues that clause “b)” of claim 17 of the ‘173 patent would be well

²⁶⁴ JX-166, col. 1, ll. 18 -21 (emphasis added).

²⁶⁵ *Smiths Industries*, 183 F.3d at 1356 (emphasis added).

²⁶⁶ Allais, Tr. 1521-22.

known to one of ordinary skill in the art at that time, as a laser diode would be an obvious choice for a light source in a bar code scanner.²⁶⁷ Symbol and Staff oppose Metrologic's view.

Metrologic's arguments are not persuasive. Metrologic's case consists, in part, of testimony of Mr. Palmer:

The '440 patent indicates that the invention can be used in laser scanners. One of ordinary skill in the art would therefore understand that a laser bar code reader would include the use of a laser as its light source.²⁶⁸

Again, this is conclusory testimony unsupported by other evidence in the record, and it is therefore rejected.

Metrologic also cites Dr. Allais' testimony as support for its position. While Dr. Allais, in the testimony cited by Metrologic, indicates that in 1989 one of ordinary skill in the art would have "available to him ... the use of laser diodes ...,"²⁶⁹ nothing in that testimony or the later testimony of Dr. Allais cited by Metrologic²⁷⁰ adds the necessary supplemental justification to the Palmer testimony to meet the test of single reference obviousness discussed above with respect to the '501 patent. Therefore, since clause "b)" of claim 17 of the '173 patent is not disclosed in the '440 patent, Metrologic has not shown by clear and convincing evidence that the '440 patent renders obvious claim 17 of the '173 patent. Also, since the '440 patent does not render obvious claim 17 of the '173 patent, dependent claim 18 is not rendered obvious by the '440 patent. In light of these findings, there is no need to discuss the remaining arguments of the parties with respect to obviousness and the '440 patent.

²⁶⁷ RIB 118-19.

²⁶⁸ RX-1C (Palmer Direct) at Q. 140.

²⁶⁹ Allais, Tr. 1521-22.

²⁷⁰ Allais, Tr. 1534-35.

4. Written description/Enablement Under 35 U.S.C. § 112

Metrologic argues that if the claims of the '173 patent are construed broadly so as to encompass the Metrologic products, the '173 patent is invalid under 35 U.S.C. § 112, ¶ 1 for failing to sufficiently describe the invention so as to enable one skilled in the art to make and use the invention. Metrologic states that there is no teaching in the specification of the '173 patent to give any direction to one of ordinary skill in the art as to how to construct a configuration like the flipper used in the Metrologic scanners.²⁷¹

Metrologic states that this is confirmed by the prosecution of the patent applications that lead to the issuance of the '173 patent. Metrologic asserts that during the prosecution of the '761 application in an Office Action mailed on July 8, 1996, the Examiner objected to the Abstract of the Disclosure "as misrepresentative of the current invention," as "it has only a single bent spring." Metrologic argues that the Office Action also stated that "the written description supports a single bent spring. As disclosed, a single spring is bent and clamped between pin 46 and block 48, therefore a single spring is essential to the operation of the disclosed invention." The Examiner, it is alleged, rejected several claims under "35 U.S.C. § 112, first paragraph, as the disclosure is enabling for claims limited to a single leaf spring bent around pin 46..." Thus, Metrologic concludes that the specification of the '173 patent does not sufficiently enable the Metrologic flipper device - only a bent spring as depicted in Figure 2.²⁷²

Symbol rejects Metrologic's arguments. Symbol asserts that the '173 patent provides sufficient information for a person of ordinary skill in the art to practice the full scope of claims 17

²⁷¹ RIB 120 citing RX-1C (Palmer Direct) at Q. 152-58.

²⁷² RIB 120-21 and the citations noted therein.

and 18. Symbol states that Metrologic's argument is simply a restatement of its earlier claim construction argument that the prosecution history limits claim 17 to a bent spring as set forth in Figure 2 of the '173 patent. Symbol asserts that the correct reading of the prosecution history is that the examiner rejected multiple springs and did not limit single spring devices to those that are identical to Figure 2 in the '173 patent.

Metrologic's arguments are not persuasive. Metrologic's argument is, in essence, a restatement of its claim construction argument, rejected earlier in this Initial Determination, that the prosecution history limits claim 17 of the '173 patent to Figure 2 of that patent. Accordingly, Metrologic's arguments are rejected.

V. The '627 Patent

A. Claim Construction

1. Asserted Claim

Independent claim 48 of the '627 patent reads as follows (with the first instance of the disputed terms highlighted in *italics*):

48. A system for reading an optically encoded symbol, comprising:

emitting and optics means for emitting a beam of light and optically directing **the** beam of light toward the optically encoded symbol;

oscillatory support means for mounting a component of the emitting and optics means for oscillating movement about an axis;

drive means for producing oscillating motion of the component mounted on **the** oscillatory support means;

a planar resilient non-metallic element coupled to the oscillatory support means and extending away from the axis, for producing biasing forces opposing the oscillating motion of the component mounted on the oscillatory support means produced by **said** drive means and for absorbing shock forces; and

means responsive to light reflected back from the optically encode symbol for producing electrical signals corresponding to differing light reflectivity of the optically encoded symbol.

2. Disputed Claim Terms

The following claim terms in the '627 patent are in dispute: “oscillatory support means” and “planar resilient non-metallic element coupled to the oscillatory support means and extending away from the axis.” Those terms not in dispute need not be construed.²⁷³

a. “oscillatory support means”

Claim 48 requires an “oscillatory support means for mounting a component of the emitting and optics means for oscillating movement about an axis.” The limitation “oscillatory support means” recites the word “means,” which gives rise to the presumption that 35 U.S.C. § 112, ¶ 6 applies.²⁷⁴ The presumption is overcome only if the claim recites sufficient structure, material or acts to perform the claimed function.²⁷⁵ Although the parties disagree as to what constitutes the claimed function associated with the “oscillatory support means,” all of the parties agree that the limitation falls within § 112, ¶ 6.²⁷⁶ Because the limitation does not recite any structure, 35 U.S.C. § 112, ¶ 6 applies.

Claim construction of a means-plus-function limitation includes two steps: (1) determining the claimed function; and (2) identifying the corresponding structure in the written description of the

²⁷³ See *Vanderlande*, 366 F.3d at 1323 (noting that the ALJ need only construe disputed claim terms).

²⁷⁴ See *Rodime PLC v. Seagate Tech., Inc.*, 174 F.3d 1294, 1302 (Fed. Cir. 1999) (“*Rodime*”).

²⁷⁵ *Micro Chem., Inc. v. Great Plains Chem. Co.*, 194 F.3d 1250, 1257 (Fed. Cir. 1999) (“*Micro Chemical*”).

²⁷⁶ See CIB 4; RIB 35-36; SIB 12.

patent that performs that function.²⁷⁷ As mentioned above, the parties disagree as to what constitutes the claimed function. Symbol argues that the function of the “oscillatory support means” is to mount a component of the emitting and optics means for oscillating movement about an axis.²⁷⁸ Metrologic asserts that the “oscillatory support means” has two functions: (1) to support a component of the emitting and optics means; and (2) to provide an axis of rotation.²⁷⁹ The Staff argues that the function of the “oscillatory support means” is limited to mounting a component of the emitting and optics means, with the component being that which oscillates about an axis.²⁸⁰

In determining the proper claim construction of the limitation “oscillatory support means” the claim language itself is examined, because it can provide “substantial guidance as to the meaning of particular claim terms.”²⁸¹ Before going through the exercise of parsing the syntax of the claim language at issue, it is important to note that all of the parties agree that the “component of the emitting and optics means” in the disputed claim language is a scan mirror.²⁸² Therefore, in order to simplify the analysis of the disputed claim language, the phrase “a component of the emitting and optics means” will be hereinafter referred to as “a scan mirror.”

In the context of claim 48, the disputed claim language reads, “[a] system for reading an optically encoded symbol, comprising . . . oscillatory support means for mounting [a scan mirror] for oscillating movement about an axis.” The disputed language consists of two main prepositional phrases, “for mounting a scan mirror” and “for oscillating movement about an axis.” Grammatically,

²⁷⁷ *Applied Medical Resources Corp. v. U.S. Surgical Corp.*, 448 F.3d 1324, 1332 (Fed. Cir. 2006) (“*Applied Medical*”).

²⁷⁸ CRB 2.

²⁷⁹ RRB 2.

²⁸⁰ SIB 12.

²⁸¹ *Phillips*, 415 F.3d at 1314.

²⁸² CRB 2-4; RIB 35-37; SIB 12.

the first prepositional phrase “for mounting a scan mirror” is adjectival. Like all adjectives, an adjectival prepositional phrase modifies a noun or pronoun, and answers the questions which one? what kind of? or how many? In this instance, the phrase “for mounting a scan mirror” modifies the noun “means” by describing what kind of means the “system for reading an optically encoded symbol, compris[es].” The claim language does not require just any means, but rather a means who’s function is to mount a scan mirror. The parties appear to be in agreement on this point as each acknowledges that a function of the oscillatory support means is to support or mount a scan mirror.²⁸³

The point of contention between the parties centers around the second prepositional phrase “for oscillating movement about an axis.” Grammatically, when one prepositional phrase follows another prepositional phrase, the second prepositional phrase can modify the same word as the first prepositional phrase, or modify the object of the first prepositional phrase. In the instant case, parsing the syntax of the disputed claim language is made more difficult by the fact that the object of the first prepositional phrase, “mounting a scan mirror” includes its own object, “a scan mirror.” Accordingly, there are three possible interpretations of the phrase “oscillating movement about an axis.” First, the prepositional phrase “for oscillating movement about an axis” can modify the word “means.” Second, the phrase can modify “mounting.”²⁸⁴ Third, the phrase can modify the word “mirror.” Grammatically, each interpretation is plausible.

According to Symbol, the “means” functions to support the scan mirror in such a way that the mirror can oscillate about an axis.²⁸⁵ Because Symbol asserts that the scan mirror must be

²⁸³ CRB 2; RIB 36; RRB 4; SIB 12.

²⁸⁴ Grammatically, the word “mounting” is a gerund, which acts as a noun and the object of the preposition “for” in the phrase “for mounting a scan mirror.”

²⁸⁵ CIB 5.

supported in such a way that the mirror can oscillate about an axis, Symbol appears to be arguing that the phrase “for oscillating movement about an axis” modifies the word “mounting.” Metrologic argues that the means not only functions to support a scan mirror, but also to define an axis of rotation.²⁸⁶ According to Metrologic’s argument, the “means” itself oscillates and thus, the “means” must define the axis of rotation.²⁸⁷ Because Metrologic’s conclusion is based on the assumption that the “means” must oscillate,²⁸⁸ Metrologic appears to be arguing that the phrase “oscillating movement about an axis” modifies the word “means.” The Staff argues that the “means” functions to mount a scan mirror.²⁸⁹ According to the Staff’s argument, it is the scan mirror that oscillates about an axis.²⁹⁰ Because the Staff argues that the function of the “means” is to mount a scan mirror, with the scan mirror being that which oscillates about an axis, it appears that the Staff is arguing that the phrase “oscillating movement about an axis” modifies the term “scan mirror.”

The undersigned finds unpersuasive Metrologic’s argument that the “oscillatory support means” also defines the axis of rotation. While grammatically plausible, Metrologic’s underlying argument that the “means” must oscillate is the most unnatural reading of the disputed claim language. Had the applicant intended the “means” to have the additional function of “oscillating movement about an axis” the more natural wording of the claim language would have been

²⁸⁶ RRB 2.

²⁸⁷ RIB 37.

²⁸⁸ See RRB 2 (“the file history establishes that *the claimed function* is not simply to ‘be pivoted’ but *includes participation in the oscillation* of the scan element”)(emphasis added); *see also* *Id.* at 3 (“the “oscillatory support means” creates or imparts this ‘oscillating movement’”)(emphasis in original); *Id.* at 4 (“a more logical syntactic argument is that the two-fold function is described by the use of two verbs: . . . mounting . . . oscillating . . .”)(emphasis in original).

²⁸⁹ SIB 12.

²⁹⁰ *Id.* (“The function is limited to mounting a thing - the thing being a component of the emitting and optics means, with the component being that which oscillates about an axis, as opposed to a component of the emitting and optics means that is fixed.”).

“oscillatory support means for mounting a scan mirror and for oscillating movement about an axis. With regard to the remainder of Metrologic’s underlying argument that the “means” must not only oscillate, but assist in the oscillation, the undersigned finds Metrologic to be in error.²⁹¹ The plain language of claim 48 belies Metrologic’s argument that the “oscillatory support means” must also assist in the oscillation. In addition to the disputed claim language, claim 48 requires a “drive means for producing oscillating motion of the [scan mirror] mounted on the oscillatory support means.”²⁹² It is clear from the plain language of this limitation that it is the “drive means” that produces the oscillating motion, not the “oscillatory support means.”

Metrologic asserts that the specification supports its construction that the “means” must both oscillate and assist in the oscillation.²⁹³ However, the passages to which Metrologic cites do not discuss the term “oscillatory support means” or any “means” for that matter. The passages to which Metrologic cites discuss the structural elements that Metrologic argues are linked to its asserted functions of the “oscillatory support means.” The undersigned agrees with Metrologic that the specification should be consulted in determining the proper function associated with the “means,” however, in this instance, the specification is silent. Metrologic commits error by identifying its proposed structures in the specification and then apparently determining the appropriate function.²⁹⁴

²⁹¹ See RRB 2 (“the file history establishes that *the claimed function* is not simply to ‘be pivoted’ but *includes participation in the oscillation* of the scan element”)(emphasis added); see also *Id.* at 3 (“the “oscillatory support means” creates or imparts this ‘oscillating movement’”)(emphasis in original).

²⁹² JX-1 (the ‘627 patent) at col. 14:54-56.

²⁹³ See RRB 2.

²⁹⁴ See *id.* (citing JX-1 (the ‘627 patent) at col. 8:67-68 (post 50 is “oscillatable about an axis y extending through the post”)). Contrary to Metrologic’s argument, this passage does not say anything about the function of the “oscillatory support means.” The passage only discusses the function of the structural elements Metrologic asserts are linked with its proposed function of the
(continued...)

Means-plus-function jurisprudence requires that it is the function that must be first determined **and** then the specification consulted to find the structures linked to that function.²⁹⁵ Additionally, **even** if Metrologic's citations to the specification were proper, those passages discuss **specific** embodiments of the invention. Reading limitations into the claims from specific embodiments of an invention is prohibited.²⁹⁶ Metrologic also asserts that the prosecution history supports its argument.²⁹⁷ However, the portions of the prosecution history to which Metrologic cites only **discuss** the specific embodiment of the invention illustrated in Figure 4.²⁹⁸ It is improper to read **limitations** from a preferred embodiment into the claims.²⁹⁹

As between Symbol's proposed construction, that the function of the "oscillatory **support means**" is to mount the scan mirror in such a way that the scan mirror can be oscillated about **an** axis,³⁰⁰ and the Staff's proposed construction, that the function of the "oscillatory **support means**" is to mount a scan mirror, with the mirror being that which oscillates about an axis, the undersigned finds that ultimately there is little practical difference between the constructions. Under **either**

²⁹⁴(...continued)
"oscillatory support means."

²⁹⁵ *Applied Medical*, 448 F.3d at 1332 ("Claim construction of a means-plus-function limitation includes two steps. First, the court must determine the claimed function. Second, **the** court must identify the corresponding structure in the written description of the patent that **performs** that function." (internal citations omitted)).

²⁹⁶ *Applied Medical*, 448 F.3d at 1334 ("A court errs when it improperly imports **unclaimed** functions into a means-plus-function claim limitation.").

²⁹⁷ See RRB 2.

²⁹⁸ See JX-1 (the '627 patent) at col. 10:10-18 ("While there has been shown and **described** what are considered to be a preferred embodiment of the invention, it will of course be **understood** that various modifications and changes in form or detail could readily be made without **departing** from the spirit of the invention. It is therefore, intended that the invention be not limited to the **exact** form and detail herein shown and described, nor to anything less than the whole of the **invention**, herein disclosed as hereinafter claimed.").

²⁹⁹ *Id.*

³⁰⁰ CIB 5.

interpretation, a means that prevents the scan mirror from oscillating will not meet the claim limitation. Nevertheless, based on the intrinsic evidence of record, the undersigned finds the Staff's interpretation more persuasive.

As previously noted, in addition to the "oscillatory support means," claim 48 requires a "drive means for producing oscillating motion of the [scan mirror] mounted on the oscillatory support means."³⁰¹ The plain language of this claim limitation supports the Staff's construction by reinforcing that it is the scan mirror that oscillates. The specification similarly supports the Staff's construction. In the Summary of the Invention, the applicant wrote that "the present invention contemplates a further improvement . . . through the utilization of a Mylar leaf spring which positions a generally flat scan element or mirror which is oscillated by a read-start device."³⁰² This statement again shows that the applicant's focus was on the oscillation of the scan mirror. Accordingly, for the reasons specified herein above, the undersigned finds that the function associated with the "oscillatory support means" in claim 48 of the '627 patent is "mounting a scan mirror" with the scan mirror being that which oscillates about an axis.

Having identified the proper function, the next step in construing the "oscillatory support means" requires identification of the corresponding structure.³⁰³ Symbol identifies the corresponding structure as "a combination of plastic parts that clamp the scanning mirror to the flexure element, including a post labeled 50, an L-shaped bracket member, labeled 52, and nubbins on the mirror that

³⁰¹ JX-1 (the '627 patent) at col. 14:54-56.

³⁰² JX-1 (the '627 patent) at col. 4:46-56.

³⁰³ *Cardiac Pacemakers, Inc. v. St. Jude Medical, Inc.*, 296 F.3d 1106, 1113 (Fed. Cir. 2002) ("*Cardiac Pacemakers*").

cooperate with holes in the bracket/post assembly shown in Figures 10 and 13.”³⁰⁴ Metrologic identifies the corresponding structure as the post 50 and bracket 52.³⁰⁵ The Staff identifies **the** corresponding structure as only the bracket 52.³⁰⁶

In support of its conclusion that the bracket 52 is the only structure corresponding to **the** “oscillatory support means,” the Staff argues that “if post (50) were removed, the mirror (54) would remain mounted via bracket (52); thus the post is not required structure in the claim.”³⁰⁷ The Staff also argues that the language of the claims support its argument that bracket 52 is the only required structure. Specifically, the Staff argues that non-asserted, independent claim 37 uses similar “oscillatory support means” language, but dependent claim 45 requires a post to be part of **the** support structure.³⁰⁸ Thus, pursuant to the doctrine of claim differentiation, the Staff argues that **the** oscillatory support means cannot include the post, else dependent claim 45 would be redundant.³⁰⁹ The undersigned finds the Staff’s argument unpersuasive.

In order to qualify as corresponding structure, “the structure must not only perform **the** claimed function, but the specification must clearly associate the structure with performance of **the** function.”³¹⁰ According to the specification, “[t]he post 50 **includes** a bracket member 52 to which there is fastened a suitable scan element 54, such as a flat scan mirror.”³¹¹ In contrast to the Staff’s

³⁰⁴ CRB 3.

³⁰⁵ RRB 5.

³⁰⁶ SIB 12.

³⁰⁷ SIB 13.

³⁰⁸ SIB 13.

³⁰⁹ SIB 13.

³¹⁰ *JVW Enterprises, Inc. v. Interact Accessories, Inc.*, 424 F.3d 1324, 1332 (Fed. Cir. 2005) (“*JVW Enterprises*”) (quoting *Cardiac Pacemakers*, 296 F.3d at 1113).

³¹¹ JX-1 (the ‘627 patent) at col. 8:64-66 (emphasis added).

argument, the specification makes clear that it is “the rotatable post 50 supporting the scan mirror.”³¹² The Federal Circuit has made clear that the doctrine of claim differentiation yields to an interpretation mandated by § 112, ¶ 6.³¹³ As shown above, the specification clearly links both the post 50 and bracket 52 to the function of mounting a scan mirror.

Accordingly, in this instance, 35 U.S.C. § 112, ¶ 6, mandates that the structure corresponding to “oscillatory support means” be the post 50 and bracket 52, even though the doctrine of claim differentiation may suggest otherwise. Having properly identified the function associated with the “**oscillatory support means**” to be “**mounting a scan mirror,**” the undersigned finds that based on the intrinsic evidence of record, one of ordinary skill in the art the time of the invention would identify the corresponding structure as “**the post 50 and bracket 52, and equivalents thereof.**”

b. “planar resilient non-metallic element coupled to the oscillatory support means and extending away from the axis”

Claim 48 requires “a planar resilient non-metallic element coupled to the oscillatory support means and extending away from the axis.”³¹⁴ Symbol argues that properly construed, the limitation “planar resilient non-metallic element” is “a flat spring not made of metal.”³¹⁵ Metrologic argues that the limitation should be construed as “a flat, non-metallic spring that is coupled to the oscillatory support means and extends away from the axis that coincides with the oscillatory support means (post 50).”³¹⁶ The Staff argues that the “planar resilient non-metallic element” should be construed

³¹² See JX-1 (the ‘627 patent) at col. 9:27-28; *see also id.* at col. 5:29-30 (“the upstanding post supporting the scan mirror.”).

³¹³ See *Laitram*, 939 F.2d at 1538.

³¹⁴ JX-1 (the ‘627 patent) at col. 14:57-59.

³¹⁵ CIB 7.

³¹⁶ RIB 37.

by its plain meaning, but fails to offer any proposed construction.³¹⁷

The Federal Circuit has noted that “[i]n some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.”³¹⁸ This is such a case. The proper construction of the limitation “planar resilient non-metallic element” is “a flat, non-metallic spring.” This construction comports with the plain and ordinary meaning of the claim language, and is fully supported by the specification of the ‘627 patent. Notably, this is also the construction proposed by both Symbol and Metrologic.³¹⁹

While Symbol and Metrologic both agree that a “planar resilient non-metallic element” is “a flat, non-metallic spring,” the parties dispute the proper construction of the remaining claim language requiring the “flat, non-metallic spring” to be “coupled to the oscillatory support means and extending away from the axis.” Symbol and the Staff argue that the phrase should be construed in accordance with its plain and ordinary meaning. Metrologic contends that the “flat, non-metallic spring” must be coupled to the oscillatory support means and extend away from the axis that coincides with the oscillatory support means (post 50).³²⁰ As pointed out by the Staff in its initial post-hearing brief, Metrologic’s argument is not well developed.³²¹ From the few words it devotes to the topic, Metrologic appears to rely on the specifications of the ‘627 and ‘173 patents and the

³¹⁷ SIB 14.

³¹⁸ *See Phillips*, 415 F.3d at 1314.

³¹⁹ CIB 7; RIB 37.

³²⁰ RIB 37; RRB 7-8.

³²¹ RRB 7.

prosecution history of the '173 patent to support its claim construction argument.³²²

With regard to the specification of the '627 patent, Metrologic concludes that based on the following passage,

[t]he post 50 includes a bracket member 52 to which there is fastened a suitable scan element 54, such as a flat scan mirror through fastener elements extending so as to be oscillatable about an axis y extending coaxially through the post,”

the axis must coincide with the oscillatory support means. The quoted passage, however, does not amount to a clear disavowal of claim scope.³²³ Nor is there anything in claim 48 that would suggest that the axis must coincide with the oscillatory support means. To the contrary, recall that as properly construed hereinabove, the oscillatory support means functions only for mounting a scan mirror, with the scan mirror being that which oscillates about an axis. Because it is clear from the plain language of the claim that it is the scan mirror that must oscillate about an axis, adopting Metrologic's argument would improperly read a limitation from the specification into the claims. Accordingly, the undersigned finds Metrologic's argument unpersuasive.

With regard to the '173 patent, Metrologic appears to argue that the specification and prosecution history show that the placement of the axis of rotation to coincide with the oscillatory support means was a key feature of patentability of the '173 patent and therefore, must also be a feature of the '627 patent.³²⁴ Turning first to the prosecution history of the '173 patent, the

³²² RRB 7.

³²³ See *Liebel-Flarsheim*, 358 F.3d at 906 (“Even when the specification describes only a single embodiment, the claims of the patent will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using ‘words or expressions of manifest exclusion or restriction.’”).

³²⁴ RIB 37 (“The placement of the axis of rotation to coincide with the oscillatory support means was a key feature of patentability of the underlying '173 invention in that the placement behind the scan mirror results in minimization of image translation. Thus, the planar resilient non-
(continued...)”)

undersigned notes that although Metrologic mentions it in its post-hearing reply brief, Metrologic does not specifically cite to any portion of the prosecution history in support of its argument.³²⁵ Accordingly, the undersigned has no basis for evaluating Metrologic's argument. As for the '173 patent specification, the passage to which Metrologic cites states that "[b]y providing a well defined center of rotation at axis 66 that is close to the scan component, image translation is minimized."³²⁶ Metrologic fails to explain, and the undersigned fails to see, how that statement compels Metrologic's proposed construction of the phrase "planar resilient non-metallic element coupled to the oscillatory support means and extending away from the axis" as requiring the axis to coincide with the oscillatory support means. Regardless, the statement to which Metrologic cites does not show a clear disavowal of claim scope, so in no event could the statement ever bind the construction of the disputed claim language in the '627 patent. Accordingly, the undersigned finds Metrologic's argument unpersuasive.

For the reasons expressed hereinabove, the undersigned finds that one of ordinary skill in the art at the time of the invention would construe the limitation **"a planar resilient non-metallic element coupled to the oscillatory support means and extending away from the axis"** in accordance with its plain and ordinary meaning as **"a flat, non-metallic spring coupled to the oscillatory support means and extending away from the axis."**

³²⁴(...continued)

metallic spring is coupled to the oscillatory support means (through post 50) and extends away from the axis that coincides with the oscillatory support means."); RRB 8 ("The prosecution history of the '173 demonstrates that, and the '627 is simply an improvement over the '173, and is thus, similarly limited.").

³²⁵ RRB 8.

³²⁶ JX-4 (the '173 patent) at col. 5:21-23.

B. Infringement

To prove infringement, Symbol must show by a preponderance of the evidence that an accused product meets all the limitations of at least one asserted claim either literally or under the doctrine of equivalents.³²⁷ In this investigation, Symbol alleges that Metrologic's Eclipse MS5145, Voyager MS9535 and Voyager MS9540 bar code scanners infringe claim 48 of the '627 patent.³²⁸ This includes the redesigned versions of the Eclipse MS5145 and Voyager MS9540.³²⁹ However, the "redesign" aspects of the two products are irrelevant for the purposes of this infringement analysis.³³⁰ That is to say, if the Eclipse MS5145 and Voyager MS9540 are found to infringe claim 48 of the '627 patent, the redesign products will also infringe.

With the exception of the limitations "oscillatory support means for mounting a component of the emitting and optics means for oscillating movement about an axis" and "a planar resilient non-metallic element coupled to the oscillatory support means and extending away from the axis," there appears to be no real dispute that the accused products meet the remaining limitations of claim 48 of the '627 patent.³³¹ Accordingly, citation to the record evidence showing that the accused products meet many of the limitations of claim 48 is provided below in summary format.

³²⁷ *Pfizer, Inc. v. Teva Pharmaceuticals, USA, Inc.*, 429 F.3d 1364, 1376 (Fed. Cir. 2005) ("*Pfizer*") ("To prove infringement, a patentee must show that an accused product or method meets every claim limitation either literally or under the doctrine of equivalents."); *Advanced Cardiovascular Sys., Inc. v. Scimed Life Sys., Inc.*, 261 F.3d 1329, 1336 (Fed. Cir. 2001) ("*Advanced Cardiovascular*") ("To prevail, the plaintiff must establish by a preponderance of the evidence that the accused device infringes one or more claims of the patent either literally or under the doctrine of equivalents.").

³²⁸ CIB 3, 51.

³²⁹ CIB 3, n. *.

³³⁰ CX-208C (Allais Supplemental Direct) at Q. 300.

³³¹ CIB 51; RIB 74-77; RRB 2-9; SIB 37.

A system for reading an optically encoded symbol, comprising:	CX 109C (Allais Direct) at Q. 37, 51, 53, 134; RX-5C (Schmidt Direct) at Q. 10
emitting and optics means for emitting a beam of light and optically directing the beam of light toward the optically encoded symbol;	CX 109C (Allais Direct) at Q. 38, 40, 41, 51, 53, 138; CX-116 (MS9540 scan board photograph item 1)
oscillatory support means for mounting a component of the emitting and optics means for oscillating movement about an axis;	discussed in detail below
drive means for producing oscillating motion of the component mounted on the oscillatory support means;	CX-109C (Allais Direct) at Q. 48, 51, 53, 152; CX-119 (item 11); CX-116 (MS9540 scan board photograph item 12); CX-118 (MS9540 scanning mirror photograph item 12); CX-120 (MS9540 scanning mirror motion photograph item 12); CX-136 (MS9540 scanning mirror photograph)
a planar resilient non-metallic element coupled to the oscillatory support means and extending away from the axis,	discussed in detail below
for producing biasing forces opposing the oscillating motion of the component mounted on the oscillatory support means produced by said drive means and for absorbing shock forces; and	CX-109C (Allais Direct) at Q. 159
means responsive to light reflected back from the optically encode symbol for producing electrical signals corresponding to differing light reflectivity of the optically encoded symbol.	CX-109C (Allais Direct) at Q. 42-44, 51, 53, 162; CX-116 (MS9540 scan board photograph item 7)

With regard to the limitations “oscillatory support means for mounting a component of the emitting and optics means for oscillating movement about an axis” and “a planar resilient non-metallic element coupled to the oscillatory support means and extending away from the axis,” Symbol argues that the accused products satisfy the claim limitations, while Metrologic argues that the accused products do not meet the claim limitations. In support of its direct infringement argument, Symbol relies primarily on the testimony of its expert, Dr. Allais. Likewise, in support

of its non-infringement argument, Metrologic relies primarily on the testimony of its expert, Mr. Palmer. In the instant case, the infringement dispute mirrors the claim construction dispute. As discussed in detail below and is oft the case in these situations, proper claim construction resolves the infringement dispute.

1. “oscillatory support means for mounting a component of the emitting and optics means for oscillating movement about an axis”

As previously discussed, the undersigned finds that the limitation “oscillatory support means for mounting a component of the emitting and optics means for oscillating movement about an axis” is properly construed in accordance with 35 U.S.C. § 112, ¶ 6 as requiring “post 50 and bracket 52, and equivalents thereof” for mounting a scan mirror, with the scan mirror being that which oscillates about an axis. Symbol does not argue that the accused products have a post 50 and bracket 52.³³² Rather, Symbol argues the accused products infringe claim 48 because the accused products have an equivalent structure that is insubstantially different from the post 50 and bracket 52.³³³ Symbol identifies the equivalent structure as the metallic shim labeled (8) in Exhibits CX-116 and CX-118.³³⁴ In order to establish that the differences between the accused structure and the structure disclosed in the patent are “insubstantial,” a party must typically prove that the accused structure performs the claimed function in substantially the same way so as to achieve substantially the same result as the

³³² CIB 51-54.

³³³ See *Valmont Indus., Inc. v. Reinke Mfg. Co., Inc.*, 983 F.2d 1039, 1043 (Fed. Cir. 1993) (“*Valmont*”) (Under §112, ¶6, “an equivalent results from an insubstantial change which adds nothing of significance to the structure, material, or acts disclosed in the patent specification.”); see also *Odetics, Inc. v. Storage Tech. Corp.*, 185 F.3d 1259, 1267 (Fed. Cir. 1999) (“*Odetics*”) (“structural equivalents under § 112, ¶ 6 are included within literal infringement of means-plus-function claims”); *IMS Tech., Inc. v. Haas Automation, Inc.*, 206 F.3d 1422, 1430 (Fed. Cir. 2000) (“*IMS Technologies*”) (Whether the differences between the patented structure and the accused structure are substantial is a question of fact.).

³³⁴ CIB 52.

structure disclosed in the patent.³³⁵

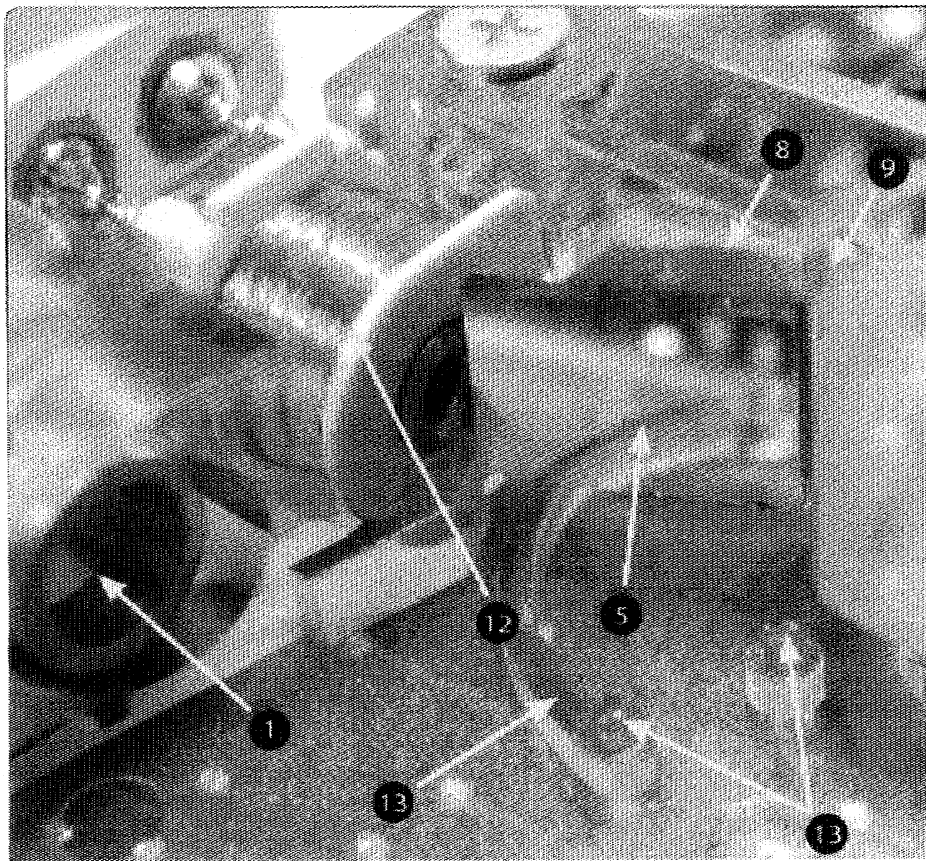
The first step under the function-way-result test is to determine whether the accused structure and the disclosed structure perform the identical function.³³⁶ As previously held, the function of the “oscillatory support means” is “mounting a scan mirror.” Thus, in order to satisfy the first step of the function-way-result test, Symbol must prove that a function of the metallic shim in the accused products is “mounting a scan mirror.” To that end, Dr. Allais testified that in each of the accused products the scanning mirror is mounted on a metallic shim.³³⁷ As reproduced in part below, exhibit CX-118 clearly shows the scan mirror (labeled 5 in the exhibit) mounted to a metallic shim (labeled 8 in the exhibit).³³⁸

³³⁵ See *Ishida Co., Ltd. v. Taylor*, 221 F.3d 1310, 1317 (Fed. Cir. 2000) (“*Ishida*”).

³³⁶ *Applied Medical*, 448 F.3d at 1334 (“To prove structural equivalence under the function-way-result test, the court must first determine that the accused and disclosed structures perform the identical functions.”).

³³⁷ CX-109C (Allais Direct) at Q. 144, 146.

³³⁸ See CX-118 (MS9540 scanning mirror photograph); see also CX-116 (MS9540 scan board photograph).



Additionally, a visual inspection of the accused products supports Dr. Allais' opinion.³³⁹

Metrologic argues that the metallic shim does not perform the identical function as the post 50 and bracket 52 disclosed in the '627 patent.³⁴⁰ Specifically, Metrologic's expert, Mr. Palmer, testified:

Dr. Allais argues that the copper layer between the Metrologic flipper's mirror and Kapton leaf spring functions as an equivalent to the oscillatory support means described in the patent. I disagree with this viewpoint, as the copper layer is present to provide a bonding surface for the adhesive that holds the mirror, and it does not

³³⁹ See RPX-32 (MS9540 voyager scan board); RPX-33 (MS5145 eclipse scan board); SPX-1 (MS9540 voyager scan board - redesign model); SPX-2 (MS5145 eclipse scan board - redesign model).

³⁴⁰ See RX-1C (Palmer Direct) at Q. 185, 188.

define an axis for oscillatory motion, as required by the patent.³⁴¹

Mr. Palmer makes clear in his testimony that the reason he opines that the metallic shim (which he refers to as the copper layer) does not have the identical function as the disclosed post 50 and bracket 52 is that the metallic shim does not define an axis for oscillatory motion. The undersigned finds Mr. Palmer's opinion in this matter unpersuasive because it is based on a faulty claim construction. As previously discussed in detail, the function of the oscillatory support means is "mounting a scan mirror." Contrary to Mr. Palmer's testimony, claim 48 does not require that the "oscillatory support means" define an axis for oscillatory motion. Accordingly, based on the evidence of record, the undersigned finds that the metallic shim in the accused products has the same function as the post 50 and bracket 52 disclosed in the '627 patent.

Having found identity of function, the next step in the function-way-result test is to determine the way in which the disclosed structure performs the claimed function; in this case, the way in which the post 50 and bracket 52 perform the function of "mounting a scan mirror."³⁴² The Federal Circuit has cautioned that during this step of the function-way-result test, the inquiry must be "restricted to the way in which the structure performs the *properly-defined function* and should not be influenced by the manner in which the structure performs other, extraneous functions."³⁴³ Symbol argues through the testimony of its expert, Dr. Allais, that the post 50 and bracket 52 perform the function of mounting a scan mirror by "t[ying] the scan mirror to the flexural component such that

³⁴¹ RX-1C (Palmer Direct) at Q. 185.

³⁴² *Applied Medical*, 448 F.3d at 1334 ("The court was then required to determine the way in which these functions were performed by the two structures.").

³⁴³ *Id.* (emphasis in original).

the scan mirror and its support are entirely supported by the flexural component.”³⁴⁴ Contrary to Dr. Allais’ opinion, however, there is nothing in the undersigned’s adopted construction that requires the scan mirror to be tied to the flexural component and certainly nothing requiring the scan mirror and its support to be entirely supported by the flexural component. Rather, the defined function is merely “mounting a scan mirror.”

The specification of the ‘627 patent discloses that “[t]he post 50 includes a bracket member 52 to which there is fastened a suitable scan element, such as a flat mirror.”³⁴⁵ The specification also discloses that the post 50 “support[s] the scan mirror 54.”³⁴⁶ Additionally, Figure 4 shows the scan mirror 54 attached to the post 50 and bracket 52. In each instance, the post 50 and bracket 52 act as a structure onto which the scan mirror is attached. Thus, it appears from the specification that the post 50 and bracket 52 perform the function of “mounting a scan mirror” by providing a structure onto which the scan mirror is attached. This notion, that the post 50 and bracket 52 perform the function of “mounting a scan mirror” by providing a structure onto which the scan mirror is attached, is not only supported by the specification, but also by the plain and ordinary meaning of the phrase “mounting a scan mirror.” For example, a picture frame may be said to perform the function of mounting a picture. The frame accomplishes this function by acting as a structure that the picture is placed against and attached to. By loose analogy, that is the same way in which the post 50 and bracket 52 perform the function of “mounting the scan mirror.” Accordingly, based on the record evidence, the undersigned finds that the way in which the post 50 and bracket 52 perform the function of “mounting a scan mirror” is by being a structure onto which a scan mirror is attached.

³⁴⁴ CX-109C (Allais Direct) at Q. 147.

³⁴⁵ JX-1 (the ‘627 patent) at col. 8:64-67.

³⁴⁶ *Id.* at col. 9:27-28.

Having properly determined that the way in which post 50 and bracket 52 perform the function of “mounting a scan mirror” the question becomes whether the metallic shim of the accused products performs the function of “mounting a scan mirror” in substantially the same way. Symbol argues that the disclosed and accused structures function in substantially the same way.³⁴⁷ Metrologic argues that they do not.³⁴⁸ However, in arguing that the disclosed and accused structures do not function in substantially the same way, Metrologic again relies on a claim construction that incorrectly requires the oscillatory support means to define the axis of rotation.³⁴⁹ Because the undersigned has previously rejected this construction, the undersigned finds Metrologic’s argument unpersuasive.

Turning now to Symbol’s argument, Symbol relies on the testimony of its expert, Dr. Allais, in support of its argument that the disclosed structure and the accused structure function in substantially the same way. In his direct testimony, Dr. Allais opined that the post 50 and bracket 52 disclosed in the ‘627 patent and the metallic shim of the accused products function in substantially the same way by “t[ying] the scan mirror to the flexural component such that the scan mirror and its support are entirely supported by the flexural component.”³⁵⁰ Although the undersigned previously found Dr. Allais’ testimony unpersuasive in defining the way in which the post 50 and bracket 52 perform the function of “mounting a scan mirror” the testimony nevertheless supports a finding of § 112, ¶ 6 equivalence. Specifically, Dr. Allais’ testimony supports a finding of equivalence because implicit to Dr. Allais’ opinion is the notion that the scan mirror is supported

³⁴⁷ CIB 52.

³⁴⁸ RRB 6-7.

³⁴⁹ RX-1C (Palmer Direct) at Q. 185, 188.

³⁵⁰ CX-109C (Allais Direct) at Q. 147.

by the metallic shim to which it is attached. Additionally, Metrologic's own expert, Mr. Palmer, admits that "the copper layer is present to provide a bonding surface for the adhesive that holds the mirror."³⁵¹ Further, a visual inspection of the accused products confirms that the metallic shim acts as a structure onto which a scan mirror is attached. Accordingly, based on the evidence of record, the undersigned finds that the metallic shim of the accused products performs the function of "mounting a scan mirror" in substantially the same way as the post 50 and bracket 52 disclosed in the '627 patent.

Having determined that the disclosed structure and the accused structure have identical functions that are performed in substantially the same way, the last step in the function-way-result test is to determine whether the post 50 and bracket 52 and the metallic shim perform the function of "mounting a scan mirror" to achieve substantially the same result. There can be no question that as properly construed herein, the post 50 and bracket 52 perform the function of "mounting a scan mirror" to achieve the result of actually having a scan mirror attached onto it. Thus, the question is whether the metallic shim in the accused products performs the function of "mounting a scan mirror" to achieve substantially the same result. Symbol argues that the disclosed and accused structures achieve substantially the same result, Metrologic argues that they do not. Because Metrologic's argument again rests on its faulty claim construction requiring the "oscillatory support means" to define the axis of oscillation, the undersigned finds Metrologic's argument unpersuasive.

With regard to Symbol's argument, Dr. Allais testified that the metallic shim in the accused products functions to achieve the same result as the oscillatory support means in the '627 patent,

³⁵¹ RX-1C (Palmer Direct) at Q. 185. Note, what Mr. Palmer refers to as the "copper layer" is what Dr. Allais refers to as the "metallic shim."

based on his opinion that the metallic shim supports a scan mirror for movement about an axis.³⁵² A visual inspection of the accused products supports Dr. Allais' testimony, revealing that attached to the metallic shim is in fact a scan mirror.³⁵³ Additionally, Metrologic's expert, Mr. Palmer, admits that "the copper basically makes a base that the mirror . . . can be stuck to."³⁵⁴ Accordingly, based on the record evidence, the undersigned finds that the post 50 and bracket 52 disclosed in the '627 patent and the metallic shim of the accused products function to achieve substantially the same result.

In summary, as discussed in detail hereinabove, the undersigned finds that the post 50 and bracket 52 disclosed in the '627 patent and the metallic shim of the accused products, perform the same function, in substantially the same way to achieve substantially the same result. Because the disclosed and accused structures perform the same function, in substantially the same way, to achieve substantially the same result, the undersigned finds the structures are insubstantially different. Accordingly, for purposes of 35 U.S.C. § 112 ¶ 6, the undersigned finds that the post 50 and bracket 52 disclosed in the '627 patent and the metallic shim of the accused products are equivalent structures. Recall that the disputed limitation "oscillatory support means for mounting a component of the emitting and optics means for oscillating movement about an axis" has been properly construed herein as requiring "post 50 and bracket 52, and equivalents thereof" for mounting a scan mirror, with the scan mirror being that which oscillates about an axis. Having found the metallic shim of the accused products to be an equivalent structure to the post 50 and

³⁵² CX-109C (Allais Direct) at Q. 148.

³⁵³ *see* RPX-32 (MS9540 voyager scan board); RPX-33 (MS5145 eclipse scan board); SPX-1 (MS9540 voyager scan board - redesign model); SPX-2 (MS5145 eclipse scan board - redesign model).

³⁵⁴ Palmer, Tr. 854 .

bracket 52 disclosed in the '627 patent, the only remaining question regarding whether the accused products satisfy this claim limitation is whether the scan mirror in the accused products oscillates about an axis. On this point there is no dispute. Dr. Allais testified that "[t]here is a small portion of the flexural component in the accused products that is free to bend [and] . . . the axis about which the mirror oscillates is near the root or fixed end of this free portion."³⁵⁵ Metrologic does not dispute this fact and a visual inspection of the accused products supports Dr. Allais' testimony.³⁵⁶

Accordingly, for the reasons expressed hereinabove, the undersigned finds that the accused products satisfy the limitation of the claim 48 of the '627 patent requiring an "oscillatory support means for mounting a component of the emitting and optics means for oscillating movement about an axis."

2. "a planar resilient non-metallic element coupled to the oscillatory support means and extending away from the axis"

The undersigned has previously construed herein the limitation "a planar resilient non-metallic element coupled to the oscillatory support means and extending away from the axis" as requiring "a flat, non-metallic spring coupled to the oscillatory support means and extending away from the axis." Symbol and the Staff argue that the accused products meet this limitation.³⁵⁷ Metrologic argues to the contrary.³⁵⁸

Symbol asserts that the part in the accused products referred to by Metrologic as the Kapton®

³⁵⁵ See CX-109C (Allais Direct) at Q. 149; *see also* CX-119 (MS9540 plastic flexure photograph) (showing the free portion to which Dr. Allais refers in his testimony).

³⁵⁶ See ROCFF 4.89; *see also* RPX-32 (MS9540 voyager scan board); RPX-33 (MS5145 eclipse scan board); SPX-1 (MS9540 voyager scan board - redesign model); SPX-2 (MS5145 eclipse scan board - redesign model).

³⁵⁷ CIB 54-55; SIB 36-37.

³⁵⁸ RRB 7.

satisfies the limitation requiring “a planar resilient non-metallic element coupled to the oscillatory support means and extending away from the axis.”³⁵⁹ Recalling that as properly construed herein the metallic shim in the accused products is the “oscillatory support means,” there appears to be no dispute that the Kapton® is a flat, non-metallic spring coupled to the oscillatory support means. Symbol’s expert, Dr. Allais, testified that “the accused products include a plastic flexure . . . [that] is a flat, resilient, non-metallic material attached to the metallic shim.”³⁶⁰ Metrologic does not dispute these facts.³⁶¹

Thus, all that remains to be determined is whether the Kapton® “extend[s] away from the axis.” Here, proper claim construction drives the infringement analysis. Properly construed herein, “the axis” refers to the axis about which the scan mirror oscillates.³⁶² As previously discussed, Dr. Allais testified that “[t]here is a small portion of the flexural component in the accused products that is free to bend [and] . . . the axis about which the mirror oscillates is near the root or fixed end of this free portion.”³⁶³ Metrologic does not dispute this fact, stating that the “axis of oscillation is at the root where the Kapton enters the ball.”³⁶⁴

³⁵⁹ CIB 54.

³⁶⁰ CX-109C (Allais Direct) at Q. 154; *see* MS9540 photographs (CX-116, CX-118, CX-119 and CX-120); *see also* CFF 4.101; ROCFF 4.101.

³⁶¹ *See* ROCFF 4.106, 4.108, 4.109, 4.111; *see also* ROCFF 4.59 (“In the Metrologic products, a scanning mirror is attached to a copper shim. The copper shim is attached to a Kapton® material.”).

³⁶² Recall that the undersigned construed the limitation “oscillatory support means for mounting a [scan mirror] for oscillating movement about an axis” as requiring the “oscillatory support means” to perform the function of “mounting a scan mirror,” with the scan mirror being that which oscillates about an axis. *See supra*, at Section V(A)(2)(a).

³⁶³ *See* CX-109C (Allais Direct) at Q. 149; *see also* CX-119 (MS9540 plastic flexure photograph) (showing the free portion to which Dr. Allais refers in his testimony).

³⁶⁴ *See* ROCFF 4.89, 4.99; *see also* RX-1 (Palmer Direct) at Q. 188 (“The only arguable axis in the Metrologic device occurs near the ball fixing the Metrologic flipper to the support. This axis
(continued...)”)

Accordingly, the question becomes whether the Kapton® extends away from the root end where the Kapton® enters the ball. To that end, Dr. Allais testified that “[t]he plastic flexure extends away from where the axis of rotation is located.”³⁶⁵ A visual inspection of the accused products confirms Dr. Allais’ testimony.³⁶⁶ Metrologic argues that the Kapton® does not extend away from the axis.³⁶⁷ However, Metrologic relies on a faulty claim construction requiring the oscillatory support means to define the axis of oscillation to support its conclusion.³⁶⁸ Because Metrologic relies on a claim construction that has been previously rejected, the undersigned finds Metrologic’s argument unpersuasive. Accordingly, based on the record evidence, the undersigned finds that the Kapton® in the accused products extends away from the axis. Moreover, the undersigned finds based on the record evidence and analysis hereinabove that the Kapton® in the accused products satisfies the limitation in claim 48 of the ‘627 patent requiring “a planar resilient non-metallic element coupled to the oscillatory support means and extending away from the axis.”

As discussed in detail, *supra*, Metrologic’s accused products satisfy all the limitations of claim 48 of the ‘627 patent. Accordingly, the undersigned finds that Metrologic literally infringes claim 48 of the ‘627 patent.

³⁶⁴(...continued)

is at the other end of the Kapton away from the copper layer.”).

³⁶⁵ See CX-109C at Q. 154.

³⁶⁶ See CX-118 (MS9540 scanning mirror photograph); *see also* RPX-32 (MS9540 voyager scan board); RPX-33 (MS5145 eclipse scan board); SPX-1 (MS9540 voyager scan board - redesign model); SPX-2 (MS5145 eclipse scan board - redesign model).

³⁶⁷ See RRB 8.

³⁶⁸ See RRB 7-8; *see also* ROCFF 4.99; RX-1C (Palmer Direct) at Q. 188 (“[t]o the extent one defines the copper layer between the mirror and the Kapton as the oscillatory support means, the Kapton flipper in Metrologic’s product does not ‘extend away’ from the axis.”).

C. Domestic Industry - Technical Prong

Symbol argues that its SE1200, SE1224, SE1524, SE900, SE923, SE800 and SE824 products practice all the limitations of claim 48 of the '627 patent.³⁶⁹ Metrologic argues that Symbol's SE1200, SE1224, SE900, SE923, SE800 and SE824 products do not practice claim 48 of the '627 patent.³⁷⁰ With regard to Symbol's SE1524 product, however, Metrologic admits that it practices claim 48 of the '627 patent.³⁷¹ The Staff argues that all of Symbol's asserted products satisfy the technical prong requirement of Section 337.³⁷²

Because there is no dispute that Symbol's SE1524 product exploits or practices the '627 patent-at-issue, the undersigned finds that Symbol has satisfied the technical prong requirement of 19 U.S.C. §1337 with respect to the '627 patent. Accordingly, the undersigned need not undertake an analysis of Symbol's SE1200, SE1224, SE900, SE923, SE800 and SE824 products to see whether those products also practice claim 48 of the '627 patent. The fact that Symbol's SE1524 product practices the '627 patent is sufficient to satisfy the technical prong requirement.

D. Validity

1. Person of Ordinary Skill in the Art

Symbol argues through its expert Dr. Allais that the level of ordinary skill in the art for the '627 patent is:

some combination of education and experience equivalent to a Bachelor of Science in Mechanical or Optical Engineering and two years experience in bar-code scanner design. By equivalent, I mean that neither the degree nor the time in the industry is

³⁶⁹ CIB 84; CX-109C (Allais Direct) at Q. 164.

³⁷⁰ RIB 101.

³⁷¹ RX-1C (Palmer Direct) at Q. 189, 190 ("It is my opinion that the Symbol SE1200 does not fall within the scope of claim 48 of the '627 patent, but the SE1524 does.").

³⁷² SIB 48-50.

a minimum; greater experience and lesser education or greater education and lesser experience could also qualify someone as a person of ordinary skill in the art.³⁷³

Metrologic's expert, Mr. Palmer, argues that the level of ordinary skill in the art is "someone with a Bachelor's degree in engineering and five years pertinent work experience, e.g., mechanical design relating to bar code scanning mechanisms."³⁷⁴ Mr. Palmer notes, however, that a person of ordinary skill in the art could have a higher educational degree and less work experience, or a lesser degree and more pertinent experience.³⁷⁵ The only difference between the level of ordinary skill proposed by Symbol and that proposed by Metrologic is that Symbol argues that two years of pertinent experience is sufficient, while Metrologic argues that five years of pertinent experience is required.

Although the '627 patent deals with complex technology, the invention disclosed therein is mechanical in nature and as such primarily involves the arrangement of various component parts. Metrologic does not discuss why such a high level of pertinent experience is necessary. The undersigned finds Metrologic's proposed level of ordinary skill less persuasive than that proposed by Symbol. Accordingly, the undersigned finds that the level of ordinary skill in the art for the '627 patent is one who has some combination of education and experience equivalent to a Bachelor Degree in mechanical or optical engineering and two years experience in bar code scanner design.

³⁷³ CX-109C (Allais Direct) at Q. 33, 34.

³⁷⁴ See RFF 392 (citing RX-1C (Palmer Direct) at Q. 65). The undersigned notes that Metrologic's finding of fact RFF 392 is directed to the '627 patent, although Mr. Palmer's testimony at RX-1C at Q.65 is directed to the level of ordinary skill for the '173 patent. Because of the similarity in subject matter between the '173 patent and '627 patent, the level of ordinary skill for the '173 patent should be the same as that of the '627 patent.

³⁷⁵ RX-1C (Palmer Direct) at Q. 65.

2. Anticipation

a. U.S. Patent No. 4,632,501

Metrologic argues that the '627 patent is anticipated by U.S. Patent No. 4,632,501 (the '501 patent).³⁷⁶ The '501 patent is titled, "Resonant Electromechanical Oscillator" and was issued on December 30, 1986.³⁷⁷ The '501 patent was before the patent examiner and is cited on the front of the '627 patent.³⁷⁸ Because the '501 patent was before the examiner during prosecution of the '627 patent, the burden for overcoming the presumption of validity is especially difficult.³⁷⁹

To prove anticipation, Symbol must show by clear and convincing evidence that the '501 patent discloses each and every limitation of claim 48 of the '627 patent.³⁸⁰ In support of its anticipation argument, Metrologic relies on the testimony of its expert, Mr. Palmer. On direct, Mr. Palmer testified that in his opinion, the '501 patent meets every limitation of claim 48 of the '627 patent.³⁸¹ However, on cross-examination, Mr. Palmer admitted that several claim limitations are not expressly disclosed in the '501 patent. Specifically, Mr. Palmer admitted that the '501 patent does not disclose the following limitations found in claim 48 of the '627 patent: (1) a system for reading an optically encoded symbol;³⁸² (2) an emitting and optics means for emitting a beam of light

³⁷⁶ JX-166 (the '501 patent).

³⁷⁷ *Id.*

³⁷⁸ See JX-1 (the '627 patent) at 1.

³⁷⁹ See *Hewlett-Packard Co. v. Bausch & Lomb, Inc.*, 909 F.2d 1464, 1467 (Fed. Cir. 1990) ("HP").

³⁸⁰ *SmithKline Beecham Corp. v. Apotex Corp.*, 403 F.3d 1331, 1343 (Fed. Cir. 2005) ("*SmithKline Beecham*") ("A patent is invalid for anticipation if a single prior art reference discloses each and every limitation of the claimed invention.").

³⁸¹ See RX-1C (Palmer Direct) at Q. 196, 197; see also RDX-100 (claim chart).

³⁸² See Palmer, Tr. 805, 812. The undersigned acknowledges that although discussed as a limitation, there is a question as to whether the preamble of claim 48 is indeed an additional limitation of the claim. Ultimately, whether the preamble is or is not a claim limitation has no effect (continued...)

and optically directing the beam of light toward the optically encoded symbol;³⁸³ (3) a planar resilient non-metallic element;³⁸⁴ and (4) a means responsive to light reflected back from the optically encoded symbol.³⁸⁵

Although the '501 patent lacks these limitations of the '627 patent, the '501 patent may nevertheless anticipate the '627 patent if the missing limitations are inherent to the '501 patent.³⁸⁶ With regard to the preamble of the '627 patent requiring "[a] system for reading an optically encoded symbol," Metrologic argues that the '501 patent satisfies this limitation because the '501 patent states that the disclosed invention can be used in "portable devices such as laser-type bar code scanning readers."³⁸⁷ With regard to the limitations "an emitting and optics means for emitting a beam of light and optically directing the beam of light toward the optically encoded symbol" and "a means responsive to light reflected back from the optically encoded symbol," Mr. Palmer testified that one of ordinary skill in the art in 1989 would understand that a bar code scanner would have these limitations.³⁸⁸ With regard to the limitation "a planar resilient non-metallic element," Mr. Palmer testified that the leaf spring shown as item 18 in Figures 8 and 9 of the '501 patent satisfies

³⁸²(...continued)
on the holdings made herein.

³⁸³ See *id.* at 805-06, 812.

³⁸⁴ See *id.* at 810-11, 812-13.

³⁸⁵ See *id.* at 811-13.

³⁸⁶ *SmithKline Beecham*, 403 F.3d at 1343 ("a prior art reference may anticipate without disclosing a feature of the claimed invention if that missing characteristic is necessarily present, or inherent, in the single anticipating reference.").

³⁸⁷ RIB 109; RDX-100 (claim chart); JX-166 (the '501 patent) at col. 1:20-21.

³⁸⁸ RX-1C (Palmer Direct) at Q. 198 ("One of ordinary skill in the art in 1989 would understand that a bar code scanner would use a laser diode as its light source."), Q. 202 ("One of ordinary skill in the art in 1989 would understand that a bar code scanner would use a photosensor to produce electrical signals corresponding to different light reflectivities of the bar code symbol being scanned."); RDX-100 (claim chart).

this claim limitation.³⁸⁹ Mr. Palmer admits that the disclosed leaf spring in the ‘501 patent is metallic (as opposed to non-metallic as required by the ‘627 patent), but argues that “[o]ne of ordinary skill in the art in 1989 would recognize that a lower frequency of scanning oscillation could be achieved by using a material with a lower modulus of elasticity, which would suggest the use of a non-metallic material.”³⁹⁰

As described above, Mr. Palmer relies on the knowledge of one of ordinary skill in the art to satisfy those limitations that he admits are missing from the ‘501 patent. However, in so doing, Mr. Palmer seemingly confuses obviousness under 35 U.S.C. § 103 with anticipation under 35 U.S.C. § 102. The Federal Circuit has made absolutely clear that to prove inherency, the missing limitations must necessarily be present in the allegedly anticipating prior art reference.³⁹¹ Because Mr. Palmer’s testimony in no way discusses how the missing limitations are necessarily present in the ‘501 patent, the undersigned finds that Metrologic has failed to prove by clear and convincing evidence that the ‘501 patent anticipates claim 48 of the ‘627 patent-at-issue.

b. U.S. Patent No. 4,732,440

Metrologic argues that the ‘627 patent is anticipated by U.S. Patent No. 4,732,440 (the ‘440 patent).³⁹² The ‘440 patent is titled, “Self Resonant Scanning Device” and was issued on March 22,

³⁸⁹ RX-1C (Palmer Direct) at Q. 201; RDX-100 (claim chart).

³⁹⁰ *Id.*

³⁹¹ See *SmithKline Beecham*, 403 F.3d at 1343; see also *Finnigan*, 180 F.3d at 1365 (“To serve as an anticipation when the reference is silent about the asserted inherent characteristic, such gap in the reference may be filled with recourse to extrinsic evidence. Such evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill”) (quoting *Continental Can*, 948 F.2d at 1268).

³⁹² See RX-279 (the ‘440 patent).

1988.³⁹³ The ‘440 patent was before the patent examiner and is cited on the front of the ‘627 patent.³⁹⁴ Because the ‘440 patent was before the examiner during prosecution of the ‘627 patent, the burden for overcoming the presumption of validity is especially difficult.³⁹⁵

To prove anticipation, Symbol must show by clear and convincing evidence that the ‘440 patent discloses each and every limitation of claim 48 of the ‘627 patent.³⁹⁶ In support of its anticipation argument, Metrologic relies on the testimony of its expert, Mr. Palmer. On direct, Mr. Palmer testified that in his opinion, the ‘440 patent meets every limitation of claim 48 of the ‘627 patent.³⁹⁷ However, on cross-examination, Mr. Palmer admitted that several claim limitations are not expressly disclosed in the ‘440 patent. Specifically, Mr. Palmer admitted that the ‘440 patent does not disclose the following limitations found in claim 48 of the ‘627 patent: (1) a system for reading an optically encoded symbol;³⁹⁸ (2) an emitting and optics means for emitting a beam of light and optically directing the beam of light toward the optically encoded symbol;³⁹⁹ (3) a planar resilient non-metallic element;⁴⁰⁰ and (4) a means responsive to light reflected back from the optically encoded symbol.⁴⁰¹

Although the ‘440 patent lacks these limitations of the ‘627 patent, the ‘440 patent may

³⁹³ *Id.*

³⁹⁴ *See* JX-1 (the ‘627 patent) at 1.

³⁹⁵ *See* *HP*, 909 F.2d at 1467.

³⁹⁶ *SmithKline Beecham*, 403 F.3d at 1343 (“A patent is invalid for anticipation if a single prior art reference discloses each and every limitation of the claimed invention.”).

³⁹⁷ *See* RX-1C (Palmer Direct) at Q. 196, 207; *see also* RDX-99 (claim chart).

³⁹⁸ *See* Palmer, Tr. 825-26, 831. The undersigned acknowledges that although discussed as a limitation, there is a question as to whether the preamble of claim 48 is indeed an additional limitation of the claim. Ultimately, whether the preamble is or is not a claim limitation has no effect on the holdings made herein.

³⁹⁹ *See id.* at 826, 831.

⁴⁰⁰ *See id.* at 829, 831.

⁴⁰¹ *See id.* at 831.

nevertheless anticipate the '627 patent if the missing limitations are inherent to the '440 patent.⁴⁰² With regard to the preamble of the '627 patent requiring "[a] system for reading an optically encoded symbol," Metrologic argues that the '440 patent satisfies this limitation because the '440 patent states that the disclosed invention can be used in "bar code readers."⁴⁰³ With regard to the limitations "an emitting and optics means for emitting a beam of light and optically directing the beam of light toward the optically encoded symbol" and "a means responsive to light reflected back from the optically encoded symbol," Mr. Palmer testified that one of ordinary skill in the art would understand that a bar code scanner would have these limitations.⁴⁰⁴ With regard to the limitation "a planar resilient non-metallic element," Mr. Palmer testified that the S-spring assembly shown in Figure 4 of the '440 patent satisfies this claim limitation.⁴⁰⁵ Mr. Palmer admits that the disclosed S-spring assembly in the '440 patent is described as being metallic (as opposed to non-metallic as required by the '627 patent), but argues that "[o]ne of ordinary skill in the art in 1989 would recognize that a lower frequency of scanning oscillation could be achieved by using a material with a lower modulus of elasticity, which would suggest the use of a non-metallic material."⁴⁰⁶

As described above, Mr. Palmer relies on the knowledge of one of ordinary skill in the art to satisfy those limitations that he admits are missing from the '440 patent. However, in so doing,

⁴⁰² *SmithKline Beecham*, 403 F.3d at 1343 ("a prior art reference may anticipate without disclosing a feature of the claimed invention if that missing characteristic is necessarily present, or inherent, in the single anticipating reference.").

⁴⁰³ RIB 112; RDX-99 (claim chart); RX-279 (the '440 patent) at col. 2:20-23.

⁴⁰⁴ RX-1C (Palmer Direct) at Q. 208 ("When used in a bar code scanner, a person of ordinary skill in the art at that time would have recognized that a laser diode would be an obvious choice for a light source."), Q. 212 ("One of ordinary skill in the art in 1989 would understand that a bar code scanner would certainly use a photosensor to produce electrical signals corresponding to different light reflectivities of the bar code symbol being scanned."); RDX-99 (claim chart).

⁴⁰⁵ RX-1C (Palmer Direct) at Q. 211; RDX-99 (claim chart).

⁴⁰⁶ *Id.*

Mr. Palmer seemingly confuses obviousness under 35 U.S.C. § 103 with anticipation under 35 U.S.C. § 102. The Federal Circuit has made absolutely clear that to prove inherency, the missing limitations must necessarily be present in the allegedly anticipating prior art reference.⁴⁰⁷ Because Mr. Palmer's testimony in no way discusses how the missing limitations are necessarily present in the '440 patent, the undersigned finds that Metrologic has failed to prove by clear and convincing evidence that the '440 patent anticipates claim 48 of the '627 patent-at-issue.

3. Obviousness

a. U.S. Patent No. 4,632,501

Metrologic argues that one of ordinary skill in the art would find the '627 patent obvious in light of the '501 patent combined with the knowledge of one of ordinary skill in the art. Metrologic's obviousness argument mirrors its anticipation argument. In fact, Metrologic addresses both obviousness and anticipation of the '627 patent in the same section of its post-hearing brief.⁴⁰⁸

As discussed with regard to anticipation, the '501 patent fails to disclose at least three separate claim limitations.⁴⁰⁹ The missing limitations are: (1) an emitting and optics means for emitting a beam of light and optically directing the beam of light toward the optically encoded

⁴⁰⁷ See *SmithKline Beecham*, 403 F.3d at 1343; see also *Finnigan*, 180 F.3d at 1365 (Fed. Cir. 1999) ("To serve as an anticipation when the reference is silent about the asserted inherent characteristic, such gap in the reference may be filled with recourse to extrinsic evidence. Such evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill") (quoting *Continental Can*, 948 F.2d at 1268).

⁴⁰⁸ RIB 108-11.

⁴⁰⁹ Mr. Palmer also admits that the '501 patent does not satisfy the preamble of the '627 patent. See Palmer, Tr. 805, 812.

symbol;⁴¹⁰ (2) a planar resilient non-metallic element;⁴¹¹ and (3) a means responsive to light reflected back from the optically encoded symbol.⁴¹²

Analysis of Metrologic's argument regarding the second missing limitation, "a planar resilient non-metallic element," is dispositive of Metrologic's obviousness argument. Accordingly, Metrologic's argument regarding this limitation is now addressed. Metrologic's expert, Mr. Palmer, testified that the sheet-form suspension member 18 described in the specification and shown in Figures 8 and 9 of the '501 patent satisfies the claim limitation "a planar resilient non-metallic element," although admittedly the suspension member 18 in the '501 patent is metallic.⁴¹³ Mr. Palmer testified that the suspension member 18 "is described as being metallic, because some of the applications envisioned by this invention required a much higher frequency of oscillation than those commonly used in bar code scanners."⁴¹⁴ According to Mr. Palmer, "[o]ne of ordinary skill in the art in 1989 would recognize that a lower frequency of scanning oscillation could be achieved by using a material with a lower modulus of elasticity, which would suggest the use of a non-metallic material."⁴¹⁵

In response, Dr. Allais testified for Symbol that:

The '501 patent does not suggest to a person of ordinary skill in the art that any material other than heat-treated carbon steel could be used in its resonant oscillator. At column 4, lines 10-14, the '501 patent describes resonant oscillators operating at 20 hertz. In 1989, laser bar code scanners typically operated at approximately 18-20

⁴¹⁰ See *id.* at 805-06, 812.

⁴¹¹ See *id.* at 810-13.

⁴¹² See *id.* at 811-13.

⁴¹³ See RX-1C (Palmer Direct) at Q. 201; RDX-100 (claim chart); *see also* Palmer, Tr. 810-11 (admitting that the '501 patent "neither teaches nor discloses a non-metallic element") (emphasis added).

⁴¹⁴ See RX-1C (Palmer Direct) at Q. 201.

⁴¹⁵ *Id.*

hertz. Therefore, there would be no need to seek a flexure with a lower modulus of elasticity than the carbon steel disclosed in the '501 patent, and the '501 patent does not suggest using any material other than carbon steel for the disclosed flexure. Also, there were ways known to designers of bar code scanners in 1989 to lower the spring constraint of a flexure other than substituting a non-metallic material.⁴¹⁶

In response to Dr. Allais' testimony, Mr. Palmer changed his obviousness argument, testifying that:

[T]he device described in the '501 patent has a larger mirror than those which often were incorporated in new scanner designs that were started in this time frame. This large mirror and its associated metallic mount would have been much heavier than the plastic mirrors and supports that were being designed in this time period. If a smaller and lighter mirror (probably using plastic both for the mirror and its support) were to be used, the resulting resonant frequency would be raised. In order to again lower the frequency, a designer would naturally consider a different material for the [suspension member 18]. This would be nothing more than the normal response of one of ordinary skill in the field to the availability of smaller, lighter components.

...

A designer working in 1989 to develop a hand held laser scanner would want to reduce the size and weight of the device as much as possible. There would therefore be motivation to reduce all of the physical dimensions of the device described in the '501 patent. Again, this would result in an increase in the resonant frequency, and one obvious way to reduce the frequency again would be to consider a different material for use in the [suspension member 18].⁴¹⁷

Dr. Allais disagreed with Mr. Palmer's testimony, stating that:

there is nothing in the '501 patent that suggests reducing the size of the mirror used to make it better suited for a laser bar code scanner. However, even if one were to reduce the size of the mirror disclosed in the '501 patent and wanted to maintain a certain resonant frequency, skilled artisans in 1989 would have simply lowered the spring constant of the metallic flexure rather than move to a non-metallic flexure.⁴¹⁸

According to Dr. Allais, "[i]n 1989, non-metallic flexures were not used in laser bar code

⁴¹⁶ CX-166C (Allais Rebuttal) at Q. 103. Dr. Allais also testified that in 1989, non-metallic flexures were not used in laser bar code scanners. *Id.* at Q. 104.

⁴¹⁷ RX-1C (Palmer Direct) at Q. 206.

⁴¹⁸ CX-166C (Allais Rebuttal) at Q. 105.

scanners.”⁴¹⁹

As is plain from the above quoted testimony, Mr. Palmer initially argued that one of ordinary skill would be motivated to change from the disclosed metallic suspension member 18 to a non-metallic member because the disclosed invention of the ‘501 patent operated at a frequency of oscillation that was higher than was needed for bar code scanners. Thus, according to Mr. Palmer, one of ordinary skill looking for a way to lower the frequency of oscillation would have been motivated to change the material of the suspension member 18 from metal to non-metal. However, after Dr. Allais testified that the disclosed 20 hertz operating frequency in the ‘501 patent was in fact within the normal frequency range for bar code scanners of that time, Mr. Palmer changed his obviousness theory. Mr. Palmer abandoned his theory based on the disclosed frequency in the ‘501 patent and adopted a new theory based on the desire of one of ordinary skill in the art to reduce the physical dimensions of the oscillator in the ‘501 patent. The undersigned finds Mr. Palmer’s change in position troubling as it casts doubt on his credibility as a witness. Additionally, if it is fair to assume that Mr. Palmer’s change of position was the result of Dr. Allais’ testimony, then a question arises as to why Mr. Palmer, who is allegedly one of ordinary skill in the art, didn’t know the standard frequency of oscillation for bar code scanners at that time. The undersigned’s perception from the evidence of record is that the frequency of oscillation is a critical component in designing bar code scanners and a basic fact which one of ordinary skill would normally possess.

In addition to the undersigned’s above-noted doubts as to the credibility of Mr. Palmer’s testimony, the undersigned finds Mr. Palmer’s substantive argument unpersuasive. Under both theories of obviousness, Mr. Palmer concludes that one of ordinary skill wishing to lower the

⁴¹⁹ *Id.* at Q. 104.

frequency of oscillation would be motivated to change the metallic suspension member 18 to a non-metallic element. However, the evidence of record shows that there were other ways in which one of ordinary skill could have lowered the frequency of oscillation. Specifically, Dr. Allais testified that one of ordinary skill would have been more readily motivated to “simply lower[] the spring constant of the metallic flexure rather than move to a non-metallic flexure.”⁴²⁰ Mr. Palmer provides no explanation as to why one of ordinary skill would choose to change the disclosed metallic suspension member 18 to a non-metallic member rather than lower the spring constant of the disclosed metallic suspension member 18. In light of the fact that in 1989, non-metallic flexures were apparently not used in laser bar code scanners,⁴²¹ the undersigned is left with the impression that Mr. Palmer used the ‘627 patent as a blueprint to develop his obviousness argument. This is the hallmark of hindsight analysis and is impermissible.⁴²²

Metrologic argues that one of ordinary skill in the art, armed only with the ‘501 patent and their own knowledge in the art of scanner design, would be motivated to create a laser bar code scanner that satisfies all the limitations of claim 48 of the ‘627 patent. Based on the record evidence, in order to create a laser bar code scanner that satisfies all the limitations of claim 48, a person of ordinary skill would have to determine, at a minimum, that: (1) the oscillator of the ‘501 patent can

⁴²⁰ See *id.* at Q. 105; see also *id.* at Q. 103.

⁴²¹ *Id.* at Q. 104.

⁴²² See *Ecolochem v. Southern California Edison Co.*, 227 F.3d 1361, 1371-72 (Fed. Cir. 2000) (“*Ecolochem*”) (Making an obviousness analysis “without evidence of [] a suggestion, teaching, or motivation simply takes the inventor’s disclosure as a blueprint for piecing together the prior art to defeat patentability-the essence of hindsight”); see also *Sensonic, Inc. v. Aerosonic Corp.*, 81 F.3d 1566, 1570 (Fed. Cir. 1996) (“*Sensonic*”) (“To draw on hindsight knowledge of the patented invention, when the prior art does not contain or suggest that knowledge, is to use the invention as a template for its own reconstruction - an illogical and inappropriate process by which to determine patentability.”).

be used in a laser bar code scanner;⁴²³ (2) in order to make the laser bar code scanner operate there needs to be a light source and a photosensor;⁴²⁴ (3) the light source should be a laser diode;⁴²⁵ (4) the physical dimensions of the scanner should be reduced;⁴²⁶ (5) reducing the physical dimensions of the scanner raises the resonant frequency;⁴²⁷ (6) the resonant frequency needs to be lowered;⁴²⁸ (7) to lower the resonant frequency, the metallic suspension member 18 needs to be made of different material;⁴²⁹ and (8) the material should be non-metallic.⁴³⁰ Metrologic would have the undersigned believe that one of ordinary skill in the art, which has been defined herein as a person with a bachelor's degree and 2 years of design experience, would be motivated to make all of these determinations using only the '501 patent and his/her own knowledge in the art of scanner design. The record evidence does not support such a conclusion.

"In cases such as this where a single prior art reference is alleged to render the claimed invention obvious, there must be a sufficient showing of a suggestion or motivation for any modification of the teachings of that reference necessary to reach the claimed invention in order to support the obviousness conclusion."⁴³¹ The suggestion or motivation may come from the prior art reference itself, from the knowledge of one of ordinary skill in the art, or from the nature of the

⁴²³ See Palmer, Tr. 805, 812.

⁴²⁴ See Palmer, Tr. 805-06, 811-13; *see also* RX-1C (Palmer Direct) at Q. 206.

⁴²⁵ See Palmer, Tr. 805-06, 811-12; *see also* RX-1C (Palmer Direct) at Q. 206.

⁴²⁶ See RX-1C (Palmer Direct) at Q. 206.

⁴²⁷ *Id.*

⁴²⁸ *Id.*

⁴²⁹ *Id.*

⁴³⁰ See Palmer, Tr. 810-13; *see also* RX-1C (Palmer Direct) at Q. 201.

⁴³¹ See *McGinely v. Franklin Sports, Inc.*, 262 F.3d 1229, 1359 (Fed. Cir. 2001) ("*McGinely*"); *see also* *B.F. Goodrich*, 72 F.3d at 1582.

problem to be solved, but in any event must be clear and particular.⁴³² Broad conclusory statements are insufficient.⁴³³ As previously highlighted, Mr. Palmer's testimony is mostly conclusory and ultimately reflects the use of impermissible hindsight to reconstruct the invention of the '627 patent-at-issue. For the reasons discussed hereinabove, and as is plain from the evidence of record, the undersigned finds that Metrologic has failed to prove by clear and convincing evidence that claim 48 of the '627 patent is obvious in light of the '501 patent.⁴³⁴

b. U.S. Patent No. 4,732,440

Metrologic argues that one of ordinary skill in the art would find the '627 patent obvious in light of the '440 patent combined with the knowledge of one of ordinary skill in the art. Metrologic's obviousness argument mirrors its anticipation argument. In fact, Metrologic addresses both obviousness and anticipation of the '627 patent in the same section of its post-hearing brief.⁴³⁵

As discussed with regard to anticipation, the '440 patent fails to disclose at least three separate claim limitations.⁴³⁶ The missing limitations are: (1) an emitting and optics means for emitting a beam of light and optically directing the beam of light toward the optically encoded symbol;⁴³⁷ (2) a planar resilient non-metallic element;⁴³⁸ and (3) a means responsive to light reflected

⁴³² See *SIBIA Neuroscis., Inc. v. Cadus Pharm. Corp.*, 225 F.3d 1349, 1356 (Fed. Cir. 2000) ("*SIBIA*").

⁴³³ See *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1125 (Fed. Cir. 2000) ("*Brown & Williamson*").

⁴³⁴ The undersigned's conclusion of non-obviousness is also supported by the record evidence of commercial success and long-felt need. See CIB 105; CX-110C at Q. 95, 96, 98; CX-192C at Q. 7-10, 13; CX-193C at Q. 12-24.

⁴³⁵ RIB 108-14.

⁴³⁶ Mr. Palmer also admits that the '440 patent does not satisfy the preamble of the '627 patent. See Palmer, Tr. 825-26, 831.

⁴³⁷ See *id.* at 826, 831.

⁴³⁸ See *id.* at 829, 831.

back from the optically encoded symbol.⁴³⁹

Analysis of Metrologic's argument regarding the second missing limitation, "a planar resilient non-metallic element," is dispositive and accordingly it is now addressed. Metrologic relies on the testimony of its expert, Mr. Palmer, in support of its argument that claim 48 of the '627 patent would have been obvious in light of the '440 patent combined with the knowledge of one of ordinary skill in the art of bar code scanner design. Mr. Palmer identifies the S-shaped spring shown in Figure 4 of the '440 patent as the element that meets the "planar resilient non-metallic element" limitation of claim 48 of the '627 patent.⁴⁴⁰ Although admittedly metallic, Mr. Palmer testified that:

[t]he S-spring assembly is described as being metallic in the '440 patent, because some of the applications envisaged by this invention required a much higher frequency of oscillation than those commonly used in bar code scanners. One of ordinary skill in the art in 1989 would recognize that a lower frequency of scanning oscillation could be achieved by using a material with a lower modulus of elasticity, which would suggest the use of non-metallic material.⁴⁴¹

In response, Dr. Allais testified for Symbol that:

The '440 patent does not suggest to a person of ordinary skill in the art that any non-metallic material could be used for the S-shaped springs. At column 13, lines 31-36, the '440 patent indicated that steel was selected for the springs because of its very high endurance limitation and its toughness. The '440 patent further describes at column 13, lines 50-65 subjecting the steel to annealing and hardening treatments. Such features are particular to metallic springs, not non-metallic springs. Thus, one skilled in the art would not be motivated to make the S-shaped springs disclosed in the '440 patent from a non-metallic material.⁴⁴²

Also, Dr. Allais testified that it would not have been obvious to one of ordinary skill in the art to make the S-shaped springs non-metallic, because "non-metallic flexures were not used in laser bar

⁴³⁹ See *id.* at 831.

⁴⁴⁰ RX-1C (Palmer Direct) at Q. 211.

⁴⁴¹ *Id.*

⁴⁴² CX-166C (Allais Rebuttal) at Q. 113; *id.* at Q. 114 (testifying that the '440 patent teaches away from non-metallic springs").

code scanners in 1989.”⁴⁴³ In response, Mr. Palmer testified:

Dr. Allais argues that the ‘440 patent describes a device with a resonant frequency of 625 Hz. whereas in 1989 laser bar code scanners operated at approximately 18-20 Hz. I agree that hand-held laser scanners in 1989 typically operated with a scanning frequency of 18-20 Hz. However, claim 48 of the ‘627 patent is not limited to hand-held scanners. Fixed mount-laser scanners normally operated at a higher frequency than 20 Hz, making the scanner design as described in the ‘440 patent more usable.

If one of ordinary skill in the art in 1989 were assigned to design a bar code scanner with a scanning rate of 20 Hz, he would recognize through an examination of the equations in the ‘440 patent that the use of a spring material with a lower modulus of elasticity would lower the frequency. This would inevitably require the use of a non-metallic material.⁴⁴⁴

For the reasons discussed in detail below, the undersigned finds Mr. Palmer’s argument unpersuasive.

Mr. Palmer’s obviousness argument is based on his opinion that one of ordinary skill in the art seeking to lower the frequency of scanning oscillation would “inevitably” be motivated to use a non-metallic material for the S-shaped spring to achieve the lower frequency sought.⁴⁴⁵ To that end, Mr. Palmer testified that one of ordinary skill in the art would seek to lower the frequency of oscillation disclosed in the ‘440 patent, because the “applications envisaged by this invention required a much higher frequency of oscillation than those commonly used in bar code scanners.”⁴⁴⁶ However, in his later testimony Mr. Palmer states that fixed-mount scanners normally operated at rates higher than 20 Hz, “making the scanner design in the ‘440 patent more usable.”⁴⁴⁷ Mr. Palmer fails to adequately explain why one of ordinary skill in the art would be motivated in the first

⁴⁴³ *Id.* at Q. 114.

⁴⁴⁴ RX-1C (Palmer Direct) at Q. 216.

⁴⁴⁵ *Id.*

⁴⁴⁶ *Id.* at Q. 211.

⁴⁴⁷ *Id.* at Q. 216.

instance to lower the frequency of oscillation of the S-shaped spring if the scanner design in the '440 patent was usable in a 1989 fixed-mount scanner.⁴⁴⁸ Moreover, Mr. Palmer fails to explain why one of ordinary skill in the art would be "assigned to design a bar code scanner with a scanning rate of 20 Hz."⁴⁴⁹ There is only one reference in the '440 patent to bar code scanners. That reference is at the very beginning of the background section of the specification and states that

[t]he use of scanners is becoming ever more important with the high speed printers, optical storage devices, and bar code readers all using a scanning device in conjunction with a beam of eletromagnetic radiation to transform electronic signals between computer memories and printed copy and vice versa.⁴⁵⁰

The '440 patent does not say anything about hand-held bar code scanners, which admittedly operated in 1989 in the 18-20 Hz range, or any other type of bar code scanner operating in the 20 Hz range. In fact, the '440 patent teaches away from building such low frequency scanners.⁴⁵¹ A review of the '440 patent specification makes clear that the purpose of the disclosed invention is to permit higher resonant scanner frequencies, not lower frequencies.⁴⁵²

Because the record evidence, as discussed above, provides no motivation as to why one of ordinary skill would be motivated to design a 20 Hz bar code scanner, the only reasonable conclusion to be drawn is that Mr. Palmer chose 20 Hz because at that frequency level he believed one of ordinary skill in the art would be motivated to use a non-metallic material for the S-shaped spring.

⁴⁴⁸ *Id.*

⁴⁴⁹ *Id.*

⁴⁵⁰ See RX-279 (the '440 patent) at col. 2:20-25.

⁴⁵¹ See *Optivus Technology, Inc. v. Ion Beam Applications S.A.*, 469 F.3d 978, 989 (Fed. Cir. 2006) ("*Optivus*") ("A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant."); *Ormco Corp. v. Align Technology, Inc.*, 463 F.3d 1299, 1308 (Fed. Cir. 2006) ("*Ormco*") ("[A] reference that 'teaches away' . . . may negate a motivation to modify the prior art to meet the claimed invention.").

⁴⁵² See RX-279 (the '440 patent) at col. 4:35-39, 52-55; 5:5-7; 6:23-27.

Such reasoning is based on hindsight and is impermissible in an obviousness analysis.

Nevertheless, even assuming that one of ordinary skill were motivated to design a 20 Hz bar code scanner, or any low frequency bar code scanner for that matter, Metrologic fails to convincingly prove why one of ordinary skill in the art would be motivated to use a non-metallic material for the S-shaped spring. The '440 patent discloses that "[t]he preferred material for the spring is Carpenter Custom 455 steel."⁴⁵³ According to the patent, the material is "selected for its high endurance limit and its toughness."⁴⁵⁴ The '440 patent also discloses that after the material is bent into its S-shape, the resulting spring element is annealed and precipitation hardened.⁴⁵⁵ As Dr. Allais testified, the annealing and hardening steps are particular to metallic springs, not non-metallic springs.⁴⁵⁶ Because a non-metallic spring would lack the qualities set forth in the specification for selecting a material for the S-shaped spring, namely toughness and a high endurance limit, the '440 patent teaches away from using a non-metallic spring element. In light of the teaching of the '440 patent, it is unclear why one of ordinary skill in the art would be motivated to change the S-shaped spring from metallic to non-metallic. This is especially true in light of the fact that in 1989 non-metallic flexures apparently were not used in laser bar code scanners.⁴⁵⁷

Mr. Palmer stated on redirect that one of ordinary skill in the art seeking to lower the frequency of oscillation would look to the equations disclosed in the '440 patent and "figure out what parameter to play with."⁴⁵⁸ Mr. Palmer admits that the equations disclosed in the '440 patent for

⁴⁵³ RX-279 (the '440 patent) at col. 13:32-33.

⁴⁵⁴ *Id.* at col. 13:34-36.

⁴⁵⁵ *Id.* at col. 13:50-65.

⁴⁵⁶ CX-166C (Allais Rebuttal) at Q. 113.

⁴⁵⁷ *Id.* at Q. 104.

⁴⁵⁸ Palmer, Tr. 858-59.

determining the frequency of oscillation are based on several parameters.⁴⁵⁹ According to Mr. Palmer, “[t]he parameter which would immediately leap out would be this one of modulus of elasticity” which would “necessarily steer [one of ordinary skill in the art] to a material that was nonmetallic.”⁴⁶⁰ Dr. Allais testified, however, that “there were ways known to designers of bar code scanners in 1989 to lower the spring constant of a flexure other than substituting a non-metallic material.”⁴⁶¹ In light of Dr. Allais’ testimony and because Mr. Palmer provides no meaningful explanation as to why one of ordinary skill in the art would focus on the “modulus of elasticity” instead of the other parameters that admittedly effect the frequency of oscillation, it appears that Mr. Palmer again engaged in impermissible hindsight analysis to arrive at his stated obviousness conclusions.

“In cases such as this where a single prior art reference is alleged to render the claimed invention obvious, there must be a sufficient showing of a suggestion or motivation for any modification of the teachings of that reference necessary to reach the claimed invention in order to support the obviousness conclusion.”⁴⁶² The suggestion or motivation may come from the prior art reference itself, from the knowledge of one of ordinary skill in the art, or from the nature of the problem to be solved, but in any event must be clear and particular.⁴⁶³ Broad conclusory statements are insufficient.⁴⁶⁴ As previously highlighted, Mr. Palmer’s testimony is mostly conclusory and ultimately reflects the use of impermissible hindsight to reconstruct the invention of the ‘627 patent-

⁴⁵⁹ *Id.*

⁴⁶⁰ *Id.*

⁴⁶¹ CX-166C (Allais Rebuttal) at Q. 103.

⁴⁶² *See McGinely*, 262 F.3d at 1359; *see also B.F. Goodrich*, 72 F.3d at 1582.

⁴⁶³ *See SIBIA*, 225 F.3d at 1356.

⁴⁶⁴ *See Brown & Williamson*, 229 F.3d at 1125.

at-issue. For the reasons discussed hereinabove, and as is plain from the evidence of record, the undersigned finds that Metrologic has failed to prove by clear and convincing evidence that claim 48 of the '627 patent is obvious in light of the '440 patent.⁴⁶⁵

4. Written Description/Enablement Under 35 U.S.C. § 112

Metrologic argues that “[i]f claim 48 is construed broadly so as to encompass the Metrologic devices, the '627 patent is invalid under 35 U.S.C. § 112, ¶1 for failing to sufficiently describe the invention so as to enable those skilled in the art to make and use the invention.”⁴⁶⁶ Both Symbol and the Staff argue that Metrologic has failed to meet its burden of proof.⁴⁶⁷

Patents are presumed valid and can be proved invalid only by clear and convincing evidence.⁴⁶⁸ The written description requirement is distinct from the enablement requirement.⁴⁶⁹ The written description requirement is a question of fact, judged from the perspective of one of ordinary skill in the art.⁴⁷⁰ Enablement is a question of law involving underlying factual inquiries.⁴⁷¹

Metrologic relies on the testimony of its expert, Mr. Palmer, in support of its invalidity argument under 35 U.S.C. § 112, ¶ 1.⁴⁷² To that end, Mr. Palmer testified as follows:

217. Do you have any further opinions concerning the validity of the '627 patent?

⁴⁶⁵ The undersigned's conclusion of non-obviousness is also supported by the record evidence of commercial success and long-felt need. See CIB 107; CX-110C at Q. 95, 96, 98; CX-192C at Q. 7-10, 13; CX-193C at Q. 12-24.

⁴⁶⁶ RIB 115.

⁴⁶⁷ CRB 47; SIB 58.

⁴⁶⁸ *High Concrete Structures, Inc. V. New Enterprise Stone and Lime Co., Inc.*, 377 F.3d 1379, 1382 (Fed. Cir. 2004) (“*High Concrete Structures*”).

⁴⁶⁹ *Invitrogen Corp v. Clontech Labs., Inc.*, 428 F.3d 1052, 1071 n. 17 (Fed. Cir. 2005) (“*Invitrogen*”).

⁴⁷⁰ *Falko-Gunter Falkner v. Inglis*, 448 F.3d 1357, 1363 (Fed. Cir. 2006) (“*Falko-Gunter*”).

⁴⁷¹ *Id.*

⁴⁷² RIB 115.

A. I also believe that the '627 patent is invalid under the first paragraph of 35 USC 112, as it does not contain sufficient written description of the invention so as to enable one skilled in the art from making and using the invention, if the claims are construed so broadly as to cover Metrologic's scanners. There is no teaching in the specification of the '627 patent to give any direction to one of ordinary skill in the art as to how to construct a configuration like the flipper used in Metrologic scanners.

218. Have you reviewed Dr. Allais rebuttal opinion regarding the invalidity of the '627 patent under section 112?

A. Yes, I have done so.

219. Can you explain to the Court what aspects of Dr. Allais' opinion you disagree with and why?

A. One of ordinary skill in the art could not rely up on the teachings of the '627 patent to learn how to make a structure like Metrologic's flipper.

Dr. Allais states that he does not believe that the July 8, 1996 Office Action has "... any effect on the scope of the claims of the '627 patent." I respectfully disagree with this position, because it is clear to me that the Examiner was objecting to anything other than "a single bent spring." The Metrologic devices do not have "resilient spring elements" or a "single bent spring." If the Court now adopts Symbol's broadened claim interpretation to cover any type of scanner incorporating a leaf spring, then the patent's specification clearly does not provide an enabling description of such a structure. More importantly, there is no disclosure in the '627 patent that would enable the use of a support means that has an axis of rotation that is not coincident with the support means.⁴⁷³

The gist of Mr. Palmer's invalidity opinion is that if claim 48 is construed to cover Metrologic's accused products, then the '627 patent fails to meet the written description and enablement requirements because the specification of the '627 patent does not teach one of ordinary skill how to construct the flipper assembly used in Metrologic's products.

Having reviewed Mr. Palmer's testimony, the undersigned finds it to be inadequate to support

⁴⁷³ RX-1C (Palmer Direct) at Q. 217-19 (emphasis in original).

a holding of invalidity under 35 U.S.C. §112, ¶ 1. Contrary to Mr. Palmer's opinion, a patent applicant need not describe every embodiment of his/her invention.⁴⁷⁴ Additionally, Mr. Palmer's opinion appears to be based, at least in part, on Metrologic's faulty claim construction requiring the oscillatory support means to define the axis of oscillation. Moreover, the entirety of Mr. Palmer's testimony is conclusory, lacking any type of factual support. Thus, in light of Dr. Allais' testimony that "[t]he specification provides a disclosure that is sufficient to allow a person of ordinary skill in the art to make, use and practice the full scope of the claimed invention," the undersigned finds Mr. Palmer's testimony unpersuasive.⁴⁷⁵ Accordingly, the undersigned finds that Metrologic has failed to prove by clear and convincing evidence that the '627 patent is invalid for lack of enablement and written description.

VI. The '889 Patent

A. Claim Construction

1. Asserted Claims

The asserted claims of the '889 patent are reproduced below (with the first instance of the disputed terms highlighted in *italics*):

7. An optical component for use in optical scanning system of the type having a laser light source and a laser light sensor mounted in a lightweight handheld housing, and operative for reading indicia having parts of different light reflectivity, comprising:
 - (a) a stationary folding mirror mounted in the path of the light from the light source;
 - (b) a *reciprocally oscillatable scanning mirror* for reflecting light from the folding mirror directly to the indicia parts in a scan across the indicia parts, thereby returning

⁴⁷⁴ See *Phillips*, 415 F.3d at 1323 ("[W]e have expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment.").

⁴⁷⁵ See CX-166C (Allais Rebuttal) at Q. 122.

light of variable light intensity reflected off the indicia parts at least a portion of which is directly received and reflected by the scanning mirror;

(c) a stationary collecting mirror for collecting a least a portion of the returning light reflected by the scanning mirror, and for directing the collected portion of light to the light sensor; wherein the folding mirror is smaller than, and is *positioned near a central area of the collecting mirror*; and

(d) *drive means* for oscillating the scanning mirror.

8. The component as recited in claim 7, wherein the *folding mirror is one-piece construction with the collecting mirror*.

11. The component as recited in claim 7, wherein the light source is a laser source, and wherein the indicia constitute bar code symbols.

13. A lightweight, handheld laser scanner for reading indicia and generating electrical signals indicative thereof, comprising:

(a) a housing having an area for passing laser light to the indicia and for receiving reflected laser light from the indicia;

(b) a source of laser light in the housing;

(c) a sensor in the housing for receiving the reflected laser light after it has been admitted through the area and for generating a first signal representative of the indicia;

(d) a plurality of optical elements positioned in the housing generally defining an optical path between the source of laser light and the area of the housing and between the area and the sensor, the optical elements including (i) a stationary folding mirror for receiving laser emissions from the light source, (ii) a reciprocally oscillatable scanning mirror positioned for receiving laser emissions from the folding mirror and sweeping them directly through the area and across the indicia, and for receiving light reflected directly from the indicia through said area, and (iii) a stationary collecting mirror positioned for receiving the reflected laser light from said scanning mirror and reflecting it onto the sensor, wherein the folding mirror and the collecting mirror are secured in a fixed physical relationship with respect to each other, the folding mirror being smaller than the collecting mirror and *positioned adjacent a central area thereof*; and

(e) *drive means* for reciprocally oscillating the scanning mirror.

14. The scanner according to claim 13 and including signal processing circuitry in the head for processing the first signal into a digital signal.
17. A method for bar code scanning, comprising the steps of:
- generating a light beam utilizing a light source;
 - reflecting the generated light beam to an oscillating scanning mirror utilizing a stationary folding mirror;
 - reflecting the light beam from said scanning mirror utilizing the scanning mirror directly to a field located outside the scanning apparatus; at least a portion of the light received by the field being returned directly back to the scanning mirror;
 - reflecting said returned light by the scanning mirror to a concave stationary collecting mirror, wherein the collecting mirror is larger than the folding mirror and *the folding mirror is mounted near a line intercepting a central area of the collecting mirror*; and
 - reflecting said returned light by the collecting mirror to a light sensor.
18. A light scanning assembly for distinguishing light reflective indicia comprising:
- (a) a forward portion of the assembly spaced from said indicia, and a rearward portion disposed further from said indicia than said forward portion;
 - (b) an actuatable laser light source mounted on said assembly and operative, when actuated, for generating an incident laser beam;
 - (c) a stationary folding mirror on said assembly for reflecting said incident laser beam along a first optical path;
 - (d) *a movable scanning mirror on said rearward portion of said assembly*, positioned in said first operable path so as to reflect said incident laser beam directly to a reference plane located exterior to said assembly, into a symbol located in a working distance range in the vicinity of the reference plane, thereby reflecting off said symbol reflected laser light, at least a returning portion of which travels along a second optical path away from said symbol directly back to said scanning mirror;
 - (e) a stationary, curved collecting mirror having said *folding mirror disposed in the light path of a central area thereof*, said collecting mirror being larger than said folding mirror;

(f) a *scan drive* mounted on said assembly for moving said scanning mirror to cause a sweeping of said incident laser beam in a scan across the symbol, the returning portion of the reflected laser light having a variable intensity over said scan; and

(g) a sensor mounted in said assembly for detecting the variable intensity of the returning portion of the reflected laser light over a field of view, and for generating an electrical analog signal indicative of the detected variable light intensity, said curved collecting mirror positioned to collect the returning portion of the reflected laser light over the field of view and to direct the collected returning portion to said sensor.

2. Disputed Claim Terms

The following claim terms in the '889 patent are in dispute: “reciprocally oscillatable scanning mirror,” “positioned near a central area of the collecting mirror,” “drive means,” “folding mirror is one-piece construction with the collecting mirror,” “positioned adjacent a central area thereof,” “the folding mirror is mounted near a line intercepting a central area of the collecting mirror,” “movable scanning mirror on said rearward portion of said assembly,” “folding mirror disposed in the light path of a central area thereof,” and “scan drive.” Those terms not in dispute need not be construed.⁴⁷⁶

a. “reciprocally oscillatable scanning mirror” (claims 7, 8, 11, 13, 14)

Both Symbol and the Staff argue that this claim limitation should be construed in accordance with its plain and ordinary meaning as “a scanning mirror capable of moving in a back-and-forth motion.”⁴⁷⁷ Metrologic argues that the limitation “reciprocally oscillatable scanning mirror” is properly construed as “a scanning mirror that causes a laser beam to travel back and forth across a

⁴⁷⁶ See *Vanderlande*, 366 F.3d at 1323 (noting that the ALJ need only construe disputed claim terms).

⁴⁷⁷ CIB 17-18; SIB 21-22.

bar code symbol.”⁴⁷⁸

The Federal Circuit has noted that “[i]n some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.”⁴⁷⁹ This is such a case. The proper construction of the limitation “reciprocally oscillatable scanning mirror” is “a scanning mirror capable of moving in a back-and-forth motion.” This construction comports with the widely accepted, plain and ordinary meaning of the claim language, and is fully supported by the specification of the ‘889 patent.⁴⁸⁰ In the ‘889 patent specification, “reciprocal oscillation” is expressly described as producing “a bi-directional scan of laser light on the indicia.”⁴⁸¹ Additionally, arrows 236 in Figure 15 show the reciprocal oscillation of the scanning mirror as a back-and-forth movement.⁴⁸²

Metrologic’s argument that the limitation should be construed as “a scanning mirror that causes a laser beam to travel back and forth across a bar code symbol” is unpersuasive. There is nothing about the plain and ordinary meaning of the limitation “reciprocally oscillatable scanning mirror” to suggest that the limitation should be defined in terms of how a laser beam moves across a bar code symbol. Further, Metrologic fails to point to anything in the specification that would

⁴⁷⁸ RIB 42-43.

⁴⁷⁹ See *Phillips*, 415 F.3d at 1314.

⁴⁸⁰ See Merriam-Webster’s On-Line Collegiate Dictionary (oscillate - “**1a** : to swing backward and forward like a pendulum **b** : to move or travel back and forth between two points”); see also *id.* (reciprocal - “**3** : serving to reciprocate,” reciprocate - “**2** : to move forward and backward alternately”).

⁴⁸¹ JX-3 (the ‘889 patent) at col. 22:20-24.

⁴⁸² *Id.* at Figure 15.

indicate the applicant's clear intent to define the limitation in such a manner.⁴⁸³ Metrologic's proposed claim construction impermissibly reads additional limitations into the claim and is accordingly rejected.⁴⁸⁴

Based on the intrinsic evidence of record, the undersigned finds that one of ordinary skill in the art would construe the term **"reciprocally oscillatable scanning mirror"** as **"a scanning mirror capable of moving in a back-and-forth motion."**

b. "positioned near a central area of the collecting mirror" (claims 7, 8, 11)

Symbol construes the limitation "positioned near a central area of the collecting mirror" as something positioned closer to the central area than to any edge of the collecting mirror without overlapping an edge, with the term "central area" defined as an area of the collecting mirror in the same shape as the collecting mirror with boundaries halfway between the center and the edge.⁴⁸⁵ Metrologic argues that the limitation "positioned near a central area of the collecting mirror" is invalid under 35 U.S.C. § 112, ¶ 2 because the limitation is vague and indefinite.⁴⁸⁶ Alternatively, Metrologic argues that the limitation should be construed as requiring a folding mirror positioned so that at least one point within the folding mirror coincides with the physical center of the collecting mirror.⁴⁸⁷ The Staff argues that the disputed limitation is properly construed as requiring a folding

⁴⁸³ See *Liebel-Flarsheim*, 358 F.3d at 906 ("the claims of the patent will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using 'words or expressions of manifest exclusion or restriction.'").

⁴⁸⁴ See *Arlington Indus., Inc. v. Bridgeport Fittings, Inc.*, 345 F.3d 1318, 1327 (Fed. Cir. 2003) (it is improper to read a limitation from the specification into the claims.) ("*Arlington Industries*").

⁴⁸⁵ CIB 18-25.

⁴⁸⁶ RIB 136-38.

⁴⁸⁷ *Id.* at 43-46. According to Metrologic, the folding mirror may be positioned in front,
(continued...)

mirror to be in or near the interior of the collecting mirror but does not include a folding mirror positioned along the exterior edge of the collecting mirror.⁴⁸⁸

A claim will not be held invalid for indefiniteness if the “meaning of the claim is discernable, even though the task may be formidable and the conclusion may be one over which reasonable persons will disagree.”⁴⁸⁹ The definiteness inquiry focuses on whether those skilled in the art would understand the scope of the claim when the claim is read in light of the specification and teachings of the prior art.⁴⁹⁰ “That some claim language may not be precise . . . does not automatically render a claim invalid.”⁴⁹¹ Words of degree are acceptable so long as there is some standard for measuring that degree such that one of ordinary skill in the art would understand what is claimed.⁴⁹² If a “claim is subject to construction, i.e., it is not insolubly ambiguous, it is not invalid for indefiniteness.”⁴⁹³ As discussed in detail below, the limitation “positioned near a central area of the collecting mirror” is readily construed and therefore not indefinite.

Proper construction of the limitation “folding mirror . . . positioned near a central area of the collecting mirror” first requires construction of the term “central area of the collecting mirror.” Once this term is properly construed the claim construction analysis can focus on the construction of the entire limitation “positioned near a central area of the collecting mirror.” The term “central area”

⁴⁸⁷(...continued)

behind, or attached to the collecting mirror. *Id.*

⁴⁸⁸ SIB 22-25.

⁴⁸⁹ See *Bancorp Servs., LLC v. Hartford Life Ins. Co.*, 359 F.3d 1367, 1371 (Fed. Cir. 2004) (“*Bancorp Services*”).

⁴⁹⁰ See *Energizer Holdings v. ITC*, 435 F.3d 1366, 1370 (Fed. Cir. 2006) (“*Energizer*”).

⁴⁹¹ *Seattle Box Co. v. Industrial Crating & Packing, Inc.*, 731 F.2d 818, 826 (Fed. Cir. 1984) (“*Seattle Box*”).

⁴⁹² *Id.*

⁴⁹³ See *Bancorp Services*, 359 F.3d at 1372.

was added during prosecution to overcome an obviousness rejection.⁴⁹⁴ The term “near” was added after allowance.⁴⁹⁵

Words in a claim are presumed to carry their ordinary and customary meaning to one of ordinary skill in the art at the time of the invention.⁴⁹⁶ The record evidence indicates that the phrase “near a central area” has no special meaning in the art.⁴⁹⁷ The Federal Circuit has noted that “[i]n some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.”⁴⁹⁸ This is such a case. The disputed claim language concerns the physical proximity of the folding mirror to the collecting mirror. The phrase “central area” is a relative term that describes a particular region of the collecting mirror.⁴⁹⁹ Based on the widely accepted meaning of these commonly understood words, it is clear that the ordinary meaning of the phrase “central area of the collecting mirror” is the region located at, in or near the center of the collecting mirror.⁵⁰⁰ Likewise, it is readily apparent that the ordinary meaning of the full limitation “folding mirror . . . positioned near a central area of the collecting mirror” requires the folding mirror to be positioned close to the region located at, in or near the center of the collecting mirror.⁵⁰¹ This construction is fully supported by the specification

⁴⁹⁴ See JX-07 at SBL0002210-2212.

⁴⁹⁵ See *id.* at SBL0002219-2220.

⁴⁹⁶ *Texas Digital Sys., Inc. v. Telegenix, Inc.*, 308 F.3d 1193 (Fed. Cir. 2002) (“*Texas Digital*”).

⁴⁹⁷ See CX-109C (Allais Direct) at Q. 191.

⁴⁹⁸ See *Phillips*, 415 F.3d at 1314.

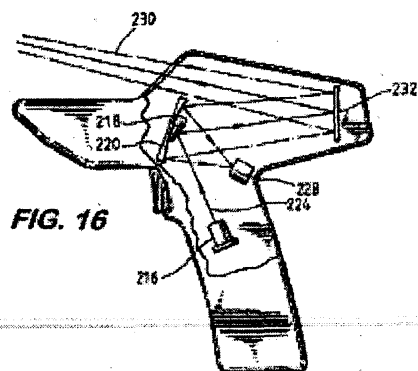
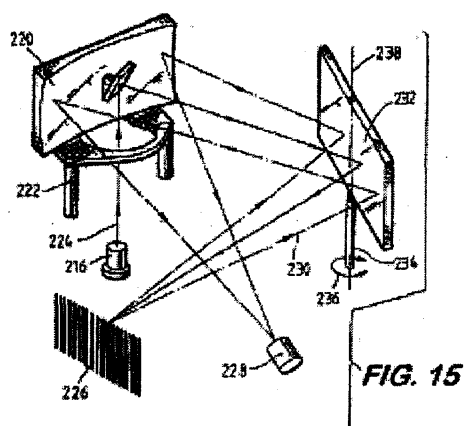
⁴⁹⁹ See *The American Heritage Dictionary of the English Language* (4th ed.) (area - “1. A roughly bounded part of the space on a surface; a region”).

⁵⁰⁰ See *id.* (central - “1. Situated at, in, or near the center”).

⁵⁰¹ See *id.* (near - “Close to”).

and prosecution history.

The specification of the '889 patent does not use the disputed language “positioned near a central area.” However, Figures 15 and 16 show the spacial relationship between the folding mirror and the collecting mirror in a preferred embodiment of the invention.⁵⁰² Because a claim construction that reads out a preferred embodiment is almost never correct, Figures 15 and 16 help inform the proper construction of the disputed limitation.⁵⁰³



As seen above, Figures 15 and 16 show the folding mirror 218 attached to the collecting mirror 220 with the folding mirror 218 located close to, and in front of, the center of the collecting mirror 220.⁵⁰⁴ The specification states that “the folding mirror 218 may be affixed to a curved collecting mirror 220 . . . [or] . . . mounted to a support within the scanning head, so long as it is mounted in a fixed,

⁵⁰² See JX-3 (the '889 patent) at Figures 15, 16.

⁵⁰³ *Sandisk Corp. v. Memorex Prods.*, 415 F.3d 1278, 1285 (Fed. Cir. 2005) (“*Sandisk*”) (“A claim construction that excludes a preferred embodiment, . . . is rarely, if ever, correct.”)(internal quotations omitted).

⁵⁰⁴ JX-3 (the '889 patent) at Figures 15, 16.

stationary relationship to the collecting mirror 220.”⁵⁰⁵ While admittedly the specification does not provide much guidance regarding the proper construction of the phrase “near a central area,” the placement of the folding mirror in relationship to the collecting mirror in Figures 15 and 16 supports the plain and ordinary meaning of the disputed limitation requiring the folding mirror to be close to the region located at, in or near the center of the collecting mirror.

“[T]he prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.”⁵⁰⁶ As previously noted, the phrase “central area” was added during prosecution in response to an obviousness rejection made by the patent examiner and the term “near” was added after allowance. For purposes of construing the disputed limitation, the pertinent portion of the prosecution history begins with the patent examiner’s rejection of the claims of patent application number 562,037 (the ‘037 application), which, after several continuations, eventually issued as the ‘889 patent. The patent examiner rejected the pending claims of the ‘037 application as obvious in light of U.S. Patent No. 4,575,625 (the ‘625 patent) to Knowles in combination with U.S. Patent No. 4,760,248 (the ‘248 patent) to Swartz et al.⁵⁰⁷ Specifically, the patent examiner stated:

Knowles has disclosed a hand-held bar code scanner with . . . stationary folding mirror 88 for the incident beam, . . . stationary curved collecting mirror 98 mounted behind the folding mirror, . . . and laser 24. Swartz et al have also disclosed a hand-held scanner. They have disclosed that . . . the folding mirror and collecting mirror might be attached to each other.⁵⁰⁸

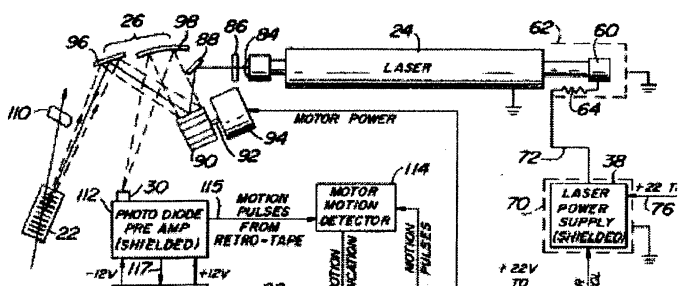
⁵⁰⁵ JX-3 (the ‘889 patent) at col. 21:55-60.

⁵⁰⁶ *Phillips*, 415 F.3d at 1317.

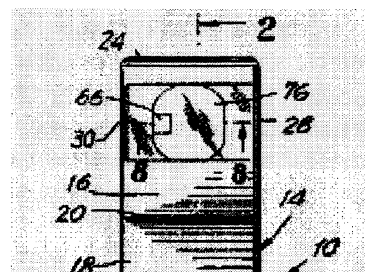
⁵⁰⁷ See JX-7 (the ‘889 prosecution history) at SBL00002203-04.

⁵⁰⁸ *Id.* at SBL00002204.

As shown in the figures below, the '625 patent to Knowles discloses a folding mirror 88 mounted at an angle in front of, and to the side, of collecting mirror 98, while the '248 patent to Swartz et al. discloses a folding mirror 66 on the edge of collecting mirror 76.⁵⁰⁹



Knowles '625 patent



Swartz et al. '248 patent

In response to the patent examiner's obviousness rejection, the applicants amended their claims to add new limitations as follows:

claim 7 - "wherein the folding mirror is smaller than and is mounted in a central area of the collecting mirror."

claim 14 - "the folding mirror being smaller than the collecting mirror and mounted in a central area thereof"

claim 21 - "wherein the collecting mirror is larger than the folding mirror and the folding mirror is mounted at a central area of the collecting mirror"⁵¹⁰

In the Remarks section of the their response to the patent examiner's obviousness rejection, the applicants stated, in pertinent part, that "the claims are distinguished from the primary reference by reciting [that] . . . (2) the folding mirror is centrally mounted in the concave fixed mirror (rather than being mounted spaced from and offset with respect to the mirror 98 of Knowles)."⁵¹¹ With respect to Swartz et al., the applicants noted that the "mirror 66 [is] attached to an edge of the spherical

⁵⁰⁹ JX-176 (the '625 patent) at Figure 2; JX-155 (the '248 patent) at Figure 1.

⁵¹⁰ See JX-7 (the '889 prosecution history) at SBL00002210-12.

⁵¹¹ *Id.* at SBL00002213.

mirror 76” so that even “assuming the combined mirror 76, 66 of Swartz et al. could be used in the Knowles structure in place of the mirrors 88 and 98, the claims would still not be met because . . . the folding mirror is not centrally located.”⁵¹² The applicants went on to state that the pending claims were “distinguishable from the proposed combination by reciting . . . a stationary collecting mirror having a smaller folding mirror centrally mounted thereon.”⁵¹³ In light of the above claim amendments and written remarks, the examiner allowed the pending claims of the ‘037 application.⁵¹⁴

After allowance, the applicants filed a continuation application amending the pending claims as follows:

claim 7 - “wherein the folding mirror is smaller than and is [mounted in] positioned near a central area of the collecting mirror”

claim 14 - “the folding mirror being smaller than the collecting mirror and [mounted on] positioned adjacent a central area thereof”

claim 21 - “wherein the collecting mirror is larger than the folding mirror and the folding mirror is mounted [at] near a line intercepting a central area of the collecting mirror”⁵¹⁵

The applicants stated that the newly amended claims were allowable because “the folding mirror is centrally positioned with respect to the concave fixed mirror (rather than being mounted spaced from and offset with respect to the mirror 98 of Knowles)” and because in the ‘248 patent to Swartz et al. “the folding mirror is located at a side edge.”⁵¹⁶ Additionally, the applicants stated,

The claims, as amended, differ from the allowed claims in that the folding mirror is

⁵¹² *Id.* at SBL00002213.

⁵¹³ *Id.* (emphasis in original).

⁵¹⁴ *Id.* at SBL00002215.

⁵¹⁵ *Id.* at SBL00002219-20.

⁵¹⁶ *Id.* at SBL00002222 (emphasis in original).

said to be positioned “near” the central area of the curved mirror instead of “at” the central area; in the disclosed embodiment, the mirror 218 is seen to be slightly spaced away from the curved mirror and slightly below a centerline. Thus, it is submitted that the amended claims are more properly descriptive. The mirror 218 could be fixed to the surface of the curved mirror, or positioned in front of it, or indeed positioned behind it with a hole in the central area for light to pass through.⁵¹⁷

The patent examiner allowed claims 1, 2, and 14, but initially rejected the remaining claims of the continuation application for lack of enablement.⁵¹⁸ In response to the examiner’s rejection, the applicants provided a written response arguing that the specification provided “sufficient disclosure of the relationship between the curved collecting mirror and the folding mirror . . . to support all claims.”⁵¹⁹ The applicants also included by supplemental amendment a new claim that required, *inter alia*, “a stationary, curved collecting mirror having said folding mirror disposed in the light path of a central area thereof, said collecting mirror being larger than said folding mirror.”⁵²⁰ After receiving the applicants’ response, the examiner allowed the claims without comment.⁵²¹

Although the prosecution history is extensive, in the end, the prosecution history reveals little information to aid the proper construction of the limitation “folding mirror . . . positioned near a central area of the collecting mirror.” That is, the prosecution history does not so much inform what region of the collecting mirror constitutes “near a central area,” but rather what does not constitute “near a central area.” There appears to be no dispute that the applicants’ remarks and claim amendments in response to the patent examiner’s obviousness rejection are a clear disavowal of claim scope. The applicants made clear that a “folding mirror . . . positioned near a central area of

⁵¹⁷ *Id.*

⁵¹⁸ *Id.* at SBL00002228-29.

⁵¹⁹ *Id.* at SBL00002243.

⁵²⁰ *Id.* at SBL00002252.

⁵²¹ *See id.* at SBL00002259.

the collecting mirror” in the ‘889 patent does not include: (1) a folding mirror spaced from and offset with respect to the collecting mirror; or (2) a folding mirror located at a side edge of the collecting mirror. Overall, there is nothing in the prosecution history to suggest that the applicants’ intended the limitation “near a central area” to have any meaning other than its plain and ordinary one.

Each party has proposed a different construction for the limitation “folding mirror . . . positioned near a central area of the collecting mirror.” Among the three constructions, the undersigned finds Symbol’s construction most closely aligns with the plain and ordinary meaning of the disputed claim language. However, the undersigned is unpersuaded that Symbol’s technical construction of “near a central area” is warranted in light of the claim language, specification and prosecution history. The applicants chose to use imprecise language to claim their invention and the Federal Circuit has repeatedly said that “a patentee need not define his invention with mathematical precision in order to comply with the definiteness requirement.”⁵²² It is sufficient that one of ordinary skill in the art would understand what is being claimed.⁵²³

With regard to Metrologic’s argument that the disputed limitation should be construed as requiring a folding mirror positioned so that at least one point within the folding mirror coincides with the physical center of the collecting mirror, the undersigned is unpersuaded.⁵²⁴ Metrologic argues that the plain and ordinary meaning of the disputed language supports its claim construction.

⁵²² See *Oakley, Inc. v. Sunglass Hut Int’l*, 316 F.3d 1331, 1341 (Fed. Cir. 2003) (“*Oakley*”); see also *Modine Mfg. Co. v. United States Int’l Trade Comm’n*, 75 F.3d 1545, 1557 (Fed. Cir. 1996) (“*Modine*”), abrogated on other grounds, *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 234 F.3d 558 (Fed. Cir. 2000) (“*Festo*”) (en banc) (“Mathematical precision should not be imposed for its own sake; a patentee has the right to claim the invention in terms that would be understood by persons of skill in the field of the invention.”).

⁵²³ *Id.*

⁵²⁴ RIB 43-46. According to Metrologic, the folding mirror may be positioned in front, behind, or attached to the collecting mirror. *Id.*

However, Metrologic's argument is internally conflicted. Metrologic acknowledges that the word "central" means in, at, or near the center, and yet ignores the "near" part of the definition in concluding that the folding mirror must be positioned with at least one point coinciding with the physical center of the collecting mirror.⁵²⁵ The plain and ordinary meaning of "near" is "close to," which need not include the actual physical center of the collecting mirror.⁵²⁶

Metrologic also argues that the specification supports its proposed claim construction. According to Metrologic, Figures 15 and 16 "show[] the folding mirror coterminous with the center of the collecting mirror."⁵²⁷ The specification of the '889 patent does not indicate that the proportions of the folding mirror and collecting mirror in Figures 15 and 16 are drawn to scale. Thus, Metrologic's argument hinges on an inference drawn from Figures 15 and 16 about the qualitative relationship between the folding mirror and the collecting mirror. Under Federal Circuit precedent, however, it is well established that "patent drawings do not define the precise proportions of the elements and may not be relied on to show particular sizes if the specification is completely silent on the issue."⁵²⁸ Regardless, Figures 15 and 16 illustrate a preferred embodiment of the invention.⁵²⁹ Absent clear evidence that the applicants intended to limit their invention to this preferred embodiment, it is impermissible to construe the disputed claim limitation to conform to the preferred embodiment of the invention. There is no evidence that the applicants expressly

⁵²⁵ *Id.* at 44.

⁵²⁶ See The American Heritage Dictionary of the English Language (4th ed.) (near - "Close to").

⁵²⁷ RRB at 20.

⁵²⁸ *Hockerson-Halberstadt, Inc. v. Avia Group. Int'l, Inc.*, 222 F.3d 951, 956 (Fed. Cir. 2000) ("*Hockerson-Halberstadt*").

⁵²⁹ See JX-3 (the '889 patent) at col. 21:44 ("FIG. 15 illustrates yet another preferred embodiment").

limited the scope of the claims to the preferred embodiment shown in Figures 15 and 16 and the undersigned will not accept Metrologic's invitation to do so in this instance.

In addition to the specification, Metrologic further argues that the prosecution history supports its proposed claim construction. In so doing, Metrologic primarily relies on remarks made by the applicants during prosecution of the '037 application to overcome the patent examiner's obviousness rejection. Specifically, Metrologic relies on the following statement made by the applicants.

The claims, as amended, differ from the allowed claims in that the folding mirror is said to be positioned "near" the central area of the curved mirror instead of "at" the central area; in the disclosed embodiment, the mirror 218 is seen to be slightly spaced away from the curved mirror and slightly below a centerline. Thus, it is submitted that the amended claims are more properly descriptive. The mirror 218 could be fixed to the surface of the curved mirror, or positioned in front of it, or indeed positioned behind it with a hole in the central area for light to pass through.⁵³⁰

Contrary to Metrologic's argument, there is nothing in the above statement that compels limiting the plain and ordinary meaning of the disputed claim limitation to require at least one point of the folding mirror to coincide with the center of the collecting mirror. Notwithstanding the fact that the applicants only discussed the preferred embodiment of the invention, there is nothing in the above quoted statement that would amount to a clear disavowal of claim scope.

With regard to the Staff's argument that the disputed limitation, "folding mirror . . . positioned near a central area of the collecting mirror," requires a folding mirror to be in or near the interior of the collecting mirror but does not include a folding mirror positioned along the exterior edge of the collecting mirror, the undersigned is unpersuaded.⁵³¹ Specifically, the undersigned finds

⁵³⁰ JX-7 (the '889 prosecution history) at SBL00002222; RIB 44-45.

⁵³¹ SIB 22-25.

the Staff's proposed claim construction to be too broad. By defining "near a central area of the collecting mirror" to encompass the entire interior of the collecting mirror, the Staff effectively reads out the word "centrally" from the claim. Additionally, the undersigned believes the Staff relies too heavily on the prosecution history in construing the disputed limitation. As discussed, *supra*, the prosecution history does not help construe what "near a central area of the collecting mirror" means as so much as what it does not mean. The Federal Circuit has stated that

there is no principle of patent law that the scope of a surrender of subject matter during prosecution is limited to what is absolutely necessary to avoid a prior art reference that was the basis for an examiner's rejection. . . . [Where patentees surrender more than necessary], we [hold] the patentees to the scope of what they ultimately claim, and we [do] not allow[] them to assert that claims should be interpreted as if they had surrendered only what they had to.⁵³²

In the instant case, even if the applicants could have overcome the examiner's obviousness rejection by amending the claims to allow the folding mirror to be positioned anywhere on the interior of the collecting mirror, that is not the language the applicants chose. The applicant's specifically claimed that the folding mirror must be "near a central area of the collecting mirror" and it is that language that defines the scope of the invention.

As discussed in detail above, the plain and ordinary meaning of the limitation "folding mirror . . . positioned near a central area of the collecting mirror" requires the folding mirror to be close to the region located at, in or near the center of the collecting mirror. Nothing in the specification or prosecution history indicates that the patentee intended otherwise. However, in overcoming an obviousness rejection by the patent examiner, the patentees limited the scope of the claim by

⁵³² *Norian Corp. v. Stryker Corp.*, 432 F.3d 1356, 1361-62 (Fed. Cir. 2005) ("*Norian*") (citing *Fantasy Sports Props., Inc. v. Sportsline.com, Inc.*, 287 F.3d 1108, 1114-15 (Fed. Cir. 2002) ("*Fantasy Sports*"); *Elkay Mfg. Co. v. Ebco Mfg. Co.*, 192 F.3d 973, 979 (Fed. Cir. 1999) ("*Elkay*").

disavowing: (1) a folding mirror spaced from and offset with respect to the collecting mirror; and (2) a folding mirror located at a side edge of the collecting mirror. Accordingly, for the reasons set forth hereinabove, the undersigned finds that one of ordinary skill in the art at the time of the invention would construe the limitation **“folding mirror . . . positioned near a central area of the collecting mirror”** as requiring **“the folding mirror to be close to the region located at, in or near the center of the collecting mirror, but in no event spaced away from and offset with respect to the collecting mirror or located at a side edge of the collecting mirror.”**

c. “drive means” (claims 7, 8, 11, 13, 14)

The limitation “drive means” recites the word “means,” which gives rise to the presumption that 35 U.S.C. § 112, ¶ 6 applies.⁵³³ The presumption is overcome only if the claim recites sufficient structure, material or acts to perform the claimed function.⁵³⁴ Although the parties disagree as to what constitutes the claimed function associated with the “drive means,” all of the parties agree that the limitation falls within § 112, ¶ 6.⁵³⁵ Because the limitations “drive means for oscillating the scanning mirror” and “drive means for reciprocally oscillating the scanning mirror” do not recite any structure, 35 U.S.C. § 112, ¶ 6 applies.

Claim construction of a means-plus-function limitation includes two steps: (1) determining the claimed function; and (2) identifying the corresponding structure in the written description of the patent that performs that function.⁵³⁶ As mentioned above, the parties disagree as to what constitutes the claimed function. Symbol and the Staff argue that the function of the “drive means” is

⁵³³ See *Rodime*, 174 F.3d at 1302.

⁵³⁴ *Micro Chemical*, 194 F.3d at 1257.

⁵³⁵ See CIB 25; RIB 46; SIB 25.

⁵³⁶ *Applied Medical*, 448 F.3d at 1332.

“oscillating the scanning mirror”⁵³⁷ Metrologic asserts that the function of the “drive means” is “to cause the mirror to move to allow the laser beam to scan repeatedly across the bar code symbol.”⁵³⁸

It is clear from the express language of the claims that the function of the drive means is “oscillating the scanning mirror” / “reciprocally oscillating the scanning mirror.” The specification of the ‘889 patent describes what is meant by the terms “oscillating” / “reciprocally oscillating.” In fact, the specification expressly describes the term “reciprocal oscillation” as producing “a bi-directional scan of laser light on the indicia.”⁵³⁹ Additionally, arrow 236 in Figure 15 show the reciprocal oscillation of the scanning mirror as a back-and-forth movement.⁵⁴⁰ Thus, it is clear from the specification that the applicants intended the terms “oscillating” / “reciprocally oscillating” to have their commonly understood, plain and ordinary meanings – to move back and forth.⁵⁴¹

As previously discussed, Metrologic argues that the proper construction of the function is “to cause the mirror to move to allow the laser beam to scan repeatedly across the bar code symbol.”⁵⁴² According to Metrologic, this construction includes movement “in a single direction as would occur by a rotating polygon mirror.”⁵⁴³ For the reasons below, the undersigned finds Metrologic’s argument unpersuasive.

Contrary to Metrologic’s proposed construction, the plain and ordinary meaning of the

⁵³⁷ CIB 25; SIB 25.

⁵³⁸ RIB 46.

⁵³⁹ JX-3 (the ‘889 patent) at col. 22:20-24 (emphasis added).

⁵⁴⁰ *Id.* at Figure 15.

⁵⁴¹ See Merriam-Webster’s On-Line Collegiate Dictionary (oscillate - “**1a** : to swing backward and forward like a pendulum **b** : to move or travel back and forth between two points”); see also *id.* (reciprocal - “**3** : serving to reciprocate;” reciprocate - “**2** : to move forward and backward alternately”).

⁵⁴² RIB 46.

⁵⁴³ RIB 43, 47.

disputed claim limitation “drive means for oscillating the scanning mirror” does not even remotely suggest that the function of the drive means has anything to do with a laser beam or a laser beam’s ability to scan repeatedly across a bar code symbol. For that matter, there is nothing in the plain and ordinary meaning of the limitation to suggest that the function of the drive means is merely to cause the mirror “to move.” In fact, contrary to Metrologic’s proposed construction, the claim clearly requires that the drive means oscillate the scanning mirror, not simply move the scanning mirror. As previously construed herein, the terms “oscillating” / “reciprocally oscillating” require back and forth movement. Contrary to Metrologic’s argument, something that moves “in a single direction as would occur by a rotating polygon mirror” does not oscillate, that is move back and forth. Because the undersigned finds that Metrologic’s proposed construction impermissibly reads additional limitations into the function, it is hereby rejected.⁵⁴⁴

Having determined the proper function of the drive means to be “oscillating the scanning mirror,” the next step is to examine the written description to identify corresponding structure.⁵⁴⁵ Symbol argues that the properly identified corresponding structure is a “scanning motor (not shown).”⁵⁴⁶ Metrologic and the Staff both argue that the corresponding structure is a scanning motor and drive shaft.⁵⁴⁷

The specification of the ‘889 patent states with reference to Figure 2, shown below, that:

For purposes of this application, it is believed to be sufficient to point out that the scanner motor 70 has an output shaft 72 on which a support bracket 74 is fixedly mounted. The scanning mirror 66 is fixedly mounted on the bracket 74. The motor

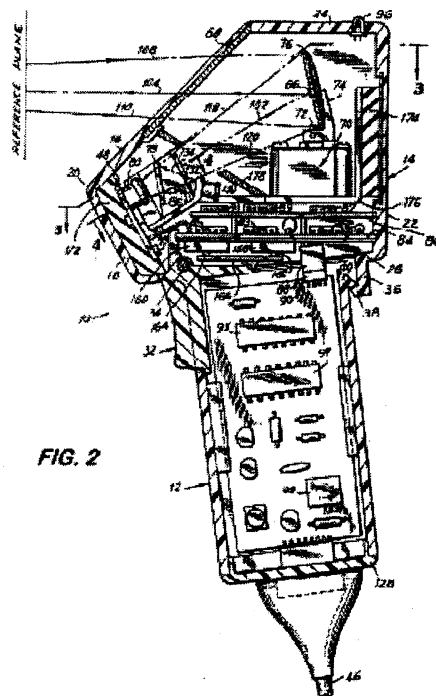
⁵⁴⁴ *Applied Medical*, 448 F.3d at 1334 (“A court errs when it improperly imports unclaimed functions into a mens-plus-function claim limitation.”).

⁵⁴⁵ *Applied Medical*, 448 F.3d at 1332.

⁵⁴⁶ CIB 26.

⁵⁴⁷ RRB 22; SIB 25.

70 is driven to reciprocally and repetitively oscillate the shaft 72 in alternate circumferential directions.⁵⁴⁸

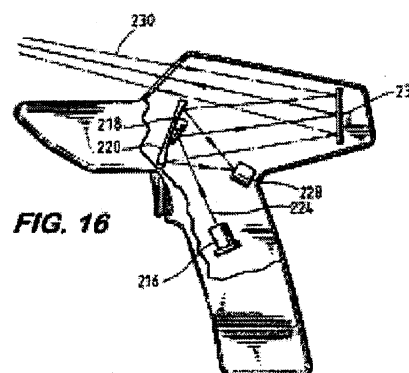
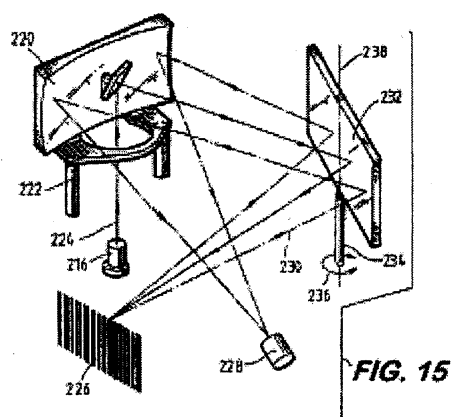


With reference to Figures 15 and 16, shown below, the specification also states:

The scanning mirror 232 is mounted on a shaft 234 of a scanning motor (not shown). The scanning mirror 232 preferably reciprocally oscillates a plurality of times per second, typically 40 scans per second, as shown by arrows 236, about an axis 238.⁵⁴⁹

⁵⁴⁸ JX-3 (the '889 patent) at col. 14:26-32, Figure 2.

⁵⁴⁹ *Id.* at col. 22:16-20, Figures 15-16.



In determining corresponding structure, the Federal Circuit has noted that “[t]he structure must be necessary to perform the claimed function.”⁵⁵⁰ Additionally, the corresponding structure must also be clearly linked or associated with the claimed function.⁵⁵¹ As previously stated, Symbol asserts that the corresponding structure disclosed for performing the function of oscillating the scanning mirror is simply a “scanning motor.”⁵⁵² In so asserting, Symbol argues that one of ordinary skill in the art would recognize that the term “scanning motor” describes a known class of structures for activating a scanning mirror.⁵⁵³ According to Symbol, disclosure of a generic class of structures well known in the art is sufficient corresponding structure for purposes of 35 U.S.C. § 112, ¶ 6.⁵⁵⁴

The Federal Circuit has repeatedly stated that means-plus-function claiming represents “a *quid pro quo* by permitting inventors to use a generic means expression for a claim limitation *provided* that the specification indicates what structure(s) constitute(s) the means.”⁵⁵⁵ Contrary to

⁵⁵⁰ *Omega Eng'g. Inc. v. Raytek Corp.*, 334 F.3d 1314, 1321 (Fed. Cir. 2003) (“*Omega*”).

⁵⁵¹ *Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1375 (Fed. Cir. 2003) (“*Altiris*”).

⁵⁵² CIB 26.

⁵⁵³ *Id.* at 27-29.

⁵⁵⁴ *Id.* at 26-32.

⁵⁵⁵ *Atmel Corp. v. Information Storage Devices, Inc.*, 198 F.3d 1374, 1381 (Fed. Cir. 1999)
(continued...)

Symbol's argument, the '889 patent does not simply disclose a scanning motor for performing the claimed function. Rather, the patentees disclosed that both a scanning motor and shaft are necessary components of the structure explicitly linked to the function of oscillating the scanning mirror. The specification clearly states that "the scanner motor 70 has an output shaft 72" and that "[t]he scanning mirror 232 is mounted on a shaft 234 of a scanning motor (not shown)."⁵⁵⁶ Symbol argues that a shaft is not a necessary component of the corresponding structure because Figure 16 shows the scanning mirror in such a position that it cannot sit on top of a shaft.⁵⁵⁷ The undersigned notes that the "patent drawings do not define the precise proportions of the elements and may not be relied on to show particular sizes if the specification is completely silent on the issue."⁵⁵⁸ Because there is absolutely no indication that the figures in the '889 patent are drawn to scale, Dr. Allais' opinion, which is based on the perceived distance between the scanning mirror and the edge of the scanner in Figure 16, amounts to nothing more than mere conjecture. Furthermore, it is clear from the specification that without the shaft the scanning motor would not be able to oscillate the scanning mirror. Accordingly, the undersigned finds Symbol's argument unpersuasive.

Having properly identified the function associated with the **"drive means"** to be **"oscillating the scanning mirror"** / **"reciprocally oscillating the scanning mirror,"** the undersigned finds that based on the intrinsic evidence of record, one of ordinary skill in the art the time of the invention would identify the **corresponding structure** as **"a scanning motor and shaft, and equivalents thereof."** It is important to note that the '889 patent incorporates by reference United States Patent

⁵⁵⁵(...continued)
(*"Atmel"*)(emphasis added).

⁵⁵⁶ JX-3 (the '889 patent) at col. 14:27, 22:16-17.

⁵⁵⁷ CIB 31; CRB 11-12.

⁵⁵⁸ *Hockerson-Halberstadt*, 222 F.3d at 956.

Nos. 4,251,798 (the '798 patent) and 4,387,297 (the '297 patent), which disclose several corresponding structures for "oscillating a scanning mirror."⁵⁵⁹ The '798 patent discloses as corresponding structures a speaker-type oscillator unit (90), and a stepper motor (76) attached to a drive shaft (74).⁵⁶⁰ The '297 patent discloses as corresponding structures a penta-bimorph scanning element (250), and motor (68) attached to shaft (72).⁵⁶¹ The parties all appear to acknowledge that the above noted structures disclosed in the '297 and '798 patents are also corresponding structure, but at the same time note that these structures are not particularly relevant in the present investigation.

d. "one-piece construction" (claim 8)

Symbol argues that the limitation "one-piece construction" should be construed as requiring the fold mirror and collecting mirror to be fabricated as one piece.⁵⁶² Metrologic and the Staff argue that, properly construed, the disputed limitation requires the folding mirror and the collecting mirror to be constructed as a single piece, either by molding the two pieces together as one or by affixing the pieces as a single unit.⁵⁶³

Looking first to the claims, the undersigned notes that the claim language itself does not inform the proper construction of the disputed limitation. Standing alone in the claims, the phrase "one-piece construction" has no clear meaning. The specification, however, states:

The scanning mirror 66 and the collecting mirror 76 are in a preferred embodiment, of one-piece construction and, as shown in Fig. 8, are light-reflecting layers or coatings applied to a planar-convex lens 82 constituted of a light-

⁵⁵⁹ JX-3 (the '889 patent) at col. 14:22-26, 15:44-46.

⁵⁶⁰ JX-149 (the '798 patent).

⁵⁶¹ JX-151 (the '297 patent).

⁵⁶² CIB 33-34.

⁵⁶³ RIB 48, SIB 27.

transmissive material, preferably glass. . . .

The scanning mirror 66 can also be a discrete, small planar mirror attached by glue, or molded in place, at the correct position and angle on a discrete, front surfaced, silvered collecting mirror.⁵⁶⁴

The undersigned recognizes that the above quoted passage from the specification of the '889 patent discusses the relationship between the scanning mirror and the collecting mirror and not the relationship between the folding mirror and collecting mirror as is at issue in the disputed claim language. Nevertheless, because patentees are presumed to define terms consistently throughout a patent, the above-quoted passage helps inform the proper construction of the limitation "one-piece construction" as used in claim 8.⁵⁶⁵ It is clear from the above-quoted passage that the patentees distinguish something that is of "one-piece construction" and something that "is attached by glue, or molded in place." Thus, the specification supports Symbols' argument that the phrase "one-piece construction" requires the folding mirror and collecting mirror to be a single component fabricated as one piece.

It is unclear how Metrologic's citations to the specification and prosecution history support its position.⁵⁶⁶ Simply because the patentees disclosed in the specification that the folding mirror could be attached by glue or molded in place to the collecting mirror does not necessitate a construction of the phrase "one-piece construction" that includes components affixed to each other. As discussed above, the specification clearly draws a distinction between components that are affixed to each other and components that are of one-piece construction.

⁵⁶⁴ JX-3 (the '889 patent) at col. 15:9-23.

⁵⁶⁵ *Research Plastics, Inc. v. Fed. Packaging Corp.*, 421 F.3d 1290, 1295 (Fed. Cir. 2005) ("*Research Plastics*") ("claim terms are presumed to be used consistently throughout the patent").

⁵⁶⁶ RIB 48.

Based on the intrinsic evidence of record, the undersigned finds that one of ordinary skill in the art at the time of the invention would construe the limitation **“folding mirror is one-piece construction with the collecting mirror”** to require **“the folding mirror and collecting mirror to be fabricated as a single component.”**

e. **“positioned adjacent a central area thereof” (claims 13 and 14)**

The parties propose the same construction for the limitation “positioned adjacent a central area thereof” as they do for the limitation “near a central area of the collecting mirror.”⁵⁶⁷ The commonly understood meaning of the word “adjacent” is “not distant” or “nearby.”⁵⁶⁸ With no other guidance from the specification or prosecution history, the undersigned finds that the limitation “positioned adjacent a central area thereof” should be construed in accordance with its widely accepted, commonly understood meaning, which in this case is “not distant” or “nearby.”⁵⁶⁹ Because the words “adjacent” and “near” are practically synonyms, the undersigned agrees with the parties that the limitation “positioned adjacent a central area thereof” may be construed the same as the limitation “near a central area of the collecting mirror.” Accordingly, for the reasons discussed hereinabove, the undersigned finds that one of ordinary skill in the art would construe the limitation **“positioned adjacent a central area thereof”** as requiring **“the folding mirror to be close to the region located at, in or near the center of the collecting mirror, but in no event spaced away from and offset with respect to the collecting mirror or located at a side edge of the collecting mirror.”**

⁵⁶⁷ CIB 34; RIB 48-49; SIB 27.

⁵⁶⁸ See Merriam-Webster’s On-Line Collegiate Dictionary (adjacent - “1a: not distant : nearby”).

⁵⁶⁹ *Id.*

f. “the folding mirror is mounted near a line intercepting a central area of the collecting mirror” (claim 17)

Symbol argues that the limitation “folding mirror . . . mounted near a line intercepting a central area of the collecting mirror” should be construed as requiring the folding mirror to be mounted closer to a line perpendicular to the surface of the collecting mirror that passes through the central area than to any line perpendicular to the surface and passing through an edge of the collecting mirror.⁵⁷⁰ Metrologic argues that this limitation is invalid under 35 U.S.C. § 112, ¶ 2 because it is vague and indefinite.⁵⁷¹ Alternatively, Metrologic argues that the disputed limitation should be construed to require that at least one point of the folding mirror encompasses a line centered on the optical path that passes through the center area of the collecting mirror.⁵⁷² The Staff appears to assert that the limitation should have its plain and ordinary meaning, arguing that the disputed limitation requires the folding mirror to be near a line that intercepts the central area.⁵⁷³ For the reasons discussed below, the undersigned finds this limitation insolubly ambiguous and therefore indefinite.⁵⁷⁴ Accordingly, the limitation “the folding mirror is mounted near a line intercepting a central area of the collecting mirror” cannot be construed.⁵⁷⁵

None of the parties allege that the disputed claim language has any special meaning within the art. In fact, nothing in the intrinsic evidence suggests that the patentees intended anything other

⁵⁷⁰ CIB 34-35.

⁵⁷¹ RIB 136-38.

⁵⁷² RIB 49-50.

⁵⁷³ SIB 37.

⁵⁷⁴ *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005) (“*Datamize*”) (Claims that are “not amenable to construction” or “insolubly ambiguous” are indefinite.).

⁵⁷⁵ *Honeywell Int’l, Inc. v. ITC*, 341 F.3d 1332, 1342 (Fed. Cir. 2003) (“*Honeywell*”) (“Because the claims are indefinite, the claims, by definition, cannot be construed.”).

than the words' commonly understood plain and ordinary meanings. As previously construed, the central area of the collecting mirror is the region at, in or near the center of the collecting mirror. Thus, "a line intercepting a central area of the collecting mirror" is any line that intersects a point in the region at, in or near the center of the collecting mirror. The undersigned notes that under this construction every point in the universe falls on a line intercepting a central area of the collecting mirror.

Symbol argues that a line intercepting the central area of the collecting mirror must be perpendicular.⁵⁷⁶ In so arguing, Symbol relies on its expert, Dr. Allais, who testified that "the line referred to in claim 17 must be perpendicular to the collecting mirror[o]therwise, the folding mirror could be placed anywhere with respect to the collecting mirror."⁵⁷⁷ Dr. Allais' testimony is unpersuasive as it impermissibly reads an additional "perpendicular" limitation into the disputed claim language. In order to limit the plain and ordinary meaning of a claim term, the Federal Circuit has required a clear expression of intent on the part of the patentee.⁵⁷⁸ Symbol points to nothing, and indeed there is nothing, in the intrinsic evidence to suggest that the patentees intended to limit the word "line" to a "perpendicular line." Because Dr. Allais' testimony is contrary to the intrinsic evidence, it will not be relied upon.⁵⁷⁹

⁵⁷⁶ CIB 34-35.

⁵⁷⁷ CX-109C (Allais Direct) at Q. 146.

⁵⁷⁸ See, e.g., *Elekta Instrument S.A. v. O.U.R. Scientific Int'l*, 214 F.3d 1302, 1307 (Fed. Cir. 2000) ("*Elekta*") (for a patentee to act as its own lexicographer defining a claim term differently from its ordinary meaning, the specification must clearly indicate the patentee's intent to do so).

⁵⁷⁹ See *Philips*, 415 F.3d at 1318 ("[A] court should discount any expert testimony that is clearly at odds with the claim construction mandated by the claims themselves, the written description, and the prosecution history, in other words, with the written record of the patent."); *Vitronics*, 90 F.3d at 1584 (noting that expert testimony may not be used "to vary or contradict the claim language").

Having determined the proper construction of the phrase “line intercepting a central area of the collecting mirror” as including any line that intersects a point in the region at, in or near the center of the collecting mirror, the entire limitation “folding mirror . . . mounted near a line intercepting a central area of the collecting mirror” is now addressed. “That some claim language may not be precise . . . does not automatically render a claim invalid.”⁵⁸⁰ Words of degree are acceptable so long as there is some standard for measuring that degree such that one of ordinary skill in the art would understand what is claimed.⁵⁸¹ The word “near” is an imprecise term used to describe the relative distance between two objects. For example, in the previously construed limitation “near a central area of the collecting mirror” the word “near” describes the relative distance of the folding mirror with respect to the central area of the collecting mirror and the outer boundary of the collecting mirror. That is, the limitation “near a central area of the collecting mirror” is satisfied if the folding mirror is positioned closer to the central area of the collecting mirror than an edge of the collecting mirror.

In the instant case, the disputed limitation “folding mirror . . . mounted near a line intercepting a central area of the collecting mirror” describes the word “near” with respect to the intercepting line, but fails to provide a second object by which the relative distance can be judged. Without some other object by which to judge the relative distance of the folding mirror, it is impossible to determine whether a folding mirror is “near” the intercepting line. By analogy, as may be readily observed in the figure below, it is impossible to determine whether object B is “near” object D.

⁵⁸⁰ *Seattle Box*, 731 F.2d at 826.

⁵⁸¹ *Id.*

A● B● C● D■

Relative to object A, object B is “near” object D, however, relative to object C, object B is not “near” object D. Another reference point is needed to properly determine whether object B is “near” object D.

Symbol, through its expert, Dr. Allais, argues that the word “near” in the limitation “folding mirror . . . mounted near a line intercepting a central area of the collecting mirror” is properly determined with respect to the intercepting line and a line perpendicular to the edge of the scanning mirror.⁵⁸² However, Dr. Allais provides no support for his conclusory opinion and there is nothing in the plain and ordinary meaning of the claim limitation that would support such a construction. The specification and the prosecution history of the ‘889 patent also fail to provide any basis by which the “nearness” of the folding mirror in the disputed claim limitation may be judged. Because the limitation “folding mirror . . . mounted near a line intercepting a central area of the collecting mirror” fails to provide any means of determining whether a folding mirror is “near” “a line intercepting the central area of the collecting mirror,” the undersigned finds the limitation insolubly ambiguous and therefore indefinite.⁵⁸³

g. “movable scanning mirror on said rearward portion of said assembly” (claim 18)

Symbol argues that the limitation “movable scanning mirror on said rearward portion of the assembly” is properly construed as requiring the movable scanning mirror to be located on the part

⁵⁸² CIB 34; CX-109C (Allais Direct) at Q. 245-47.

⁵⁸³ *Datamize*, 417 F.3d at 1347 (Claims that are “not amenable to construction” or “insolubly ambiguous” are indefinite.).

of the assembly that is furthest from the bar code in operation.⁵⁸⁴ Metrologic argues that the limitation should be construed as requiring the scanning mirror to be positioned in the back portion of the light scanning assembly relative to the other optical components of the light scanning assembly.⁵⁸⁵ The Staff argues that the proper construction of the limitation “movable scanning mirror on said rearward portion of the assembly” requires the scanning mirror to be located on the back half of the scanning device, assuming the bar code to be read is closer to the front half.⁵⁸⁶ The parties’ dispute centers around whether the “rearward portion of the assembly” is determined relative to the front of the scanning assembly or relative to the other optical components of the assembly.

Claim 18 states, in pertinent part:

A light scanning assembly for distinguishing light reflective indicia comprising:

(a) a forward portion of the assembly spaced from said indicia, and a rearward portion disposed further from said indicia than said forward portion;

...

(d) a movable scanning mirror on said rearward portion of said assembly . . .⁵⁸⁷

As can be clearly seen above, claim 18 defines what is meant by “rearward portion.” According to the claim language, “rearward portion” is the portion of the light scanning assembly disposed further from the indicia than the forward portion of the scanning assembly.⁵⁸⁸ Metrologic’s argument that the “rearward portion” is determined relative to the optical elements of the scanning assembly is unpersuasive. In fact, Metrologic’s argument is belied by the claim language itself. Claim 18 clearly

⁵⁸⁴ CIB 35.

⁵⁸⁵ RIB 50.

⁵⁸⁶ SIB 27.

⁵⁸⁷ JX-3 (the ‘889 patent) at col. 25:38-26:37.

⁵⁸⁸ JX-3 (the ‘889 patent) at col. 25:38-26:37.

states that the light scanning assembly includes a scan drive, which is not an optical component. Thus, it is clear from the plain language of claim 18 that the scanning assembly includes more than the optical components Metrologic's proposed claim construction relies on.

The definition of "rearward portion" from claim 18 is also fully supported by the specification. As is seen in Figure 16, the scanning mirror 232 is located on the rearward portion of the scanning assembly.⁵⁸⁹ Contrary to Metrologic's argument, nothing in the specification or prosecution history indicates that the patentees intended to limit the construction of: (1) the "light scanning assembly" to only the optical components; or (2) the "rearward portion" to the portion of the scanning assembly determined relative to the optical components.⁵⁹⁰

For the reasons discussed hereinabove, the undersigned finds that one of ordinary skill in the art at the time of the invention would construe the limitation **"movable scanning mirror on said rearward portion of the assembly"** as requiring **"the movable scanning mirror to be positioned on the portion of the light scanning assembly disposed further from the indicia than the forward portion of the scanning assembly."**

h. "folding mirror disposed in the light path of a central area thereof" (claim 18)

Symbol argues that the limitation "folding mirror disposed in the light path of a central area thereof" should be construed as requiring the folding mirror to be placed within the boundaries of the return light that impinges on the central area of the collecting mirror.⁵⁹¹ Metrologic argues that

⁵⁸⁹ *Id.* at Figure 16.

⁵⁹⁰ *See Elekta*, 214 F.3d at 1307 (for a patentee to act as its own lexicographer defining a claim term differently from its ordinary meaning, the specification must clearly indicate the patentee's intent to do so).

⁵⁹¹ CIB 36.

properly construed the disputed limitation requires that the folding mirror be positioned in front of the collecting mirror and at least a portion of the folding mirror coincides with the center of the collecting mirror.⁵⁹² The Staff does not propose a construction for this limitation other than noting that its previous construction of the phrase “near a central area of the collecting mirror” is broad enough to encompass this disputed limitation.⁵⁹³

As discussed in detail with regard to the limitation “near a central area of the collecting mirror” the disputed limitation “folding mirror disposed in the light path of a central area thereof” was added during prosecution. It is clear from the language of claim 18 that “the light path” refers to the “second optical path,” which is the path the light takes after it is reflected from the symbol. The light path is illustrated as object 230 in Figures 15 and 16.⁵⁹⁴ Although Figures 15 and 16 represent a preferred embodiment of the invention, the Figures nevertheless support the understanding of the limitation gleaned from the claim language.

Metrologic’s proposed construction requiring that the folding mirror be positioned in front of the collecting mirror with at least a portion of the folding mirror coinciding with the center of the collecting mirror is unpersuasive. There is nothing in the claims or specification to suggest that the patentee intended to limit the construction of the disputed limitation to folding mirrors positioned in front of the collecting mirror. In fact, the patentees clearly stated during prosecution that “[t]he mirror 218 could be fixed to the surface of the curved mirror, or positioned in front of it, or indeed positioned behind it with a hole in the central area for light to pass through.”⁵⁹⁵ Accordingly,

⁵⁹² RIB 51.

⁵⁹³ SIB 28.

⁵⁹⁴ JX-3 (the ‘889 patent) at Figures 15, 16.

⁵⁹⁵ *Id.*

Metrologic's argument requiring the folding mirror to be positioned in front of the collecting mirror is rejected. Similarly, Metrologic's argument requiring at least a portion of the folding mirror to coincide with the center of the collecting mirror is rejected. As discussed with regard to the limitation "near a central area of the collecting mirror," the widely accepted, commonly understood meaning of the phrase "central area" is a region at, in or near the center. Thus, contrary to Metrologic's argument, the word "central" need not include the exact center.

Thus, for the reasons discussed hereinabove, the undersigned finds that the limitation "folding mirror disposed in the light path of a central area thereof" should be construed in accordance with its plain and ordinary meaning, which requires the folding mirror to be mounted in the path of the light that impinges the region at, in or near the center of the collecting mirror. However, because the patentees made clear in their remarks to the patent examiner during prosecution that this disputed claim limitation remained patentably distinct from the cited prior art in the examiner's obviousness rejection, the patentees' are held to have disclaimed from this disputed limitation that which is disclosed by the '625 patent to Knowles and the '248 patent to Swartz et al. Accordingly, the undersigned finds that one of ordinary skill in the art at the time of the invention would construe the limitation **"folding mirror disposed in the light path of a central area thereof"** as requiring **"the folding mirror to be positioned in the path of the light that impinges the region at, in or near the center of the collecting mirror, but in no event spaced away from and offset with respect to the collecting mirror or located at a side edge of the collecting mirror."**

i. “scan drive” (claim 18)

Symbol argues that the limitation “scan drive” should be construed as a “scanning motor.”⁵⁹⁶ Metrologic argues that the limitation is properly construed as a “stepper motor like drive motor, rotating polygon, a bimorph or a speaker element or an equivalent.”⁵⁹⁷ Metrologic notes that this is the same construction it proposed with regard to the limitation “drive means.”⁵⁹⁸ The Staff argues that a “scan drive” is properly construed as a motor used for scanning.⁵⁹⁹

The parties all agree that the limitation “scan drive” is not a means-plus-function claim. Thus, unlike the limitation “drive means,” the limitation “scan drive” is not constrained by 35 U.S.C. § 112, ¶ 6. Accordingly, the limitation should be given its plain and ordinary meaning in the art at the time of the invention. The full limitation states, “a scan drive . . . for moving said scanning mirror to cause a sweeping of said incident laser beam in a scan across the symbol . . .”⁶⁰⁰ The specification of the ‘889 patent does not use the term “scan drive.” However, Symbol’s expert, Dr. Allais, testified that one of ordinary skill in the art at the time of the invention would understand that a scanning motor is synonymous with a “scan drive.”⁶⁰¹ The undersigned is persuaded and accordingly finds that one of ordinary skill in the art at the time of the invention would construe the limitation “scan drive” as “a scanning motor.”

B. Infringement

To prove infringement, Symbol must show by a preponderance of the evidence that an

⁵⁹⁶ CIB 36-37.

⁵⁹⁷ RIB 52.

⁵⁹⁸ *Id.*

⁵⁹⁹ SIB 28.

⁶⁰⁰ JX-3 (the ‘889 patent) at col. 26:25-28.

⁶⁰¹ CX-109C (Allais Direct) at Q. 262.

accused product meets all the limitations of at least one asserted claim either literally or under the doctrine of equivalents.⁶⁰² In this investigation, Symbol alleges that Metrologic’s Eclipse MS5145, Voyager MS9535 and Voyager MS9540 bar code scanners infringe the asserted claims of the ‘889 patent.⁶⁰³ Symbol also accuses the redesigned versions of the Eclipse MS5145 and Voyager MS9540.⁶⁰⁴

1. Claim 7

With the exception of the limitations “folding mirror . . . positioned near a central area of the collecting mirror” and “drive means for oscillating the scanning mirror,” there appears to be no real dispute that the accused products meet the remaining limitations of claim 7 of the ‘889 patent.⁶⁰⁵ Accordingly, citation to the record evidence showing that the accused products meet many of the limitations of claim 7 is provided below in summary format.

An optical component for use in optical scanning system of the type having a laser light source and a laser light sensor mounted in a lightweight handheld housing, and operative for reading indicia having parts of different light reflectivity, comprising:	CX-109C (Allais Direct) at Q. 177; ROCFF 4.187, 4.188
(a) a stationary folding mirror mounted in the path of the light from the light source;	CX-109C (Allais Direct) at Q.178; ROCFF 4.189, 4.190; CX-116 (MS9540 scan board photograph, item 4); CX-117 (MS9540 collecting and folding mirrors photograph, item 4)

⁶⁰² *Pfizer*, 429 F.3d at 1376 (“To prove infringement, a patentee must show that an accused product or method meets every claim limitation either literally or under the doctrine of equivalents.”); *Advanced Cardiovascular*, 261 F.3d at 1336 (“To prevail, the plaintiff must establish by a preponderance of the evidence that the accused device infringes one or more claims of the patent either literally or under the doctrine of equivalents.”).

⁶⁰³ CIB 3, 57-65.

⁶⁰⁴ CIB 3, n. *, 57-65.

⁶⁰⁵ CIB 57; RIB 80-85; RRB 18-25; SIB 39.

(b) a reciprocally oscillatable scanning mirror for reflecting light from the folding mirror directly to the indicia parts in a scan across the indicia parts, thereby returning light of variable light intensity reflected off the indicia parts at least a portion of which is directly received and reflected by the scanning mirror;	CX-109C (Allais Direct) at Q. 179, 186; CX-116 (MS9540 scan board photograph, item 5); CX-118 (MS9540 scanning mirror photograph, item 5)
(c) a stationary collecting mirror for collecting a least a portion of the returning light reflected by the scanning mirror, and for directing the collected portion of light to the light sensor;	CX-109C (Allais Direct) at Q. 187; CX-116 (MS9540 scan board photograph, item 6); CX-117 (MS9540 collecting and folding mirrors photograph, item 6)
wherein the folding mirror is smaller than, and is positioned near a central area of the collecting mirror; and	See discussion below
(d) drive means for oscillating the scanning mirror.	See discussion below

With regard to the limitations “folding mirror . . . positioned near a central area of the collecting mirror” and “drive means for oscillating the scanning mirror,” Symbol argues that the accused products satisfy the claim limitations, while Metrologic argues that the accused products do not meet the claim limitations. The Staff argues that the accused products meet the “folding mirror . . . positioned near a central area” limitation, but fail to satisfy the “drive means” limitation. In support of its direct infringement argument, Symbol relies primarily on the testimony of its expert, Dr. Allais. Likewise, in support its non-infringement argument, Metrologic relies primarily on the testimony of its expert, Dr. Eastman. In the instant case, the infringement dispute mirrors the claim construction dispute.

a. “folding mirror . . . positioned near a central area of the collecting mirror”

Symbol argues that the accused products (including the redesigned products) satisfy this

claim limitation.⁶⁰⁶ Dr. Allais testified for Symbol that “as shown in Exhibit CX-117, the folding mirror is smaller than the collecting mirror . . . [and] near a central area of the collecting mirror.”⁶⁰⁷ Dr. Allais also testified that as shown in CX-124, “[t]he center of the fold mirror is closer to the central area of the collecting mirror than to any edge of the collecting mirror, without overlapping any edge of the collecting mirror.”⁶⁰⁸ Further, Dr. Allais testified with regard to Metrologic’s redesigned products that “the fold mirror remains closer to the central area than to any edge.”⁶⁰⁹

Metrologic argues that the accused products do not have a “folding mirror . . . positioned near a central area of the collecting mirror.” Dr. Eastman testified for Metrologic that in his opinion, “the Metrologic products do not meet all of the limitations of claim 7, because . . . the folding mirror is positioned so that no portion of the folding mirror encompasses the center of the collection mirror.”⁶¹⁰ Dr. Eastman’s opinion is based on Metrologic’s proposed claim construction requiring that at least a portion of the folding mirror overlap the center of the collecting mirror.⁶¹¹ The undersigned did not adopt this claim construction, because, *inter alia*, the plain and ordinary meaning of the phrase “near a central area” need not include the exact center. Because Dr. Eastman’s opinion is based on a faulty claim construction, the undersigned finds Dr. Eastman’s testimony unpersuasive.

⁶⁰⁶ CX-109C (Allais Direct) at Q. 188; CX-208C (Allais Supplemental Direct) at Q. 302.

⁶⁰⁷ CX-109C (Allais Direct) at Q. 188; CX-117 (MS9540 collecting and folding mirror photograph).

⁶⁰⁸ CX-109C (Allais Direct) at Q. 199; CX-124 (MS9540 collecting mirror central area photograph).

⁶⁰⁹ CX-208 (Allais Supplemental Direct) at Q. 312; RX-532C (9500 collector redesign drawing); CDX-049 (redesigned collector mirror); CDX-050 (MS9540 collecting mirror showing the central area).

⁶¹⁰ RX-2C (Eastman Direct) at Q. 122-23.

⁶¹¹ *See id.* at Q. 77.

With regard to the redesigned products, Dr. Eastman testified that:

The only difference between the “old” and the “new” Metrologic products is that the folding mirror was moved so that [sic] was located outside of the “central area” as defined by Symbol in Symbol’s Seventh Supplemental Responses to Interrogatories. This change positioned the new folding mirror so that it is even further away from the center of the collection mirror and closer to its edge than was the original position of the folding mirror. The location of the center of the new folding mirror is such that it is closer to the edge of the folding mirror [sic, collecting mirror] than it is to the center of the folding mirror [sic, collecting mirror].⁶¹²

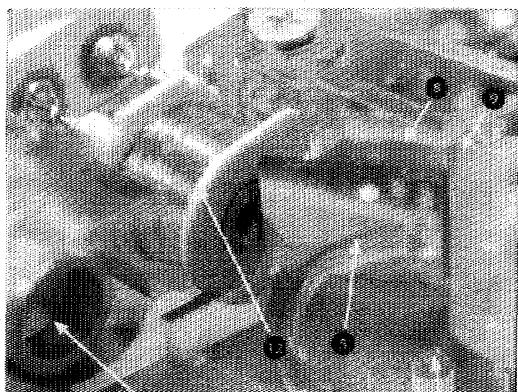
Dr. Eastman opines that the redesigned products do not infringe claim 7 because in the redesigned products the center of the folding mirror is positioned closer to the edge of the collecting mirror than it is to the center of the collecting mirror. Contrary to Dr. Eastman’s testimony, the limitation “folding mirror . . . positioned near a central area of the collecting mirror” does not require the folding mirror be positioned closer to the center of the collecting mirror than to an edge of the collecting mirror. As construed herein, the limitation only requires that the folding mirror be positioned close to the region at, in or near the center of the collecting mirror. Because Dr. Eastman’s opinion is based on the folding mirror’s position with regard to the center of the collecting mirror rather than the region at, in or near the center of the collecting mirror, the undersigned finds Dr. Eastman’s testimony unpersuasive.

The undersigned finds Dr. Allais testimony credible, persuasive and supported by the evidence of record. Accordingly, the undersigned finds that the accused products (including the redesigned products) satisfy the limitation of claim 7 requiring a “folding mirror . . . positioned near a central area of the collecting mirror.”

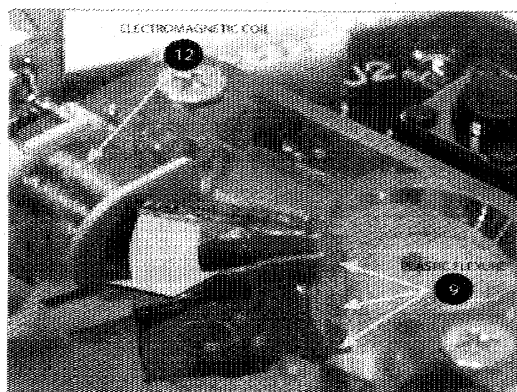
⁶¹² *Id.* at Q. 127-28.

b. “drive means for oscillating the scanning mirror”

As previously discussed, the undersigned finds that the limitation “drive means for oscillating the scanning mirror” is properly construed in accordance with 35 U.S.C. § 112, ¶ 6 as requiring “a scanning motor and shaft, and equivalents thereof” for moving the scanning mirror back and forth.⁶¹³ There is no dispute that the accused products use an electromagnetic coil and permanent magnet to oscillate the scanning mirror.⁶¹⁴ This structure is best illustrated below in exhibits CX-118 and CX-120.



CX-118



CX-120

The only dispute appears to be whether the electromagnetic coil and permanent magnet used in the accused products is the same or equivalent to the structure disclosed in the ‘889 patent for performing the function of oscillating the scanning mirror.

⁶¹³ Additional corresponding structures include those structures discussed herein that are disclosed in the ‘798 and ‘297 patents incorporated by reference in the ‘889 patent-at-issue.

⁶¹⁴ See CX-109C (Allais Direct) at Q. 211 (characterizing the structure in the accused products that functions to oscillate the scanning mirror as “a permanent magnet, labeled (11) in Exhibit CX-119, and an electromagnetic coil, labeled (12) in Exhibits CX-116, CX-118 and CX-120.”); RIB 83 (characterizing the structure as including “an electromagnetic coil, displaced from the spring-like flipper assembly and scanning mirror, which alternately attracts and repels the permanent magnet causing the flipper assembly and attached scanning mirror to oscillate.”)

As construed herein, the relevant corresponding structure disclosed in the '889 patent that oscillates the scanning mirror is a scanning motor and shaft. The record evidence shows that the accused products do not use a scanning motor with a shaft to oscillate the scanning mirror.⁶¹⁵ The evidence shows that the accused products use “an electromagnetic coil, displaced from the spring-like flipper assembly and scanning mirror, which alternately attracts and repels the permanent magnet causing the flipper assembly and attached scanning mirror to oscillate.”⁶¹⁶ Accordingly, the undersigned finds that Symbol has failed to prove by a preponderance of the evidence that the drive means in the accused products has the same structure as the structure disclosed in the '889 patent for oscillating the scanning mirror.

Nevertheless, Metrologic's accused products (including the redesigned products) may still be found to infringe claim 7 if the electromagnetic coil and permanent magnet used in the accused products is an equivalent structure of a scanning motor and shaft. Symbol argues that the structures are equivalent, while Metrologic argues they are not.⁶¹⁷ The Staff supports Metrologic in arguing that the structures are not equivalent.⁶¹⁸ Under § 112, ¶ 6, “an equivalent results from an insubstantial change which adds nothing of significance to the structure, material, or acts disclosed in the patent specification.”⁶¹⁹ In order to establish that the differences between the accused structure

⁶¹⁵ See CX-109C (Allais Direct) at Q. 211; CX-116 (MS9540 scan board photograph); CX-118 (MS9540 scanning mirror photograph); CX-119 (MS9540 plastic flexure photograph); CX-120 (MS9540 scanning mirror motion photograph).

⁶¹⁶ See RIB 83; see also CX-116 (MS9540 scan board photograph); CX-118 (MS9540 scanning mirror photograph); CX-119 (MS9540 plastic flexure photograph); CX-120 (MS9540 scanning mirror motion photograph); RPX-32 (MS9540 voyager CG scan board); RPX-33 (MS5145 eclipse scan board); RX-503C (flipper code drawing).

⁶¹⁷ CIB 60; RIB 83.

⁶¹⁸ SIB 43.

⁶¹⁹ See *Valmont*, 983 F.2d at 1043; see also *Odetics*, 185 F.3d at 1267 (“structural equivalents (continued...)”).

and the structure disclosed in the patent are “insubstantial,” a party must typically prove that the accused structure performs the claimed function in substantially the same way so as to achieve substantially the same result as the structure disclosed in the patent.⁶²⁰

The first step under the function-way-result test is to determine whether the accused structure and the disclosed structure perform the identical function.⁶²¹ As previously stated, the parties do not dispute that the electromagnetic coil and permanent magnet used in the accused products functions to oscillate the scanning mirror.⁶²² Accordingly, based on the evidence of record, the undersigned finds that the electromagnetic coil and permanent magnet in the accused products has the same function as the scanning motor and shaft disclosed in the ‘889 patent.

Having found identity of function, the next step in the function-way-result test is to determine whether the disclosed structure and alleged equivalent structure perform the claimed function of oscillating the scanning mirror in substantially the same way.⁶²³ Dr. Allais testified on behalf of Symbol that the “magnet and electromagnetic coil structure in the accused products performs the

⁶¹⁹(...continued)
under § 112, ¶ 6 are included within literal infringement of means-plus-function claims”); *IMS Technologies*, 206 F.3d at 1430 (Whether the differences between the patented structure and the accused structure are substantial is a question of fact.).

⁶²⁰ See *Ishida*, 221 F.3d at 1317.

⁶²¹ *Applied Medical*, 448 F.3d at 1334 (“To prove structural equivalence under the function-way-result test, the court must first determine that the accused and disclosed structures perform the identical functions.”).

⁶²² See CX-109C (Allais Direct) at Q. 211 (characterizing the structure in the accused products that functions to oscillate the scanning mirror as “a permanent magnet, labeled (11) in Exhibit CX-119, and an electromagnetic coil, labeled (12) in Exhibits CX-116, CX-118 and CX-120.”); RIB 83 (characterizing the structure as including “an electromagnetic coil, displaced from the spring-like flipper assembly and scanning mirror, which alternately attracts and repels the permanent magnet causing the flipper assembly and attached scanning mirror to oscillate.”)

⁶²³ *Applied Medical*, 448 F.3d at 1334 (“The court was then required to determine the way in which these functions were performed by the two structures.”).

identical function of oscillating the scanning mirror . . . in the same way by using electromagnetic pulses through a coil or coils inducing forces on a permanent magnet.”⁶²⁴ Dr. Eastman testified on behalf of Metrologic that:

Stepper motors and rotating polygons use electrical currents and magnets to rotate a shaft. The shaft simply acts to transfer the circular motion induced by the electrical current on the magnetic rotor to the mirror attached to the shaft. The shaft is not intended to cause motion of the mirror in other than a 1 to 1 relationship to that of the magnetic rotor. By contrast, mirror actuators such as those in the Metrologic devices use resilient materials to effect motion of the scanning mirror and depend on the physical characteristics (e.g., the stiffness and mass) of all of the components involved in producing the resonant motion. These types of mirror actuators, however, do not operate in the same manner as stepper motors and certainly do not use the equivalent structures. . . . The stepper motor, like the drive means disclosed in the ‘889 patent, will stop scanning as soon as its electrical drive signals are turned off. In contrast, the scanning mirror in the Metrologic device will continue to scan for a finite period of time once the electrical drive signals are turned off. Consequently, the “drive means” of the ‘889 patent functions in a substantially different manner than does the mirror actuator in the Metrologic devices.⁶²⁵

The Federal Circuit has cautioned that during this step of the function-way-result test, the inquiry must be “restricted to the way in which the structure performs the *properly-defined function*.”⁶²⁶ The undersigned is unpersuaded by Dr. Allais’ testimony that the way in which the disclosed scanning motor and shaft functions to oscillate the scanning mirror is by simply using electromagnetic pulses through a coil or coils inducing forces on a permanent magnet.⁶²⁷ Dr. Allais’ characterization is too broad and does not conform with the disclosed function of oscillating the scanning mirror. As correctly described by Dr. Eastman, the disclosed structure uses electrical currents and magnets to rotate a shaft which acts to transfer the circular motion induced by the

⁶²⁴ CX-109C (Allais Direct) at Q. 213; CX-208C (Allais Supplemental Direct) at Q. 338.

⁶²⁵ RX-2C (Eastman Direct) at Q. 213; RX-762C (Eastman Rebuttal) at Q. 322.

⁶²⁶ *Applied Medical*, 448 F.3d at 1334 (emphasis in original).

⁶²⁷ See CX-109C (Allais Direct) at Q. 213; CX-208C (Allais Supplemental Direct) at Q. 338.

electrical current on the magnetic rotor to the scanning mirror attached to the shaft.⁶²⁸ The transfer of energy from the scanning motor to the shaft must be included in the characterization of the way in which the disclosed structure functions to oscillate the scanning mirror. The fact that the transfer of energy occurs by direct contact with the shaft in the disclosed structure must also be included in the proper characterization of how the disclosed structure functions. The evidence clearly shows that without the transfer of energy directly by contact to the shaft, the scanning mirror in the disclosed device will not oscillate. Accordingly, based on the evidence of record, the undersigned finds that the way in which the disclosed scanning motor and shaft function to oscillate the scanning mirror is by using electrical currents and magnets to rotate, by direct contact, a shaft which acts to transfer the circular motion induced by the electrical current on the magnetic rotor to the scanning mirror attached to the shaft.

Having properly characterized the way in which the disclosed scanning motor and shaft oscillate the scanning mirror, the question becomes whether the electromagnetic coil and permanent magnet of the accused products (including the redesigned products) perform the function of “oscillating the scanning mirror” in substantially the same way. The evidence shows that the electromagnetic coil and permanent magnet of the accused products oscillates the scanning mirror by alternatively attracting and repelling the spring-like flipper assembly to which the scanning mirror are affixed.⁶²⁹ This is entirely different than the way in which the disclosed structure oscillates the scanning mirror. Unlike the disclosed structure, the electromagnetic coil and permanent magnet do

⁶²⁸ See RX-2C (Eastman Direct) at Q. 213; RX-762C (Eastman Rebuttal) at Q. 322.

⁶²⁹ See *id.*; see also RPX-32 (MS9540 voyager CG scan board); RPX-33 (MS5145 eclipse scan board); SPX-1 (MS9540 voyager scan board - redesigned model); SPX-2 (MS5145 eclipse scan board - redesigned model).

not use a shaft to oscillate the scanning mirror and do not impart energy through direct contact with the flipper-like assembly that supports the scanning mirror. Accordingly, based on the evidence of record, the undersigned finds that the disclosed scanning motor and shaft does not function in substantially the same way as the electromagnetic coil and permanent magnet of the accused products. Because the disclosed and alleged equivalent structure function in substantially different ways, the undersigned finds the differences between the structures not insubstantial. Consequently, the undersigned finds that Symbol has failed to prove by a preponderance of the evidence that the accused products (including the redesigned products) satisfy the limitation of claim 7 of the ‘889 patent requiring “a drive means for oscillating the scanning mirror.”

In summary, as discussed hereinabove, the undersigned finds that Symbol has failed to prove by a preponderance of the evidence that the accused products (including the redesigned products) meet every limitation of claim 7 of the ‘889 patent. Accordingly, the undersigned finds that the accused products (including the redesigned products) do not infringe claim 7 of the ‘889 patent.

2. Claim 8

The component as recited in claim 7, wherein the folding mirror is one-piece construction with the collecting mirror.	CX-109C (Allais Direct) at Q. 214-16; CX-208C (Allais Supplemental Direct) at Q. 339; CX-117 (MS9540 collecting and folding mirrors photograph); ROCFF 4.209
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Claim 8 depends from independent claim 7. Although the evidence shows that the accused products (including the redesigned products) satisfy the additional limitation of claim 8, because the undersigned has held hereinabove that the accused products (including the redesigned products) do not infringe independent claim 7, the undersigned finds that the accused products (including the

redesigned products) also do not infringe dependent claim 8 of the '889 patent.⁶³⁰

3. Claim 11

The component as recited in claim 7, wherein the light source is a laser source, and wherein the indicia constitute bar code symbols.	CX-109C (Allais Direct) at Q. 218-19; CX-208C (Allais Supplemental Direct) at Q. 341; CX-116 (MS9540 scan board photograph); ROCFF 4.214
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Claim 11 depends from independent claim 7. Although the evidence shows that the accused products (including the redesigned products) satisfy the additional limitations of claim 11, because the undersigned has held hereinabove that the accused products (including the redesigned products) do not infringe independent claim 7, the undersigned finds that the accused products (including the redesigned products) also do not infringe dependent claim 11 of the '889 patent.⁶³¹

4. Claim 13

A lightweight, handheld laser scanner for reading indicia and generating electrical signals indicative thereof, comprising:	CX-109C (Allais Direct) at Q. 221; CX-208C (Allais Supplemental Direct) at Q.343; ROCPPF 4.221, 4.222
(a) a housing having an area for passing laser light to the indicia and for receiving reflected laser light from the indicia;	CX-109C (Allais Direct) at Q. 222; CX-208C (Allais Supplemental Direct) at Q. 344; CPX-9 (MS9540 scanner); CPX-10 (MS9535 voyager BT); CPX-14 (disassembled MS5 145 eclipse); ROCFF 4.223, 4.224
(b) a source of laser light in the housing;	CX-109C (Allais Direct) at Q. 223; CX-208C (Allais Supplemental Direct) at Q. 345; CX-116 (MS9540 scan board photograph); ROCFF 4.225, 4.226

⁶³⁰ *Wahpeton Canvas Co. v. Frontier, Inc.*, 870 F.2d 1546, 1552 (Fed. Cir. 1989) (“One who does not infringe an independent claim cannot infringe a claim dependent on (and thus containing all the limitations of) that claim.”).

⁶³¹ *Id.*

(c) a sensor in the housing for receiving the reflected laser light after it has been admitted through the area and for generating a first signal representative of the indicia;	CX-109C (Allais Direct) at Q. 224; CX-208C (Allais Supplemental Direct) at Q. 346; CX-116 (MS9540 scan board photograph, item 7); ROCFF 4.227, 4.228
(d) a plurality of optical elements positioned in the housing generally defining an optical path between the source of laser light and the area of the housing and between the area and the sensor, the optical elements including (i) a stationary folding mirror for receiving laser emissions from the light source, (ii) a reciprocally oscillatable scanning mirror positioned for receiving laser emissions from the folding mirror and sweeping them directly through the area and across the indicia, and for receiving light reflected directly from the indicia through said area, and (iii) a stationary collecting mirror positioned for receiving the reflected laser light from said scanning mirror and reflecting it onto the sensor, wherein the folding mirror and the collecting mirror are secured in a fixed physical relationship with respect to each other,	CX-109C (Allais Direct) at Q. 225-27, 229; CX-208C (Allais Supplemental Direct) at Q. 347-51; ROCFF 4.230-35
the folding mirror being smaller than the collecting mirror and positioned adjacent a central area thereof; and	See discussion below
(e) drive means for reciprocally oscillating the scanning mirror.	See discussion below

Except for the limitations “folding mirror . . . positioned adjacent a central area thereof” and “drive means for reciprocally oscillating the scanning mirror,” there appears to be no real dispute that the accused products meet the remaining limitations of claim 13 of the ‘889 patent. With regard to the limitation “folding mirror . . . positioned adjacent a central area thereof,” the undersigned has construed the phrase “positioned adjacent a central area thereof” the same as the phrase “near a central area of the collecting mirror” in claim 7 of the ‘889 patent. Accordingly, for the same reasons

espoused in claim 7 regarding whether the accused products (including the redesigned products) satisfy the limitation “folding mirror . . . positioned near a central area of the collecting mirror,” the undersigned finds that Symbol has proven by a preponderance of the evidence that the accused products (including the redesigned products) satisfy the limitation of claim 13 requiring a “folding mirror . . . positioned adjacent a central area thereof.”⁶³² With regard to the limitation “drive means for oscillating the scanning mirror,” the undersigned notes that this is the identical limitation found in claim 7 of the ‘889 patent. Accordingly, for reasons discussed in claim 7 hereinabove regarding this limitation, the undersigned finds that Symbol has failed to prove by a preponderance of the evidence that the accused products (including the redesigned products) satisfy the limitation of claim 13 requiring a “drive means for oscillating the scanning mirror.”

Because Symbol has not proven by a preponderance of the evidence that the accused products (including the redesigned products) satisfy every claim limitation of claim 13 of the ‘889 patent, the undersigned finds that the accused products (including the redesigned products) do not infringe claim 13 of the ‘889 patent.

5. Claim 14

The scanner according to claim 13 and including signal processing circuitry in the head for processing the first signal into a digital signal.	CX-109C (Allais Direct) at Q.235; CX-208C (Allais Supplemental Direct) at Q. 354; ROCFF 4.240, 4.241
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Claim 14 depends from independent claim 13. Although the evidence shows that the accused

⁶³² See *supra*, at VI(B)(1)(a); see also CX-109C (Allais Direct) at Q. 230; CX-208C (Allais Supplemental Direct) at Q. 351; CX-117 (MS9540 collecting and folding mirror photograph); CDX-49 (redesigned collecting mirror); CDX-50 (MS9540 collecting mirror showing the central area); RX-532C (9500 collector redesign drawing).

products (including the redesigned products) satisfy the additional limitations of claim 14, because the undersigned has held hereinabove that the accused products (including the redesigned products) do not infringe claim 13, the undersigned finds that the accused products (including the redesigned products) also do not infringe dependent claim 14 of the '889 patent.⁶³³

6. Claim 17

A method for bar code scanning, comprising the steps of:	CX-109C (Allais Direct) at Q. 237; CX-208C (Allais Supplemental Direct) at Q. 356; ROCFF 4.246, 4.247
generating a light beam utilizing a light source;	CX-109C (Allais Direct) at Q. 238; CX-208C (Allais Supplemental Direct) at Q. 357; CX-116 (MS9540 scan board photograph, item 1); ROCFF 4.248, 4.249
reflecting the generated light beam to an oscillating scanning mirror utilizing a stationary folding mirror;	CX-109C (Allais Direct) at Q. 239; CX-208C (Allais Supplemental Direct) at Q. 358; CX-116 (MS9540 scan board photograph, items 4,5); CX-118 (MS9540 scanning mirror photograph); CX-120 (MS9540 scanning mirror motion photograph); ROCFF 4.250, 4.251
reflecting the light beam from said scanning mirror utilizing the scanning mirror directly to a field located outside the scanning apparatus; at least a portion of the light received by the field being returned directly back to the scanning mirror;	CX-109C (Allais Direct) at Q. 240; CX-208C (Allais Supplemental Direct) at Q. 359; CX-116 (MS9540 scan board photograph); ROCFF 4.252, 4.253
reflecting said returned light by the scanning mirror to a concave stationary collecting mirror, wherein the collecting mirror is larger than the folding mirror and	CX-109C (Allais Direct) at Q. 242; CX-208C (Allais Supplemental Direct) at Q. 360; CX-116 (MS9540 scan board photograph)

⁶³³ *Wahpeton Canvas Co.*, 870 F.2d at 1552.

the folding mirror is mounted near a line intercepting a central area of the collecting mirror; and	See discussion below
reflecting said returned light by the collecting mirror to a light sensor.	CX-109C (Allais Direct) at Q. 248; CX-208C (Allais Supplemental Direct) at Q. 365; CX-116 (MS9540 scan board photograph); ROCFF 4.256, 4.257

Except for the limitation “folding mirror . . . mounted near a line intercepting a central area of the collecting mirror” there appears to be no real dispute that the accused products (including the redesigned products) meet the remaining limitations of claim 17 of the ‘889 patent. With regard to the limitation “folding mirror . . . mounted near a line intercepting a central area of the collecting mirror,” the undersigned has held hereinabove that the limitation is invalid pursuant to 35 U.S.C. § 112, ¶ 2, because the limitation is insolubly ambiguous and therefore indefinite. An indefinite claim cannot be infringed. Accordingly, the undersigned finds that the accused products (including the redesigned products) do not infringe claim 17 of the ‘889 patent.

7. Claim 18

A light scanning assembly for distinguishing light reflective indicia comprising:	CX-109C (Allais Direct) at Q. 250; CX-208 (Allais Supplemental Direct) at Q. 302; ROCFF 4.261, 4.262
(a) a forward portion of the assembly spaced from said indicia, and a rearward portion disposed further from said indicia than said forward portion;	CX-109C (Allais Direct) at Q. 251; CX-208 (Allais Supplemental Direct) at Q. 302; ROCFF 4.262, 4.263
(b) an actuatable laser light source mounted on said assembly and operative, when actuated, for generating an incident laser beam;	CX-109C (Allais Direct) at Q.252; CX-208 (Allais Supplemental Direct) at Q. 302; CX-116 (MS9540 scan board photograph, item 1); ROCFF 4.264, 4.265

<p>(c) a stationary folding mirror on said assembly for reflecting said incident laser beam along a first optical path;</p>	<p>CX-109C (Allais Direct) at Q. 253; CX-208 (Allais Supplemental Direct) at Q.302; CX-116 (MS9540 scan board photograph, item 4); CX-117 (MS9540 collecting and folding mirror photograph, item 4); ROCFF 4.266, 4.267</p>
<p>(d) a movable scanning mirror on said rearward portion of said assembly, positioned in said first operable path so as to reflect said incident laser beam directly to a reference plane located exterior to said assembly, into a symbol located in a working distance range in the vicinity of the reference plane, thereby reflecting off said symbol reflected laser light, at least a returning portion of which travels along a second optical path away from said symbol directly back to said scanning mirror;</p>	<p>CX-109C (Allais Direct) at Q. 254; CX-208 (Allais Supplemental Direct) at Q.302; CX-116 (MS9540 scan board photograph, item 5); CX-118 (MS9540 scanning mirror photograph, item 5); ROCFF 4.269-72</p>
<p>(e) a stationary, curved collecting mirror having said folding mirror disposed in the light path of a central area thereof, said collecting mirror being larger than said folding mirror;</p>	<p>CX-116 (MS9540 scan board photograph, item 6); CX-117 (MS9540 collecting and folding mirror photograph, item 6)</p> <p>See discussion below regarding “folding mirror disposed in the light path of a central area thereof”</p>
<p>(f) a scan drive mounted on said assembly for moving said scanning mirror to cause a sweeping of said incident laser beam in a scan across the symbol, the returning portion of the reflected laser light having a variable intensity over said scan; and</p>	<p>CX-109C (Allais Direct) at Q. 263; CX-208 (Allais Supplemental Direct) at Q. 302; CX-116 (MS9540 scan board photograph, item 12); CX-118 (MS9540 scanning mirror photograph, item 12); CX-119 (MS9540 plastic flexure photograph, item 11); ROCFF 4.275-78</p>

(g) a sensor mounted in said assembly for detecting the variable intensity of the returning portion of the reflected laser light over a field of view, and for generating an electrical analog signal indicative of the detected variable light intensity, said curved collecting mirror positioned to collect the returning portion of the reflected laser light over the field of view and to direct the collected returning portion to said sensor.	CX-109C (Allais Direct) at Q. 264-65; CX-208 (Allais Supplemental Direct) at Q. 302; CX-116 (MS9540 scan board photograph, item 7); ROCFF 4.279, 4.280
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Except for the limitation “folding mirror disposed in the light path of a central area thereof,” there appears to be no real dispute that the accused products (including the redesigned products) meet the remaining limitations of claim 18 of the ‘889 patent. Dr. Eastman testified on behalf of Metrologic that the accused products (including the redesigned products) do not satisfy this claim limitation because the “folding mirror is positioned so that no portion of the folding mirror encompasses the center of the collection mirror and the folding mirror is not positioned in front of the collection mirror.”⁶³⁴ The undersigned has properly construed hereinabove the limitation “folding mirror disposed in the light path of a central area thereof” as requiring the folding mirror to be positioned in the path of the light that impinges the region at, in or near the center of the collecting mirror. Contrary to Dr. Eastman’s testimony, the limitation does not require a portion of the folding mirror to encompass the center of the collecting mirror. Nor does the limitation require the folding mirror to be positioned in front of the collecting mirror. Accordingly, the undersigned finds Metrologic’s noninfringement argument unpersuasive.

For the reasons espoused in claim 7 regarding whether the accused products (including the redesigned products) satisfy the limitation “folding mirror . . . positioned near a central area of the

⁶³⁴ See RX-2C (Eastman Direct) at Q. 146.

collecting mirror,” the undersigned finds that Symbol has proven by a preponderance of the evidence that the accused products (including the redesigned products) satisfy the limitation of claim 18 requiring a “folding mirror disposed in the light path of a central area thereof.”⁶³⁵ Because Symbol has proven by a preponderance of the evidence that the accused products (including the redesigned products) satisfy every claim limitation of claim 18 of the ‘889 patent, the undersigned finds that the accused products (including the redesigned products) infringe claim 18 of the ‘889 patent.

C. Domestic Industry - Technical Prong

Symbol argues that its SE1200, SE1224, SE950 and SE955 products practice all the limitations of claim 17 of the ‘889 patent.⁶³⁶ In addition, Symbol argues that its SE1200 and SE1224 products satisfy claims 7 and 8 of the ‘889 patent.⁶³⁷

1. Claim 17

Metrologic argues that so long as Symbol establishes that the asserted products are incorporated into scanners, Metrologic does not dispute that the technical prong of the domestic industry requirement is satisfied with regard to claim 17 of the ‘889 patent.⁶³⁸ The Staff also argues that Symbol’s SE950 and SE955 products satisfy the technical prong requirement of Section 337

⁶³⁵ See *supra*, at VI(B)(1)(a).; see also CX-109C (Allais Direct) at Q. 249, 257, 259, 260; CX-208C (Allais Supplemental Direct) at Q. 302; CX-117 (MS9540 collecting and folding mirror photograph); CDX-49 (redesigned collecting mirror); CDX-50 (MS9540 collecting mirror showing the central area); RX-532C (9500 collector redesign drawing).

⁶³⁶ CIB 87.

⁶³⁷ CIB 87-88.

⁶³⁸ RIB 102. It is unclear why Metrologic would for all intents and purposes concede that Symbol has satisfied the technical prong requirement with regard to claim 17 in light of the claim construction dispute between the parties. It is especially perplexing in light of the fact that Metrologic is the party that argued that claim 17 was invalid under 35 U.S.C. § 112 ¶ 2 in the first instance.

with regard to claim 17.⁶³⁹ However, as discussed in detail, *supra*, the undersigned has found claim 17 of the '889 patent invalid under 35 U.S.C. § 112, ¶ 2. Accordingly, claim 17 cannot form the basis by which Symbol satisfies the technical prong requirement.

2. Claims 7 and 8

To satisfy the technical prong requirement with regard to claims 7 or 8, Symbol must show by a preponderance of the evidence that its SE1200/SE1224 products meet each and every limitation of the claims. Claim 8 depends from independent claim 7 and therefore incorporates all the limitations of claim 7 therein. The record evidence shows that Symbol's SE1200/SE1224 products satisfy all the limitations of claims 7 and 8 except the limitation requiring a "drive means for oscillating the scanning mirror."⁶⁴⁰ The limitation "drive means for oscillating the scanning mirror" has been construed herein as a scanning motor with shaft, or equivalents thereof, for oscillating a scanning mirror. Symbol's expert, Dr. Allais, testified that the SE1200 products [

] ⁶⁴¹ As is clear from Dr. Allais' testimony, [] as required by claims 7 and 8 of the '889 patent. A visual inspection of the SE1200 readily verifies this conclusion. Because the evidence of record shows that the SE1200 products [] the undersigned finds that Symbol has failed to prove by a preponderance of the evidence that its SE1200/SE1224 products

⁶³⁹ SIB 51-52.

⁶⁴⁰ See CX-109C (Allais Direct) at Q.72, 269-70, 272-73; CX-122 (SE1200 photograph, items F, G, H, and I); CDX-29 (SE1200 & 1224, items 3-6).

⁶⁴¹ CX-109C (Allais Direct) at Q. 75.

meet the technical prong requirement of Section 337 with regard to claims 7 or 8.

For the reasons discussed hereinabove the undersigned finds that Symbol has failed to prove by a preponderance of the evidence that it satisfies the technical prong requirement of Section 337.

D. Validity

1. Person of Ordinary Skill in the Art

Symbol argues through its expert Dr. Allais that the level of ordinary skill in the art for the '889 patent is:

some combination of education and experience equivalent to a Bachelor of Science in Mechanical or Optical Engineering and two years experience in bar-code scanner design. By equivalent, I mean that neither the degree nor the time in the industry is a minimum; greater experience and lesser education or greater education and lesser experience could also qualify someone as a person of ordinary skill in the art.⁶⁴²

Metrologic's expert, Dr. Eastman, argues that the level of ordinary skill in the art is "someone with a Bachelor's degree in engineering and five years pertinent work experience, e.g., mechanical design relating to bar code scanning mechanisms."⁶⁴³ Dr. Eastman notes, however, that a person of ordinary skill in the art could have a higher educational degree and less work experience, or a lesser degree and more pertinent experience.⁶⁴⁴ The only difference between the level of ordinary skill proposed by Symbol and that proposed by Metrologic is that Symbol argues that two years of pertinent experience is sufficient, while Metrologic argues that five years of pertinent experience is required.

Although the '889 patent deals with complex technology, the invention disclosed therein primarily involves the arrangement of various component parts. Metrologic does not discuss why such a high level of pertinent experience is necessary. The undersigned finds Metrologic's proposed

⁶⁴² CX-109C (Allais Direct) at Q. 33, 34.

⁶⁴³ See RFF 392 (citing RX-1C (Palmer Direct) at Q. 65).

⁶⁴⁴ RX-1C (Palmer Direct) at Q. 65.

level of ordinary skill less persuasive than that proposed by Symbol. Accordingly, the undersigned finds that the level of ordinary skill in the art for the '889 patent is one who has some combination of education and experience equivalent to a Bachelor's Degree in mechanical or optical engineering and two years experience in bar code scanner design.

2. U.S. Patent No. 4,409,470

U.S. Patent No. 4,409,470 (the '470 patent) is titled, "Narrow-Bodied, Single-And-Twin-Windowed Portable Laser Scanning Head For Reading Bar Code Symbols" and was issued on October 11, 1983.⁶⁴⁵ The '470 patent is prior art under 35 U.S.C. § 102(b).⁶⁴⁶ The '470 patent was before the patent examiner and is cited on the front of the '889 patent.⁶⁴⁷ Because the '470 patent was before the examiner during prosecution of the '889 patent, the burden for overcoming the presumption of validity is especially difficult.⁶⁴⁸

a. Anticipation

Metrologic argues that claims 7, 11, 13 and 14 of the '889 patent are anticipated by the '470 patent.⁶⁴⁹ To prove anticipation, Metrologic must show by clear and convincing evidence that the '470 patent discloses each and every limitation of claims 7, 11, 13, and 14 of the '889 patent.⁶⁵⁰ In support of its anticipation argument, Metrologic relies on the testimony of its expert, Dr. Eastman. On direct, Dr. Eastman testified that in his opinion, claims 7, 11, 13, and 14 are anticipated by the

⁶⁴⁵ *Id.*

⁶⁴⁶ See 35 U.S.C. § 102.

⁶⁴⁷ See JX-3 (the '889 patent) at cover page (item 56).

⁶⁴⁸ See *HP*, 909 F.2d at 1467.

⁶⁴⁹ See JX-153 (the '470 patent).

⁶⁵⁰ *SmithKline Beecham*, 403 F.3d at 1343 ("A patent is invalid for anticipation if a single prior art reference discloses each and every limitation of the claimed invention.").

'470 patent.⁶⁵¹

(1) Claim 7

Symbol argues that independent claim 7 is not anticipated by the '470 patent.⁶⁵² Specifically, Symbol argues that the '470 patent fails to disclose: (1) a “folding mirror . . . positioned near a central area of the collecting mirror;” and (2) “a stationary collecting mirror for collecting a [sic] least a portion of the returning light reflected by the scanning mirror, and for directing the collected portion of light to the light sensor.”⁶⁵³

With regard to the limitation “a folding mirror . . . positioned near a central area of the collecting mirror,” Dr. Eastman testified on behalf of Metrologic that:

The drawings presented in Figures 12 through 14 of the '470 depict those mirrors as being as close together as practical for a device of the 1982 era (the filing year of the '470 patent), with the folding mirror 166 lying as close as is practical to the central hole in the collection mirror 174. Figures 12 and 14 depict one edge of folding mirror 166 is almost in contact with an edge of the collection mirror 174. To place these components as close together as possible would have been obvious to a person of ordinary skill in the art, since there was ongoing competitive pressure to reduce the size and weight of handheld bar code readers. A way to accomplish this would be to place the components in close proximity as is clearly shown in the '470 patent. Although mirrors 166 and 174 are in near contact, their edges are not shown as overlapping.⁶⁵⁴

In opposition, Dr. Allais testified on behalf of Symbol that:

The '470 patent does not disclose that the folding mirror is located “near a central area” of the collecting mirror. The specification of the '470 patent does not describe the relative positions of the mirrors, and it is not possible to tell simply by looking at the figures whether the folding mirror is “near a central area” of the collecting mirror. What is apparent from Figures 13 and 14 is that the two mirrors are offset from each other at a 45 degree angle in two different planes. Although Dr. Eastman

⁶⁵¹ RX-2C (Eastman Direct) at Q. 163-64, 167-72.

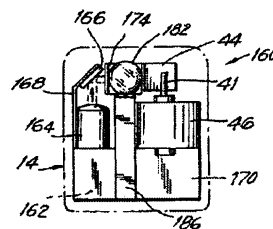
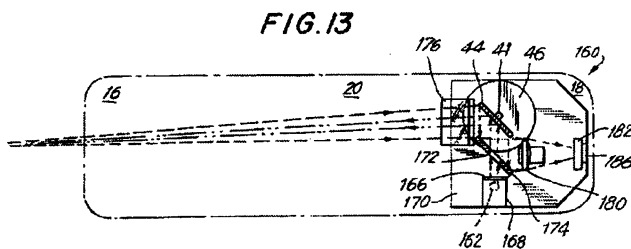
⁶⁵² CX-166C (Allais Rebuttal) at Q. 139-40.

⁶⁵³ CIB 116-17.

⁶⁵⁴ RX-2C (Eastman Direct) at Q. 181.

seemingly interprets Figures 12 and 14 as disclosing this limitation, it is not clear from these Figures precisely where the fold mirror is located with respect to the collecting mirror. Also, the specification does not state Figures 12 and 14 are drawn to scale.⁶⁵⁵

Dr. Eastman's opinion that the '470 patent discloses a "folding mirror . . . positioned near a central area of the collecting mirror" is based entirely on Figures 12-14 of the '470 patent. Figures 13-14 are reproduced below for reference.



Specifically, Dr. Eastman's opinion is based on an inference drawn from Figures 12-14 about the positional relationship of the folding mirror to the central area of the collecting mirror. However, there is absolutely no indication in the '470 patent that the figures are drawn to scale. Therefore, Dr. Eastman's opinion amounts to nothing more than speculation. Federal Circuit precedent is clear that "arguments based on drawings not explicitly made to scale in issued patents are unavailing."⁶⁵⁶ In light of this precedent and the persuasive testimony of Dr. Allais, the undersigned finds that Metrologic has failed to prove by clear and convincing evidence that the '470 patent discloses a "folding mirror . . . positioned near a central area of the collecting mirror." Accordingly, the

⁶⁵⁵ CX-166C (Allais Rebuttal) at Q. 147.

⁶⁵⁶ *Nystrom v. Trex Co.*, 424 F.3d 1136, 1148-49 (Fed. Cir. 2005) ("*Nystrom*"); *Hockerson-Halberstadt*, 222 F.3d at 956 (The disclosure gave no indication that the drawings were drawn to scale. "[I]t is well established that patent drawings do not define the precise proportions of the elements and may not be relied on to show particular sizes if the specification is completely silent on the issue."); *In re Wright*, 569 F.2d 1124, 1127 (CCPA 1977) ("*Wright*").

undersigned finds that the '470 patent does not anticipate claim 7 of the '889 patent-at-issue.

(2) Claim 11

Claim 11 depends from claim 7. Because independent claim 7 is not anticipated by the '470 patent, dependent claim 11 is also not anticipated.⁶⁵⁷

(3) Claim 13

Symbol argues that independent claim 13 is not anticipated by the '470 patent.⁶⁵⁸ Specifically, Symbol argues that the '470 patent fails to disclose: (1) a “folding mirror . . . positioned adjacent a central area thereof;” and (2) “a stationary collecting mirror for receiving the reflected laser light from said scanning mirror and reflecting it onto the sensor”⁶⁵⁹

In arguing whether the limitation “folding mirror . . . positioned adjacent a central area thereof” is disclosed by the '470 patent, Symbol and Metrologic rely on the same arguments they made regarding the “near a central area” limitation in claim 7.⁶⁶⁰ Thus, for the same reasons expressed with regard to claim 7, the undersigned finds that Metrologic has failed to prove by clear and convincing evidence that the '470 patent discloses a “folding mirror . . . positioned adjacent a central area thereof.” Accordingly, the undersigned finds that the '470 patent does not anticipate claim 13 of the '889 patent-at-issue.

⁶⁵⁷ See generally *Hartness Int'l, Inc. v. Simplimatic Eng'g, Co.*, 819 F.2d 1100, 1108 (Fed. Cir. 1987) (“*Hartness*”) (finding, after a bench trial, that the district court clearly erred by determining that a dependent claim was invalid as anticipated when its independent claim was nonobvious; “[a] fortiori, dependent claim 3 was nonobvious (and novel) because it contained all the limitations of [independent] claim 1 plus a further limitation”).

⁶⁵⁸ CX-166C (Allais Rebuttal) at Q. 139-40.

⁶⁵⁹ CIB 118.

⁶⁶⁰ CX-166C (Allais Rebuttal) at Q. 153; RX-2C (Eastman Direct) at Q. 184.

(4) Claim 14

Claim 14 depends from claim 13. Because independent claim 13 is not anticipated by the ‘470 patent, dependent claim 14 is also not anticipated.⁶⁶¹

b. Obviousness

Metrologic argues that claims 8, 17 and 18 are obvious in light of the ‘470 patent.⁶⁶²

(1) Claim 8

Claim 8 depends from independent claim 7. Claim 8 adds a limitation requiring the folding mirror and collecting mirror to be of one-piece construction.⁶⁶³ Metrologic argues that claim 8 would have been obvious in light of the ‘470 patent, because “a person of ordinary skill in the art understood that one could construct a folding mirror 166 and collecting mirror 174 as one piece.”⁶⁶⁴

The undersigned found hereinabove with regard to independent claim 7 that the ‘470 patent fails to disclose a “folding mirror . . . positioned near a central area of the collecting mirror.” Because claim 8 depends from claim 7, claim 8 also includes this limitation.⁶⁶⁵ Thus, to prove claim 8 is obvious in light of the ‘470 patent, Metrologic must prove, *inter alia*, that it would have been obvious in light of the ‘470 patent to position the folding mirror near a central area of the collecting mirror. Metrologic, however, makes no such argument. Consequently, claim 8 must fall with claim 7.⁶⁶⁶ Accordingly, the undersigned finds that Metrologic has failed to prove by clear and convincing

⁶⁶¹ See generally *Hartness*, 819 F.2d at 1108.

⁶⁶² RIB 123-127.

⁶⁶³ JX-3 (the ‘889 patent) at col. 24:23-25.

⁶⁶⁴ RIB 123.

⁶⁶⁵ 35 U.S.C. § 112, ¶ 4 (“A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.”).

⁶⁶⁶ See *In re Dance*, 160 F.3d 1339, 1340 n.2 (Fed. Cir. 1998) (“*Dance*”) (noting that dependent claims not argued separately on the merits rise or fall with the independent claim to which
(continued...)

evidence that claim 8 of the '889 patent is rendered obvious in light of the '470 patent.

(2) Claim 17

Independent claim 17 of the '889 patent includes a limitation requiring a “folding mirror [] mounted near a line intercepting a central area of the collecting mirror.”⁶⁶⁷ The undersigned has held, hereinabove, that claim 17 is invalid under 35 U.S.C. § 112, ¶ 2, because this limitation is vague and indefinite. Because the limitation “folding mirror [] mounted near a line intercepting a central area of the collecting mirror” cannot be construed, the validity of claim 17 under 35. U.S.C. §102 or §103 cannot be determined.⁶⁶⁸

(3) Claim 18

Metrologic argues that one of ordinary skill in the art would find claim 18 of the '889 patent obvious in light of the '470 patent.⁶⁶⁹ According to Metrologic, the '470 patent discloses every limitation in claim 18 except a “curved collecting mirror.”⁶⁷⁰ However, Metrologic argues that it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute a curved mirror for the flat mirror 174 and focusing lens 180 disclosed in the '470 patent.⁶⁷¹

Symbol disputes Metrologic's assertion that claim 18 is obvious in light of the '470 patent. Specifically, Symbol argues that Metrologic has failed to prove by clear and convincing evidence

⁶⁶⁶(...continued)
they relate).

⁶⁶⁷ JX-3 (the '889 patent) at col. 25:34-35.

⁶⁶⁸ *Certain Zero-Mercury-Added Alkaline Batteries, Parts Thereof, and Products Containing Same*, Inv. No. 337-TA-493, Commission Opinion at 22 (October 15, 2004, public version November 10, 2004) (“If claims are invalid for indefiniteness, by definition they cannot be construed, and any issue that depends on the claims being construed, such as infringement, cannot be addressed”) reversed on other grounds, *Energizer, supra*.

⁶⁶⁹ RRB 63; RX-2C (Eastman Direct) at Q. 176-78, 190.

⁶⁷⁰ RRB 63.

⁶⁷¹ *Id.*; RIB 126-27.

that: 1) it would have been obvious to substitute a curved mirror in place of the flat mirror 174 and lens 180 disclosed in the '470 patent; and 2) that the folding mirror 166 is disposed in the light path of a central area of the collecting mirror.

In support of Metrologic's obviousness argument, Dr. Eastman testified that:

It would have been obvious to one of ordinary skill in the art by August 2, 1990 that a flat collection mirror and a focusing lens could be interchanged for the curved collection mirror in claim [18] of the '889 patent. Interchangeability of lenses and mirrors has been known since the time of Isaac Newton (1643-1727). Newton's reflecting telescope was achieved by substituting a concave mirror for the objective lens in the refracting telescope developed by Galileo Galilei in the early 1600's. Interchange of lenses for curved mirrors, and vice versa, has been a commonplace design choice in the design of optical systems ever since that time. Use of combinations of lenses and mirrors in optical systems is also a routine design choice for a person of ordinary skill in the art and has been for at least many decades.⁶⁷²

However, Dr. Allais testified on behalf of Symbol that:

Any time you have a scanner, there are design constraints. Contrary to Dr. Eastman's opinion, components cannot simply be taken out and replaced with other components without affecting other aspects of the scanner. In the context of the design of the '470 device, such a substitution would require other changes, in the location of the photosensor and possibly other components.

Although the undersigned finds persuasive Dr. Eastman's testimony that one of ordinary skill in the art at the time of the invention would know that a curved collecting mirror could be used in place of a flat mirror and a focusing lens, that does not mean that one of ordinary skill in the art would have been motivated to make such a change in the '470 patent. "In cases such as this where a single prior art reference is alleged to render the claimed invention obvious, there must be a sufficient showing of a suggestion or motivation for any modification of the teachings of that reference

⁶⁷² RX-2C (Eastman Direct) at Q. 175, 178.

necessary to reach the claimed invention in order to support the obviousness conclusion.”⁶⁷³ The fact that a prior art device could be modified so as to produce the claimed device is not a basis for a finding of obviousness unless the prior art suggests the desirability of such a modification.⁶⁷⁴ Dr. Eastman provides no explanation why one of ordinary skill in the art would want to replace the flat mirror 174 and lens 180 with a curved collecting mirror. Because a showing of a suggestion, teaching or motivation to combine is an essential evidentiary component of an obviousness holding, Dr. Eastman’s failure to address this component is fatal.⁶⁷⁵

Regardless, even if one of ordinary skill in the art were motivated to substitute a curved collecting mirror for the flat mirror 174 and focusing lens 180 disclosed in the ‘470 patent, Metrologic has failed to prove by clear and convincing evidence that the ‘470 patent discloses a “folding mirror mounted in the light path of the central area” of the collecting mirror. When asked on direct where he found this limitation disclosed in the ‘470 patent, Dr. Eastman replied on behalf of Metrologic that “[t]he ‘470 patent discloses collection mirror 174 [sic] has folding mirror 166 along a line that intersects the central hole in collection mirror 174. The folding mirror 166 is smaller than the collection mirror 174.”⁶⁷⁶

Presumably Dr. Eastman is asserting that because the folding mirror 166 is allegedly positioned along a line that intersects the central hole of the collection mirror 174, that the folding mirror is in the light path of the central area of the collecting mirror. However, Dr. Eastman’s testimony falls far short of being either clear or convincing. First, the claim limitation requires the

⁶⁷³ See *McGinely*, 262 F.3d at 1359; see also *B.F. Goodrich*, 72 F.3d at 1582.

⁶⁷⁴ See *In re Gordon*, 733 F.2d 900 (Fed. Cir. 1984) (“*Gordon*”).

⁶⁷⁵ See *C.R. Bard, Inc. v. M3 Sys, Inc.*, 157 F.3d 1340, 1352 (Fed. Cir. 1998) (“*C.R. Bard*”).

⁶⁷⁶ RX-2C (Eastman Direct) at Q. 176-77.

folding mirror to be mounted in the light path of the central area of the collecting mirror.⁶⁷⁷ As discussed during claim construction, it is clear that “the light path” refers to the path the light takes after it is reflected from the symbol. This path can be plainly seen in Figures 12 and 13 of the ‘470 patent.⁶⁷⁸ As illustrated in those figures, the light returns through the rear window 176 onto the scanning mirror 44 where it is reflected onto the flat sensor mirror 174 where it is then reflected onto the convex lens 180 to the light sensor 182. Because the folding mirror 166 is positioned behind the flat sensor mirror 174, contrary to Dr. Eastman’s opinion, it does not appear that the folding mirror 166 is “in the light path” as required by claim 18 of the ‘889 patent.

Second, as previously discussed, the specification of the ‘470 patent provides no indication that Figures 12-14 are drawn to scale. Federal Circuit precedent is clear that figures not drawn to scale cannot be relied on to determine the proportions or sizes of elements illustrated in those figures.⁶⁷⁹ Because Dr. Eastman’s opinion that the folding mirror 166 is mounted in the light path of the central area of the collecting mirror 174 is based on a inference drawn from the relative positions of the folding mirror 166 and collecting mirror 174, Dr. Eastman’s opinion amounts to nothing more than mere speculation.

Accordingly, for the reasons stated hereinabove, the undersigned finds that Metrologic has failed to prove by clear and convincing evidence that claim 18 of the ‘889 patent-at-issue would have been obvious to one of ordinary skill in the art at the time of the invention in light of the ‘470 patent.

⁶⁷⁷ JX-3 (the ‘889 patent) at col. 26:21-24.

⁶⁷⁸ JX-153 (the ‘470 patent), Figures 12, 13.

⁶⁷⁹ *Nystrom*, 424 F.3d at 1148-49; *Hockerson-Halberstadt*, 222 F.3d at 956 (The disclosure gave no indication that the drawings were drawn to scale. “[I]t is well established that patent drawings do not define the precise proportions of the elements and may not be relied on to show particular sizes if the specification is completely silent on the issue.”); *Wright*, 569 F.2d at 1127.

3. U.S. Patent No. 4, 971,410

U.S. Patent No. 4, 971,410 (the ‘410 patent) titled, “Scanning And Collection System For A Compact Laser” was issued to Wike, Jr. et al. on November 20, 1990 from an application filed on July 27, 1989.⁶⁸⁰ The ‘410 patent is prior art under 35 U.S.C. § 102(e).⁶⁸¹ Metrologic argues that claims 7, 8, 11, 13, 14 and 17 of the ‘889 patent are anticipated by the ‘410 patent.⁶⁸² Metrologic also argues that claim 18 is obvious in light of the ‘410 patent.⁶⁸³ Symbol argues that claims 7, 8, 11, 13, 14 and 17 are not anticipated by the ‘410 patent and that claim 18 is not obvious.⁶⁸⁴ Similarly, the Staff argues that none of the asserted claims are anticipated or obvious in light of the ‘410 patent.⁶⁸⁵

a. Anticipation of claims 7, 8, 11, 13, 14, and 17

To prove anticipation, Metrologic must show by clear and convincing evidence that the ‘410 patent discloses each and every limitation of claims 7, 11, 13, and 14 of the ‘889 patent.⁶⁸⁶ In support of its anticipation argument, Metrologic relies on the testimony of its expert, Dr. Eastman. On direct, Dr. Eastman testified that in his opinion, claims 7, 11, 13, 14 and 17 are anticipated by the ‘470 patent.⁶⁸⁷

Claims 7, 8, 11, 13, and 14 of the ‘889 patent each include a limitation requiring a

⁶⁸⁰ JX-182 (the ‘410 patent) at cover page (items 11, 19, 22, 45, 54).

⁶⁸¹ See 35 U.S.C. § 102.

⁶⁸² RIB 134-36; RX-2 (Eastman Direct) at Q. 236-37.

⁶⁸³ *Id.*

⁶⁸⁴ CIB 119-22.

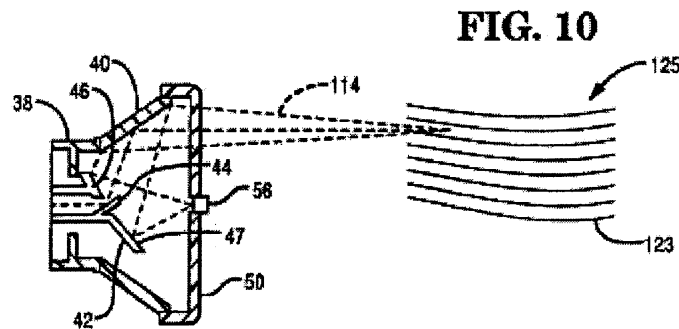
⁶⁸⁵ SIB 62.

⁶⁸⁶ *SmithKline Beecham*, 403 F.3d at 1343 (“A patent is invalid for anticipation if a single prior art reference discloses each and every limitation of the claimed invention.”).

⁶⁸⁷ RX-2C (Eastman Direct) at Q. 239-53.

“reciprocally oscillatable scanning mirror.”⁶⁸⁸ Similarly, claim 17 includes a limitation requiring an “oscillating scanning mirror.”⁶⁸⁹ In addition, each of the asserted claims of the ‘889 patent requires a stationary folding mirror and a stationary collecting mirror.⁶⁹⁰ Symbol and the Staff argue that claims 7, 8, 11, 13, 14 and 17 are not anticipated because the ‘410 patent fails to disclose a scanner that uses an oscillating scanning mirror with stationary folding and collecting mirrors.⁶⁹¹

The ‘410 patent discloses several different embodiments, but only one of which suggests using a stationary folding and collecting mirror as required by each of the asserted claims of the ‘889 patent. This embodiment is illustrated in Figure 10 of the ‘410 patent, reproduced below.



As described in the specification, “[i]n FIG. 10, the ring of mirrors 40 rotate while the transceiver 42 remains stationary thereby generating a plurality of parallel scan lines 123 comprising scan pattern 125.”⁶⁹² As seen in Figure 10, the transceiver 42 includes a deflecting mirror portion 44. The transceiver 42 is a collecting mirror and the deflecting mirror portion 44 is a folding mirror.⁶⁹³ The ring of mirrors 40 is part of a polygon-type scanning unit, which according to the above quoted

⁶⁸⁸ JX-3 (the ‘889 patent) at col. 24:10, 61-62.

⁶⁸⁹ *Id.* at col. 25:25.

⁶⁹⁰ *Id.* at col. 24:8, 16, 60, 66-67, col. 25:24, 32.

⁶⁹¹ CIB 119.

⁶⁹² JX-182 (the ‘410 patent) at col. 9:55-58.

⁶⁹³ *Id.* at col. 2:52-63.

description of Figure 10, “rotates.”

The limitations “reciprocally oscillatable scanning mirror” and “oscillating scanning mirror” have been construed herein as requiring a scanning mirror capable of moving in a back-and-forth motion. Back-and-forth motion connotes bi-directional movement, while rotation connotes uni-directional movement. Because the ring of mirrors 40 rotate, they do not oscillate as required by the ‘889 patent-at-issue.

Metrologic attempts to overcome this deficiency by arguing that the ‘410 patent also discloses a scanning unit that incorporates Hall sensors that may be used “to control the length of rotation of the motor 108 producing a dithering operation . . . which, when used with the turning mirrors 40 generate a series of parallel scan lines similar to the lines 123 shown in FIG. 10.”⁶⁹⁴ According to Metrologic, this disclosure meets the “reciprocally oscillatable scanning mirror” limitation in the ‘889 patent-at-issue. While it may be true that the above quoted passage from the specification of the ‘410 patent does disclose a scanning unit configuration that causes the ring of mirrors 40 to move in a back-and-forth motion, that does not salvage Metrologic’s anticipation argument. The above quoted passage from the specification of the ‘410 patent describes an embodiment of the invention disclosed in Figure 8 that is separate and apart from the embodiment disclosed in Figure 10. The embodiment illustrated in Figure 8 does not use stationary folding and collecting mirrors as required by claims 7, 8, 11, 13, 14 and 17 of the ‘889 patent.⁶⁹⁵ In effect Metrologic is picking and choosing elements from different embodiments of the ‘410 patent and combining them to arrive at a new

⁶⁹⁴ JX-182 (the ‘410 patent) at col. 9:1-10.

⁶⁹⁵ *See id.* at col. 4:56-59, 65-68 (“FIG. 10 shows the scan pattern generated by both embodiments of the bar code scanner unit of the present invention when only the pattern mirrors are rotated or the optical transceiver is rotated less than 360 degrees.”) (emphasis added).

device that is not disclosed anywhere in the ‘410 patent. Metrologic’s attempt to take elements from different embodiments of the ‘410 patent to concoct its anticipation argument under 35 U.S.C. §102 is impermissible.

Accordingly, for the reasons stated hereinabove, the undersigned finds that Metrologic has failed to prove by clear and convincing evidence that claims 7, 8, 11, 13 and 14 of the ‘889 patent-at-issue are anticipated by the ‘410 patent. With regard to claim 17, as held herein, that claim is invalid under 35 U.S.C. § 112, ¶ 2 as vague and indefinite. Consequently, the validity of claim 17 under 35 U.S.C. §102 cannot be tested.

b. Obviousness of claim 18

To prove obviousness, Metrologic must show by clear and convincing evidence that one of ordinary skill in the art at the time of the invention would have found claim 18 obvious in light of the ‘410 patent. In support of its obviousness argument, Metrologic relies on the testimony of its expert, Dr. Eastman. On direct, Dr. Eastman testified that in his opinion, the ‘410 patent renders claim 18 of the ‘889 patent obvious to a person of ordinary skill in the art.⁶⁹⁶

Unlike claims 7, 8, 11, 13, 14 and 17, claim 18 does not include a limitation requiring a reciprocally oscillatable scanning mirror. Instead, claim 18 simply requires a movable scanning mirror. Consequently, the problems discussed above with regard to Metrologic’s anticipation argument are not applicable to claim 18.

Metrologic admits that the ‘410 patent does not disclose a scanning mirror in the “rearward portion” of the device as required by claim 18 of the ‘889 patent-at-issue.⁶⁹⁷ However, Metrologic

⁶⁹⁶ RX-2C (Eastman Direct) at Q. 237.

⁶⁹⁷ RIB 136; *see also* JX-3 (the ‘889 patent) at col. 26:11-12.

argues that “this positioning is clearly within the knowledge of a person of ordinary skill in the art.”⁶⁹⁸ Specifically, Dr. Eastman testified for Metrologic that:

It would have been obvious to one of ordinary skill in the art to relocate the laser diode and change the angle of the fold mirror accordingly to move the position of the laser diode toward the forward portion of the scanner. Since a laser diode assembly is typically only the size of the of the [sic] filter on a filter cigarette, relocation of the laser diode is not the monumental engineering task Dr. Allais purports it to be.⁶⁹⁹

Symbol disputes Dr. Eastman’s testimony, arguing that such a change would not be obvious, because “[t]he mirrors used in the ‘410 patent could not be moved without major design changes.”⁷⁰⁰

Dr. Eastman’s testimony is neither clear nor convincing. Claim 18 of the ‘889 patent requires the scanning mirror to be positioned in the rearward portion of the scanning assembly, yet Dr. Eastman never testified that it would have been obvious to move the scanning mirror to the rearward portion of the disclosed device in the ‘410 patent. Instead, Dr. Eastman testified that it would have been obvious to move the laser diode to the forward portion of the device. Consequently, Metrologic has failed to provided particularized evidence that moving the scanning mirror to the rearward portion of the device would have been obvious to one of ordinary skill in the art. Additionally, Dr. Eastman provided no motivation and pointed to no suggestion for making the changes he proposed. “In cases such as this where a single prior art reference is alleged to render the claimed invention obvious, there must be a sufficient showing of a suggestion or motivation for any modification of the teachings of that reference necessary to reach the claimed invention in order to

⁶⁹⁸ RIB 136.

⁶⁹⁹ RX-2C (Eastman Direct) at 266-68.

⁷⁰⁰ CIB 132-33; CX-166C (Allais Rebuttal) at Q. 168.

support the obviousness conclusion.”⁷⁰¹ The fact that a prior art device could be modified so as to produce the claimed device is not a basis for a finding of obviousness unless the prior art suggests the desirability of such a modification.⁷⁰² Dr. Eastman failure to provide any motivation or suggestion for relocating the scanning mirror to the rearward portion of the device is fatal to Metrologic’s obviousness argument.

Accordingly, for the reasons discussed hereinabove, the undersigned finds that Metrologic has failed to prove by clear and convincing evidence that one of ordinary skill in the art at the time of the invention would have found claim 18 to be obvious in light of the ‘410 patent.

4. MH-132/MS131 Products and SS-100 Product

a. MS131/MH132 Products

Metrologic asserts that its MS131/MH132 bar code readers invalidate the asserted claims of the ‘889 patent under 35 U.S.C. § 103 either alone or in combination with its SS-100 product.⁷⁰³ To prove invalidity, Metrologic must show by clear and convincing evidence that the MS131/MH32 products taken alone or in combination with the SS-100 product renders the asserted claims of the ‘889 patent obvious. To that end, Dr. Eastman testified on behalf of Metrologic that in his opinion the SS-100 and MH132 products “render each of the asserted claims of the ‘889 patent invalid since these devices anticipate each limitation of the each and every asserted claim, or the limitations would have been obvious to a person of ordinary skill in the art at the time of the filing of the ‘889 patent.”⁷⁰⁴

⁷⁰¹ See *McGinely*, 262 F.3d at 1359; see also *B.F. Goodrich*, 72 F.3d at 1582.

⁷⁰² See *Gordon*, *supra*.

⁷⁰³ RRB 64.

⁷⁰⁴ RX-2C (Eastman Direct) at Q. 191-92.

Symbol disputes Dr. Eastman's testimony, arguing that the MS131/MH132 products taken alone or in combination with the SS-100 product do not obviate the asserted claims of the '889 patent. Specifically, Symbol argues that the MS131/MH132 products fail to disclose alone or in combination with the SS-100 product: 1) the limitation of each of the asserted claims requiring the light reflected from the scanning mirror to travel directly to the indicia (a.k.a. bar code) and directly from the indicia back to the scanning mirror; 2) the limitation of claims 7, 8, 11, 13, 14 and 17 requiring a reciprocally oscillatable scanning mirror / oscillating scanning mirror; and 3) the "central area" limitations of claims 7, 8, 11, 13 and 14 of the '889 patent.⁷⁰⁵

(1) the "directly" limitation (claims 7, 8, 11, 13, 14, 17, 18)

Each of the asserted claims of the '889 patent include a limitation requiring the scanning mirror to directly reflect the light from the folding mirror to the indicia and directly receive the reflected light back from the indicia.⁷⁰⁶ Whether this limitation is disclosed in the MS131/MH132 products presents a difficult issue that ultimately turns on the sufficiency of evidence produced and the burden of proof required to show invalidity. Symbol argues that the MH132 product entered into evidence does not meet this limitation because the product includes a 3rd mirror positioned between the scanning mirror and the indicia which prevents the light from traveling directly to the indicia from the scanning mirror and directly back from the indicia to the scanning mirror as required by each of the asserted claims of the '889 patent.⁷⁰⁷ Metrologic asserts that Symbol's argument is "unsupportable in light of all the evidence."⁷⁰⁸

⁷⁰⁵ CIB 127-29.

⁷⁰⁶ JX-3 (the '889 patent) at col. 24:3-26:37.

⁷⁰⁷ CIB 126-27; RPX-9 (MH132); CX-166C (Allais Rebuttal) at Q. 190.

⁷⁰⁸ RIB 129.

According to Metrologic, the MS131/MH132 products were manufactured in two varieties, a “downport” model that allegedly used an intervening 3rd mirror to direct the light from the scanning mirror to the indicia and an “outport” model that allegedly did not include the intervening 3rd mirror thereby allowing the light from the scanning mirror to directly hit the indicia.⁷⁰⁹ In support of its argument that the MS131/MH132 products satisfy the “directly” limitation of the asserted claims of the ‘889 patent, Metrologic relies on the alleged “outport” model.⁷¹⁰ While Metrologic introduced into evidence two product guides and a price list that show that the MS131/MH132 products came in both “downport” and “outport” varieties, the only evidence of record describing what is actually meant by “downport” and “outport” comes from the testimony of Metrologic’s own employee of over thirty years, Mr. Robert Blake.⁷¹¹

Mr. Blake’s testimony regarding the optical configuration of the MS131/MH132 “outport” models is entirely uncorroborated.⁷¹² Metrologic did not introduce into evidence any of the outport models of the MS131/MH132 products. Metrologic only introduced into evidence a model of the MH132 product that includes the intervening 3rd mirror.⁷¹³ As Mr. Blake is a long-standing Metrologic employee with a clear financial interest in the outcome of this investigation, the need for

⁷⁰⁹ *Id.*

⁷¹⁰ *Id.*

⁷¹¹ See RX-431 (Metrologic laser scanning heads and controller guide); RX-432 (MS131 laser head product guide); RX-438 (Metrologic domestic price list); RX-6C (Blake Direct) at Q. 33-61.

⁷¹² Mr. Blake’s testimony that Figure 2 in RX-432 shows “the depth of field for scanning with a scanner configured with an outport” is unavailing. RX-06C at Q. 56. Figure 2 is not labeled as being configured as an “outport” model and the portion of the figure showing the depth of field is unclear. See RX-432. Further, Mr. Blake’s own testimony belies his conclusion. Mr. Blake testified that the scanner models with handles were the “outports” and the tabletop models were the “downports.” RX-06C at Q. 57. As can be clearly seen in Figure 2 of RX-432, the scanner model shown is a tabletop model and thus, according to Mr. Blake’s own testimony, it must be a “downport” model. See RX-432.

⁷¹³ See RPX-9 (MH132).

corroboration in this instance is unquestionable. The evidence presented by Metrologic is neither clear nor convincing and under Federal Circuit precedent Mr. Blake's uncorroborated testimony is insufficient to support a finding that the asserted claims of the '889 patent are invalid in light of the MS131/MH132 "outport" models.⁷¹⁴

**(2) the "reciprocally oscillatable scanning mirror" /
"oscillating scanning mirror" limitations (claims 7, 8, 11,
13, 14, 17)**

Claims 7, 8, 11, 13, 14 and 17 all include a limitation requiring a "reciprocally oscillatable scanning mirror" / "oscillating scanning mirror."⁷¹⁵ As construed herein, these limitations require a scanning mirror capable of movement in a back-and-forth motion. There can be no question that the MS131/MH132 products fail to meet this limitation as the products use a rotating polygon-type scanning unit.⁷¹⁶ A polygon-type scanning unit rotates in one direction and does not move in a back-and-forth motion as required by the limitations.⁷¹⁷ Nevertheless, Metrologic argues that it would have been obvious to substitute the oscillating scanning mirror used in the SS-100 for the rotating polygon in the MS131/MH132 products.⁷¹⁸ To prove this assertion, Metrologic must show by clear and convincing evidence that one of ordinary skill in the art at the time of the invention would have found claims 7, 8, 11, 13, 14 and 17 obvious in light of the MS131/MH132 products in view of the SS-100 product.

⁷¹⁴ See *Finnigan*, 180 F.3d at 1367-68 (quoting *Stevenson v. Int'l Trade Comm'n*, 612 F.2d 546, 550 (CCPA 1979) ("*Stevenson*") ("Uncorroborated oral testimony of prior inventors or users with a demonstrated financial interest in the outcome of the litigation is insufficient to provide such proof.")).

⁷¹⁵ See JX-3 (the '889 patent) at col. 24:10-61, col. 25:24-25.

⁷¹⁶ RPX-9 (MH132).

⁷¹⁷ CX-166C (Allais Rebuttal) at Q. 192-93.

⁷¹⁸ RIB 132.

In support of its obviousness argument Metrologic relies on an alleged admission by Dr. Allais and the optical configuration of the SS-100 product.⁷¹⁹ Specifically, Metrologic argues that Dr. Allais admitted that a person of ordinary skill in the art in the mid-1980's understood that the use of either a rotating polygon or a reciprocally oscillating mirror was purely a matter of design choice.⁷²⁰ Additionally, Metrologic argues that the interchangeability of a rotating polygon and a oscillating scanning mirror is evinced by a comparison of the configurations of the MS131/MH132 and the SS-100.⁷²¹ According to Metrologic, both products employ very similar optical paths.⁷²² Although Metrologic never states as much, the undersigned assumes that Metrologic is arguing that because the optical paths are similar the substitution of a oscillating scanning mirror for a rotating polygon would have been obvious.

With regard to the alleged admission by Dr. Allais, a complete reading of the transcript reveals that Dr. Allais was only referring to the design of new scanners in stating that the use of either a rotating polygon or a reciprocally oscillating mirror would have been a matter of design choice.⁷²³ In fact, Dr. Allais testified that it would not have been obvious to substitute a oscillating scanning mirror for a rotating polygon and that both components were not interchangeable.⁷²⁴ Dr. Allais noted that each component has different “performance properties” and that there were pros and cons of using each.⁷²⁵

The undersigned finds persuasive Dr. Allais’ testimony that it would not have been obvious

⁷¹⁹ RIB 134 (chart).

⁷²⁰ RIB 132 (citing Allais, Tr. at 1600-02).

⁷²¹ RIB 132.

⁷²² *Id.*

⁷²³ *See* Allais, Tr. at 1600.

⁷²⁴ *See id.* at 1599-1600; *see also* CX-166 (Allais Rebuttal) at Q. 194.

⁷²⁵ *See* Allais, Tr. at 1599-1600; *see also* CX-166 (Allais Rebuttal) at Q. 194.

to substitute the oscillating scanning mirror of the SS-100 for the rotating polygon in the MS131/MH132 products. Furthermore, Metrologic has failed to provide any evidence why one of ordinary skill in the art at the time of the invention would have been motivated to make such a combination. “A showing of a suggestion, teaching or motivation to combine the prior art references is an ‘essential evidentiary component of an obviousness holding.’”⁷²⁶ Metrologic’s failure to provide such evidence coupled with the persuasive testimony of Dr. Allais is fatal to Metrologic’s obviousness argument. Accordingly, the undersigned finds that Metrologic has not met its burden of proving by clear and convincing evidence that substituting the oscillating scanning mirror of the SS-100 product for the rotating polygon in the MS131/MH132 products have been obvious to one of ordinary skill in the art at the time of the invention.

(3) the “central area” limitations (claims 7, 8, 11, 13, 14)

Claims 7, 8 and 11 include a limitation requiring a “folding mirror . . . positioned near the central area of the collecting mirror.”⁷²⁷ Claims 13 and 14 include a limitation requiring a “folding mirror . . . positioned adjacent a central area thereof.”⁷²⁸ These two limitations have been construed in the same fashion herein as requiring a folding mirror positioned close to the region at, in or near the center of the collecting mirror. Because both limitations have been construed the same both limitations will be addressed together.

Metrologic appears to rely on an alleged admission by Symbol’s expert Dr. Allais and the testimony of Mr. Shepard, one of the inventors of the ‘889 patent, in support of its argument that the MS131/MH132 products disclose a folding mirror positioned near/adjacent the central area of the

⁷²⁶ *C.R. Bard*, 157 F.3d at 1352.

⁷²⁷ *See* JX-3 (the ‘889 patent) at col. 24:19-21.

⁷²⁸ *See id.* at col. 25:4-6.

collecting mirror.⁷²⁹ Metrologic's argument regarding the alleged admission by Dr. Allais is not persuasive. It appears that at one point in time Dr. Allais testified that Symbol's SE950/955 products practiced all of the asserted claims of the '889 patent and that later Dr. Allais changed his position arguing that the SE950/955 products did not satisfy claims 7, 8, 11, 13 and 14.⁷³⁰ According to Metrologic, because the folding mirror of the SE950/955 products is positioned relative to the collecting mirror in the precise manner as the MS131/MH132 products, Dr. Allais must have changed his opinion regarding the SE950/955 products to avoid having the asserted claims of the '889 patent invalidated by the MS131/MH132 products.⁷³¹ The undersigned finds that the evidence of record belies this conclusion. According to Symbol, at the time Dr. Allais opined that the SE950/955 products satisfied claims 7, 8, 11, 13 and 14, Dr. Allais had already provided opinions concerning the validity of the '889 patent in light of the MS131/MH132 products.⁷³² Moreover, Dr. Allais explained at the hearing in this investigation that his original opinion was based on drawings of the products and that it was only after having the opportunity to actually analyze a physical example of the SE950/955 products that he determined that the products did not meet the claim limitations.⁷³³ The undersigned finds Dr. Allais' explanation credible and accordingly gives no weight to Metrologic's argument.

That leaves only the deposition testimony of Mr. Shepard in support of Metrologic's argument that the MS131/MH132 products satisfy the "central area" limitations of claims 7, 8, 11,

⁷²⁹ See RIB 133 (chart).

⁷³⁰ *Id.* at 130-31.

⁷³¹ *Id.* The undersigned notes that Metrologic provides no citation in support of its assertion that the position of the folding mirror in SE950/955 products relative to the collecting mirror is the same as that in the MS131/MH132 products. See *id.*

⁷³² CRB at 63.

⁷³³ Allais, Tr. at 1620:19-1622:6.

13 and 14 of the '889 patent. When asked about the relationship between the first fold mirror and the collecting mirror, Mr. Shepard testified that the first fold mirror is positioned "near, near the center" of the curved collecting mirror.⁷³⁴

Symbol disputes Metrologic's assertion that the MS131/MH132 products disclose a folding mirror positioned near/adjacent a central area of the collecting mirror. To that end, Dr. Allais testified for Symbol that the MS131/MH132 products do not disclose a folding mirror positioned near/adjacent a central area of the collecting mirror, because "there is a significant distance between the folding mirror and the collecting mirror."⁷³⁵ A visual inspection of the MH132 product confirms Dr. Allais' opinion.⁷³⁶

Determining whether a folding mirror is near/adjacent a central area of the collecting mirror depends on the position of the folding mirror in relation to the central area of the collecting mirror and the edge of the collecting mirror. As previously discussed, to satisfy the limitations requiring a folding mirror positioned near/adjacent a central area of the collecting mirror, the folding mirror must be positioned close to the region at, in or near the center of the collecting mirror. As between Mr. Blake and Dr. Allais, the undersigned finds Mr. Blake's testimony unpersuasive. Based on Dr. Allais' testimony as confirmed by a visual inspection of the MH132 product, the undersigned finds that Metrologic has failed to prove by clear and convincing evidence that the MS131/MH132 products disclose a folding mirror positioned near/adjacent a central area of the collecting mirror.

For at least the reasons discussed hereinabove, the undersigned finds that Metrologic has failed to prove by clear and convincing evidence that the MS131/MH132 products render the

⁷³⁴ RX-64C (Shepard Dep) at 80-81.

⁷³⁵ CX-166C (Allais Rebuttal) at Q. 176-77.

⁷³⁶ See RPX-9 (MH132).

asserted claims of the ‘889 patent obvious either alone or in combination with the SS-100 product.

b. SS-100 Products

Metrologic asserts that its SS-100 bar code reader invalidates the asserted claims of the ‘889 patent under 35 U.S.C. § 103 either alone or in combination with its MH132/MS131 products.⁷³⁷ The technical manual for the SS-100 product was in front of the examiner during prosecution of the ‘889 patent and is cited therein.⁷³⁸ Additionally, the patentees provided a summary of the SS-100 technical manual in an information disclosure statement (IDS) filed during prosecution of the ‘889 patent.⁷³⁹ Accordingly, Metrologic faces a higher burden with respect to the SS-100 product.⁷⁴⁰

Metrologic must prove by clear and convincing evidence that the SS-100 taken alone or in combination with the MH132/MS131 renders the asserted claims of the ‘889 patent obvious. To that end, Dr. Eastman testified on behalf of Metrologic that in his opinion the SS-100 and MH132 products “render each of the asserted claims of the ‘889 patent invalid since these devices anticipate each limitation of the each and every asserted claim, or the limitations would have been obvious to a person of ordinary skill in the art at the time of the filing of the ‘889 patent.”⁷⁴¹ Symbol disputes Dr. Eastman’s conclusion that one of ordinary skill in the art would have found the asserted claims of the ‘889 patent obvious in light of the SS-100 and/or MS132. Specifically, Symbol argues that the SS-100 fails to disclose either alone or in combination with the MS131/MH132 products: 1) the limitation found in each of the asserted claims of the ‘889 patent requiring the scanning mirror to

⁷³⁷ RRB 64.

⁷³⁸ See JX-3 (the ‘889 patent) at cover page (item 56); see also RX-620 (technical manual).

⁷³⁹ JX-7 (the ‘889 prosecution history) at SBL00001735.

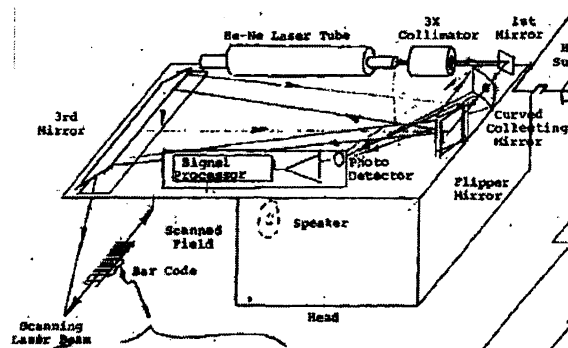
⁷⁴⁰ See *Scripps Clinic & Research Found. v. Genentech, Inc.*, 927 F.2d 1565,1576 (Fed. Cir. 1991).

⁷⁴¹ RX-2C (Eastman Direct) at Q. 191-92.

directly reflect the light from the folding mirror to the indicia (a.k.a. bar code) and directly receive the reflected light back from the indicia; 2) the limitation of claims 7, 8, 11, 13, and 14 requiring a lightweight, handheld scanner; 3) the limitation of claim 8 requiring the folding mirror and the collecting mirror to be of a one-piece construction; 4) the limitation of claims 7, 8, and 11 requiring the folding mirror to be positioned near the central area of the collecting mirror; and 5) the limitation of claims 13 and 14 requiring the folding mirror to be positioned adjacent the central area of the collecting mirror.⁷⁴²

(1) the “directly” limitation (claims 7, 8, 11, 13, 14, 17, 18)

Each of the asserted claims of the ‘889 patent includes a limitation requiring the scanning mirror to directly reflect the light from the folding mirror to the indicia (a.k.a. bar code) and directly receive the reflected light back from the indicia.⁷⁴³ There can be no question that the SS-100 fails to meet this limitation. As seen in the figure below, the SS-100 includes what is labeled as a “3rd mirror” located between the flipper mirror and the bar code that directs the light from the flipper mirror onto the symbol and directs the reflected light from the symbol back to the flipper mirror.⁷⁴⁴



⁷⁴² CIB 125-27.

⁷⁴³ See JX-3 (the ‘889 patent) at 24:3-26:37.

⁷⁴⁴ See RX-620 (SS-100) at SBL0196446; see also RPX-13 (SH-100); RIB 128.

Nevertheless, Metrologic argues that it would have been obvious to one of ordinary skill in the art at the time of the invention to remove the “3rd mirror” and reconfigure the scanner housing of the SS-100 so that the scanning mirror can directly reflect the light from the folding mirror to the indicia (a.k.a. bar code) and directly receive the reflected light back from the indicia.⁷⁴⁵

Specifically, Dr. Eastman testified on behalf of Metrologic that such changes would have been obvious in light of the MS131/MH132 products.⁷⁴⁶ According to Metrologic, the MS131/MH132 products were manufactured in two varieties, a “downport” model that allegedly used an intervening 3rd mirror to direct the light from the scanning mirror to the indicia and an “outport” model that allegedly did not include the intervening 3rd mirror thereby allowing the light from the scanning mirror to directly hit the indicia. Metrologic relies on the “outport” model in support of its obviousness argument. While Metrologic introduced into evidence two product brochures and a price list that show that the MS131/MH132 products came in both “downport” and “outport” varieties, the only evidence of record describing what was actually meant by “downport” and “outport” comes from the testimony of Metrologic’s own employee of over thirty years, Mr. Robert Blake.⁷⁴⁷

Mr. Blake’s testimony regarding the optical configuration of the MS131/MH132 “outport” models is entirely uncorroborated. Metrologic did not introduce into evidence any of the outport models of the MS131/MH132 products. Metrologic only introduced into evidence a model of the

⁷⁴⁵ RX-2C (Eastman Direct) at Q. 208; RRB 65 (“Clearly, the removal of the third mirror is an obvious variation”).

⁷⁴⁶ RX-2C (Eastman Direct) at Q. 208.

⁷⁴⁷ See RX-431 (Metrologic laser scanning heads and controller guide); RX-432 (MS131 laser head product guide); RX-438 (Metrologic domestic price list); RX-6C (Blake Direct) at Q. 33-61.

MH132 product that includes the intervening 3rd mirror.⁷⁴⁸ As Mr. Blake is a long-standing Metrologic employee with a clear financial interest in the outcome of this investigation, the need for corroboration in this instance is unquestionable. Under Federal Circuit precedent, Mr. Blake's testimony is insufficient to support a finding that the asserted claims of the '889 patent would have been obvious in light of the MS131/MH132 outport models.⁷⁴⁹

Regardless, Dr. Eastman provides no supportable explanation why one of ordinary skill in the art at the time of the invention would have been motivated to combine the SS-100 and the alleged MS131/MH132 "outport" models. "A showing of a suggestion, teaching or motivation to combine the prior art references is an 'essential evidentiary component of an obviousness holding.'"⁷⁵⁰ "This showing must be clear and particular, and broad conclusory statements about the teaching of multiple references, standing alone, are not 'evidence.'"⁷⁵¹ The entire basis for Dr. Eastman's combination is that the alleged MS131/MH132 "outport" models were available "some seven years before the filing of the '889 patent application."⁷⁵² According to Dr. Eastman:

Since the engineers at Metrologic designed both outport and downport versions of the MS132 products that were available commercially for sale in the 1984 timeframe, it was apparently obvious to someone in that organization, probably a person of ordinary skill in the art, that the 3rd mirror of the MS132 downport product could be removed to produce an outport product that scanned the laser beam directly across the bar code symbol without an intervening mirror between the scanning mirror and the and the [sic] bar code symbol.⁷⁵³

⁷⁴⁸ See RPX-9 (MH132).

⁷⁴⁹ See *Finnigan*, 180 F.3d at 1367-68 (quoting *Stevenson*, 612 F.2d at 550 ("Uncorroborated oral testimony of prior inventors or users with a demonstrated financial interest in the outcome of the litigation is insufficient to provide such proof.")).

⁷⁵⁰ *C.R. Bard*, 157 F.3d at 1352.

⁷⁵¹ *Dembiczak*, 175 F.3d at 1000.

⁷⁵² RX-2C (Eastman Direct) at Q. 208.

⁷⁵³ *Id.* at Q. 226.

Dr. Eastman's testimony is neither clear nor particular and fails to set forth any motivation to combine. Accordingly, the undersigned finds this testimony insufficient to support a finding of obviousness.

(2) the "central area" limitations (claims 7, 8, 11, 13, 14)

Claims 7, 8 and 11 include a limitation requiring a "folding mirror . . . positioned near the central area of the collecting mirror."⁷⁵⁴ Claims 13 and 14 include a limitation requiring a "folding mirror . . . positioned adjacent a central area thereof."⁷⁵⁵ These two limitations have been construed in the same fashion herein as requiring a folding mirror positioned close to the region at, in or near the center of the collecting mirror. Because both limitations have been construed the same, both limitations will be addressed together.

Metrologic appears to rely on an alleged admission by Symbol's expert Dr. Allais and the testimony of Mr. Shepard, one of the inventors of the '889 patent, in support of its argument that the SS-100 discloses a folding mirror positioned near/adjacent the central area of the collecting mirror.⁷⁵⁶ Metrologic's argument regarding the alleged admission by Dr. Allais is not persuasive. It appears based on Metrologic's post-hearing brief that at one point in time Dr. Allais testified that Symbol's SE950/955 products practiced all of the asserted claims of the '889 patent and that later Dr. Allais changed his position arguing that the SE950/955 products did not satisfy claims 7, 8, 11, 13 and 14.⁷⁵⁷ According to Metrologic, because the folding mirror of the SE950/955 products is positioned relative to the collecting mirror in the precise manner as the MS131/MH132 products, Dr. Allais

⁷⁵⁴ See JX-3 (the '889 patent) at col. 24:19-21.

⁷⁵⁵ See *id.* at col. 25:4-6.

⁷⁵⁶ See RIB 133 (chart).

⁷⁵⁷ *Id.* at 130-31.

must have changed his opinion regarding the SE950/955 products to avoid having the asserted claims of the '889 patent invalidated by the MS131/MH132 products.⁷⁵⁸ Seemingly, any possible inference to be drawn from Dr. Allais' alleged change of position would only be pertinent to the MS131/MH132 products. The undersigned fails to see how Dr. Allais' alleged change of position to avoid having the asserted claims of the '889 patent invalidated by the MS131/MH132 products proves anything regarding the SS-100 product. That leaves only the deposition testimony of Mr. Shepard in support of Metrologic's argument that the SS-100 product satisfies the "central area" limitations of claims 7, 8, 11, 13 and 14 of the '889 patent. When asked about the relationship between the first fold mirror and the collecting mirror, Mr. Shepard testified that the first fold mirror is positioned "near, near the center" of the curved collecting mirror.⁷⁵⁹

Symbol disputes Metrologic assertion that the SS-100 product discloses a folding mirror positioned near/adjacent a central area of the collecting mirror. To that end, Dr. Allais testified for Symbol that the SS-100 product does not disclose a folding mirror positioned near/adjacent a central area of the collecting mirror, because "there is a significant distance between the folding mirror and the collecting mirror."⁷⁶⁰ A visual inspection of the SS-100 product confirms Dr. Allais' opinion.⁷⁶¹

Determining whether a folding mirror is near/adjacent a central area of the collecting mirror depends on the position of the folding mirror in relation to the central area of the collecting mirror and the edge of the collecting mirror. As previously discussed, to satisfy the limitations requiring

⁷⁵⁸ *Id.* The undersigned notes that Metrologic provides no citation in support of its assertion that the position of the folding mirror in SE950/955 products relative to the collecting mirror is the same as that in the MS131/MH132 products.

⁷⁵⁹ RX-64C (Shepard Dep.) at 80-81.

⁷⁶⁰ CX-166C (Allais Rebuttal) at Q. 176-77.

⁷⁶¹ *See* RPX-13 (SS-100).

a folding mirror positioned near/adjacent a central area of the collecting mirror, the folding mirror must be positioned close to the region at, in or near the center of the collecting mirror. As between Mr. Blake and Dr. Allais, the undersigned finds Mr. Blake's testimony unpersuasive. Based on Dr. Allais' testimony, as confirmed by a visual inspection of the SS-100 product, the undersigned finds that Metrologic has failed to prove by clear and convincing evidence that the SS-100 discloses a folding mirror positioned near/adjacent a central area of the collecting mirror.

For at least the reasons discussed hereinabove, the undersigned finds that Metrologic has failed to prove by clear and convincing evidence that the SS-100 product renders the asserted claims of the '889 patent obvious either alone or in combination with the MS131/MH132 products.

5. Indefiniteness - 35 U.S.C. § 112

Metrologic argues that all of the asserted claims of the '889 patent are invalid under 35 U.S.C. § 112, ¶ 2 as vague and indefinite.⁷⁶² Specifically, Metrologic argues that the following limitations of the asserted independent claims are indefinite: 1) claim 7 - "near a central area;" 2) claim 13 - "adjacent a central area;" 3) claim 17 - "near a line intercepting the central area;" and 4) claim 18 - "in the light path in the central area."⁷⁶³

As discussed in detail during claim construction, the limitations "near a central area," "adjacent a central area," and "in the light path in the central area" are readily construed and therefore not indefinite. Also discussed in detail during claim construction is the limitation of claim 17 requiring a "folding mirror . . . mounted near a line intercepting the central area." The undersigned has found herein that this limitation is insolubly ambiguous and therefore indefinite.

⁷⁶² RIB 136-38.

⁷⁶³ *Id.*

Accordingly, the undersigned finds that claim 17 of the '889 patent is invalid pursuant to 35 U.S.C. § 112, ¶ 2.

VII. The '308 Patent

A. Claim Construction

1. Asserted Claims

The asserted claims read as follows (with the first instance of the disputed terms highlighted in *italics*):

2. A method for *combining decoded scan fragments* of a bar code symbol composed of a plurality of bar code elements representing an ordered sequence of characters, wherein the ordered sequence is delimited by a first *delimiting character* and a second delimiting character, and wherein the ordered sequence has a *predetermined length*, the method comprising the steps of:
 - scanning the symbol along a plurality of scan paths and decoding the scanned elements to obtain decoded sequences of characters;*
 - determining whether the decoded sequences of characters includes one of the first and second delimiting characters;*
 - repeating the scanning and determining steps until at least a first decoded sequence with the first delimiting character and a second decoded sequence with the second delimiting character are found;
 - comparing the predetermined length to lengths of the first and second decoded sequences of data characters; and*
 - based on the comparison, combining the first and second sequences to produce the ordered sequence of data characters by concatenating the first and second decoded sequences to produce the ordered sequence if the sum of the character lengths of the first and second sequences is equal to the predetermined length.*
10. A method for combining scan fragments of a bar code symbol composed of a plurality of bar code elements representing an ordered sequence of data characters, wherein the ordered sequence is delimited by a first delimiting character and a second delimiting character, and encodes a predetermined check value, the method comprising the steps of:

(A) scanning the symbol along a plurality of scan paths and decoding the scanned elements to obtain decoded sequences of characters;

(B) determining whether the decoded sequences of characters includes one of the first and second delimiting characters;

(C) repeating the scanning and determining steps until at least a first decoded sequence with the first delimiting character and a second decoded sequence with the second delimiting character are found, said first and second decoded sequences having respective lengths;

(D) independently of the respective lengths of the first and second decoded sequences, *combining the first and second sequences of data characters to form a test sequence of data characters*;

(E) determining a test check value for the test sequence;

(F) *comparing the test check value to the predetermined encoded check value; and*

(G) *in the event that the test check value is substantially equal to the predetermined check value, combining the first and second sequences of data characters to produce the ordered sequence of data characters.*

11. The method of claim 10, further comprising the step of:

in the event that the test check value is not substantially equal to the predetermined encoded check value, repeating the steps (A) through (G).

21. A method for combining decoded scan fragments of a bar code symbol composed of a plurality of bar code elements representing an ordered sequence of characters, wherein the ordered sequence is delimited by a first delimiting character and a second delimiting character, and wherein the ordered sequence has a predetermined length, the method comprising the steps of:

scanning the symbol along a plurality of scan paths and decoding the scanned elements to obtain decoded sequences of characters;

determining whether the decoded sequences of characters includes one of the first and second delimiting characters;

repeating the scanning and determining steps until at least a first decoded sequence with the first delimiting character and a second decoded sequence with the second delimiting character are found;

measuring the elapsed time between finding the first decoded sequence and finding the second decoded sequence;

comparing the elapsed time to a *predetermined acceptable elapsed time*, wherein in the event that the elapsed time is less than the predetermined acceptable elapsed time, performing the remaining steps of the method, and in the event that the elapsed time exceeds the predetermined acceptable time, repeating the scanning, determining, and repeating steps;

comparing the predetermined length to lengths of the first and second decoded sequences of data characters; and

based on the comparison, combining the first and second sequences to produce the ordered sequence of data characters.

2. Ordinary Skill in the Art

According to Symbol, a person of ordinary skill in the art is someone with a Bachelor's degree in computer science or equivalent education and some experience, including experience implementing algorithms in software, but not necessarily "bar code experience."⁷⁶⁴ According to Metrologic, a person of ordinary skill in the art is someone with a Bachelor's degree in electrical engineering or computer science with a year or more of experience in bar code symbologies and decoding and a least a few years of experience in algorithm implementation.⁷⁶⁵ Symbol opposes Metrologic's view that a person of ordinary skill in the art needs at least a year of experience in the bar code business.⁷⁶⁶ The undersigned finds that, for the '308 patent, a person of ordinary skill in

⁷⁶⁴ CIB 49-50; CRB 15 citing Spitz/Allais, Tr. 488-92. It should be noted that Symbol, while providing a definition of one of ordinary skill in the art, also asserted that the issue is of little relevance because Metrologic has withdrawn its anticipation and obviousness defenses. CIB 49. Metrologic disagrees and asserts that determining who is one of ordinary skill in the art is still necessary for purposes of construing the claims. RRB 33 citing *Phillips*, 415 F.3d at 1313; *Vitronics*, 90 F.3d at 1582. The undersigned agrees with Metrologic and finds that defining who one of ordinary skill in the art is necessary.

⁷⁶⁵ RIB 52 citing RX-3C (Chandler Direct) at Q. 123-24.

⁷⁶⁶ CIB 49.

the art does not necessarily have to have bar code experience. Therefore, a person of ordinary skill in the art is someone with a Bachelor's degree in electrical engineering, computer science, or equivalent education, with two years of experience implementing algorithms in software or bar code technology experience.

3. Disputed Claim Terms

a. All Asserted Claims (Claims 2, 10, 11, and 21)

(1) “Combining”

Symbol asserts that the claim term “combining” does not need to be construed because its ordinary meaning, *i.e.* “to come or bring into union; act or mix together; unite, join” should govern.⁷⁶⁷ Staff agrees.⁷⁶⁸ Metrologic asserts that the claim term should be construed as “uniting or joining two decoded sequences into a single sequence by either concatenating the sequences or combining overlapping portions of the sequences.”⁷⁶⁹

Metrologic asserts that the specification only discloses two specific types of “combining” scan fragments: (1) concatenating or (2) combining overlapping portions, which is consistent with its claim construction.⁷⁷⁰ Metrologic opposes Symbol’s claim construction because it does not “jive with the intrinsic definition of ‘combining’” because the two decoded sequences are not indiscriminately put or mixed together, but are united or brought together in a single sequence using the specific methods disclosed in the patent.⁷⁷¹ According to Metrologic, Glen Spitz, the inventor

⁷⁶⁷ CIB 42; CRB 16.

⁷⁶⁸ SIB 30 citing Webster’s New World College Dictionary (4th Ed.); SRB 8.

⁷⁶⁹ RIB 52.

⁷⁷⁰ RIB 53 citing RX-3C (Chandler Direct) at Q.126.

⁷⁷¹ RIB 54.

of the '308 patent agrees that the '308 patent covers a "very specific type of combining."⁷⁷²

Symbol opposes Metrologic's claim construction because claim 2 calls for concatenation, while claims 10 and 21 do not. Symbol asserts that construing "combining" to require concatenation is a violation of the principle of claim differentiation.⁷⁷³ Symbol and Staff⁷⁷⁴ both assert that Metrologic is improperly importing limitations from the specification into the claims. According to Symbol, all of the examples in the specification are based on Code 39 symbols, which is a symbology having specific rules that require concatenation for stitching.⁷⁷⁵

The undersigned agrees with Symbol and Staff that the term "combining" does not need to be construed because the applicant did not provide a special definition of the term within the specification. Therefore, the ordinary meaning of the term "combining" shall govern.

Accordingly, the phrase "**combining**" in claims 2, 10, 11, and 21 is construed to mean: "**mixing together, uniting or joining.**"

(2) "Decoded"

Symbol asserts that the claim term "decoded" occurs separately from "combining," which was construed above.⁷⁷⁶ Metrologic asserts that the claim term should be construed to mean "the message or values encoded in the bars and spaces has been extracted."⁷⁷⁷ Staff does not take a position on this claim term, other than in the context of the claim term "decoded sequences of

⁷⁷² RIB 54 citing CX-114C (Spitz Direct) at Q. 28.

⁷⁷³ CIB 42; CRB 16-17.

⁷⁷⁴ SRB 8.

⁷⁷⁵ CRB 17-18.

⁷⁷⁶ CRB 19.

⁷⁷⁷ RIB 56.

characters,” which is discussed below.⁷⁷⁸

Metrologic asserts that the specification and prosecution history do not provide a specific definition for the word “decode” or “decoded,” but that the specification does define “encode” as a specific arrangement of elements according to a set of rules and definitions.⁷⁷⁹ According to Metrologic, because “decode” is the opposite of “encode,” “decode” should be defined as extracting the message encoded in the bars and spaces.⁷⁸⁰ Symbol opposes Metrologics’ claim construction. Symbol asserts that, if “decoding” means “extracting and recovering a message,” then the combining step would have no meaning in the patent.⁷⁸¹

The undersigned does not find Metrologic’s arguments persuasive. While “decode” may well be considered the opposite of “encode,” there is no support for Metrologic’s claim construction within the specification. The undersigned agrees with Symbol that the process of decoding is separate from the process of combining.

Accordingly, the phrase “**decoded**” in claims 2, 10, 11, and 21 is construed to mean “**the process of converting data characters from bars and spaces into values**” and is not construed to mean that the complete message has been extracted.

(3) “Scan fragment”

Symbol asserts that the claim term “scan fragment” should be construed as “a scan that reads less than all of a bar code symbol.”⁷⁸² Staff agrees with Symbol’s claim construction.⁷⁸³ Metrologic

⁷⁷⁸ SIB 33.

⁷⁷⁹ RIB 56 citing JX-2 (the ‘308 patent) at col. 1:27-28.

⁷⁸⁰ RIB 56-57.

⁷⁸¹ CRB 19.

⁷⁸² CIB 41; CRB 18.

⁷⁸³ SIB 31; SRB 8.

asserts that the claim term should be construed as “a scan that does not cross an entire row of a bar code symbol.”⁷⁸⁴

According to Symbol, whenever a scan line passes through less than all of the symbol, the scan line is referred to as a “partial scan” or “scan fragment” in the ‘308 patent.⁷⁸⁵ Symbol asserts that the specification clearly defines a scan fragment as less than the bar code symbol, with no reference to rows. For example, the patent states that a “scan line or series of scan lines may not always entirely cross the bar code symbol,” and that in some cases “the bar code cannot be completely read with a single scan line.”⁷⁸⁶

According to Metrologic, in the context of the claim, “scan fragments” are “discarded scans.”⁷⁸⁷ Metrologic notes that, in the context of a single-row bar code symbol, there is no disagreement between the parties that a scan fragment is a scan line that does not entirely cross the bar code symbol.⁷⁸⁸ Rather, the disagreement lies with multi-row bar codes. According to Metrologic, multi-row bar codes, such as Code 16K and Code 49,⁷⁸⁹ existed at the time the ‘308 patent was filed; therefore a proper construction of the term “scan fragment” should take these multi-row bar code symbologies into account. In Metrologic’s view, multi-row bar codes were intended to be read line by line; therefore a single scan line cannot read the entire bar code symbol and a scan of a full row of a multi-row bar code symbol was not “discarded” and therefore cannot be considered

⁷⁸⁴ RIB 55.

⁷⁸⁵ CIB 41 citing JX-2 (the ‘308 patent) at col. 1:60-61; CX-112C (Payne Direct) at Q. 247; Payne, Tr. 538.

⁷⁸⁶ CRB 18 citing JX-2 (the ‘308 patent) at col. 1:60-61, 3:59-67.

⁷⁸⁷ RIB 55.

⁷⁸⁸ RIB 55 citing RX-3C (Chandler Direct) at Q. 127.

⁷⁸⁹ See JX-197 (THE BAR CODE BOOK) at 48-53.

a “scan fragment.”⁷⁹⁰

Symbol opposes Metrologic’s claim construction as not being supported by the specification because the specification does not define a scan fragment in terms of rows, but in terms of a symbol.⁷⁹¹ Symbol also points to the Broockman ‘818 patent, which refers to scan fragments that were not discarded, a point conceded by Metrologic’s expert, Mr. Chandler.⁷⁹²

Staff asserts that the fact that the patent does not provide an example of a multi-row bar code does not limit the term “scan fragment” and that the scan of only the top row of a multi-row bar code is still a scan of less than the entire bar code, thereby meeting the “scan fragment” limitation.⁷⁹³ Staff asserts that Metrologic is improperly attempting to import limitations from the specification into the claims.⁷⁹⁴

The undersigned finds merit with each parties’ arguments, but does not adopt any one party’s claim construction. While the patent states that a “scan line or series of scan lines may not always entirely cross the bar code symbol,” supporting Symbol’s and Staff’s claim constructions, the same paragraph in the patent states that “[t]hese incomplete scan lines, called fragments, were discarded until techniques were developed to stitch or combine the fragments together, so that the decoding process can be completed,” supporting Metrologic’s claim construction.⁷⁹⁵ The undersigned agrees with Symbol and Staff that the patent does not define “scan fragment” in the context of rows, therefore, the claim should not be construed in such terms. The undersigned also agrees, however,

⁷⁹⁰ RIB 55.

⁷⁹¹ CIB 42.

⁷⁹² CIB 42 citing Chandler, Tr. 1394-96 [CPFF 3.320-21].

⁷⁹³ SIB 31.

⁷⁹⁴ SRB 8.

⁷⁹⁵ JX-2 (the ‘308 patent) at col. 1:60-2:2.

that in the context of multi-row bar codes, a single scan line of a multi-row bar code symbol that is not otherwise “discarded” is not considered a “scan fragment.”

Accordingly, the phrase “**scan fragment**” in claims 2, 10, 11, and 21 is construed to mean: **“a scan that reads less than all of a bar code symbol that would otherwise be discarded.”**

(4) “Delimiting character”

Symbol asserts that the claim term “delimiting character” serves “to separate data characters and to mark the location of data characters.” According to Symbol, delimiting characters can appear at the beginning or end of a bar code symbol, or in an intermediate position, such as the center of a bar code symbol.⁷⁹⁶ Metrologic asserts that the claim term should be construed as “a character that bounds or fixes the limits of a sequence of characters, such as a bar code symbol or block of a bar code symbol.” According to Metrologic, in the ‘308 patent, delimiting characters appear only at the beginning or end of a sequence of characters, *i.e.* a block or bar code symbol.⁷⁹⁷ Staff asserts that the claim term should be construed by its ordinary meaning in the art, which is “information encoded in or decoded from a set of bar code elements that is used to provide substantive information about the bar code and the bar code data characters.”⁷⁹⁸

According to Symbol, the prosecution history supports its claim construction because the Examiner interpreted the claim term to include the center character in a UPC symbol, which is consistent with U.S. Patent No. 4,717,818 (“the Broockman ‘818 patent”), which was cited prior art.⁷⁹⁹ Symbol also asserts that its claim construction is consistent with the common and ordinary

⁷⁹⁶ CIB 38; CRB 19.

⁷⁹⁷ RIB 57.

⁷⁹⁸ SIB 31; SRB 8.

⁷⁹⁹ CIB 38-39; CRB 20; citing JX-10 (the ‘308 prosecution history) at 191488; JX-156 (the
(continued...)

meaning of the term “delimiter.” Symbol asserts that the only formal definition of “delimiter” in the bar code literature is found in the standard text on bar codes which defines “delimiter” as “an item of lexical information whose form or position in a format or program denotes the boundary between adjacent syntactic components of the format or program.”⁸⁰⁰ Likewise, Symbol points to the general dictionary definition of “delimiter” as “a letter, symbol, etc. used to set off one string of characters or item of data from another.”⁸⁰¹

Staff does not agree with Symbol that the delimiting character must “separate” data characters.⁸⁰² According to Staff, it does not matter where a delimiting character is located in the bar code as long as it provides additional information to the bar code reader about how to read the bar code.⁸⁰³

According to Metrologic, a “delimiting character” in the claims is explicitly defined by its relation to an “ordered sequence of characters,” and that the “ordered sequence of characters” in the preamble is “delimited by a first delimiting character and a second delimiting character,” which means that the delimiting characters are at the beginning and end of the ordered sequence of characters.⁸⁰⁴ In support, Metrologic cites to the “Summary of the Invention” section, which states that “an ordered sequence of data characters [is] delimited by a “start” character on one end and a “stop” character on the other.”⁸⁰⁵ Metrologic also cites to various sections of the specification

⁷⁹⁹(...continued)

Broockman ‘818 patent).

⁸⁰⁰ CIB 39 citing CDX-056.

⁸⁰¹ CIB 39 citing CX-143.

⁸⁰² SIB 32.

⁸⁰³ SIB 32.

⁸⁰⁴ RIB 57.

⁸⁰⁵ RIB 57 citing JX-2 (the ‘308 patent) at col. 2:35-37.

which refer to delimiting characters as start or stop characters.⁸⁰⁶ Metrologic also asserts that the prosecution history, particularly the Examiner's reference to the Broockman '818 patent, supports its position.⁸⁰⁷ According to Metrologic, the applicant used the more generic term "delimiting character," rather than the more narrow terms "start character" and "stop character" because the applicant needed a word that would capture both types of beginning and end characters, but not be limited to the scanning direction.⁸⁰⁸ Metrologic also asserts that its claim construction is consistent with the dictionary definition of "delimit" which is defined as "to fix the limits of; mark the boundaries of."⁸⁰⁹

Symbol disagrees with Metrologic's claim construction because it improperly imports limitations from the specification into the claims.⁸¹⁰ According to the Symbol, if the applicant intended to limit the scope of the claim to "start character" and "stop character," such terms would have been used instead of "first delimiting character" and "second delimiting character." Symbol asserts that the applicant used the term "delimiting character" because they wanted a broader scope than "start character" and "stop character."⁸¹¹ Symbol also objects to Metrologic's claim construction because there is no evidence to support the concept of "block decoding."⁸¹²

Staff does not agree with Metrologic that the delimiting character must only appear at the

⁸⁰⁶ RIB 58 citing JX-2 (the '308 patent) at col. 4:1-4, 41-42, 5:26-32.

⁸⁰⁷ RIB 58-59 citing JX-10 (the '308 prosecution history) at MITC191488, JX-156 (the Broockman '818 patent).

⁸⁰⁸ RIB 59.

⁸⁰⁹ RIB 59 citing CX-143 at 382.

⁸¹⁰ CIB 40.

⁸¹¹ CRB 19-20.

⁸¹² CIB 41; CRB 20-21.

beginning or end of a sequence of characters.⁸¹³ According to Staff, adopting Metrologic's claim construction would contradict the UPC example, which has three delimiting characters.⁸¹⁴ Staff asserts that Metrologic is once again trying to import limitation from the specification into the claims.⁸¹⁵

The undersigned finds Staff's claim construction to most accurately reflect the meaning of the term "delimiting character." Symbol's claim construction is generally descriptive, but adds a limitation that the delimiting character "separate" data characters that is not part of the claim. Likewise, Metrologic's claim construction is too narrow, limiting a delimiting character to "start" and "stop" characters, which improperly imports limitations from the specification into the claims. While the specification does state that the "bar code symbol is composed of bar code elements which represent an ordered sequence of characters delimited by a 'start' character on one end and a 'stop' character on the other,"⁸¹⁶ the fact that the claims specifically use a different term for delimiting character, *i.e.* first delimiting character and a second delimiting character, emphasizes that the applicant intended to cover a broader scope than "start" and "stop" characters, otherwise, those terms would have been used in the claim. The law is clear that "[s]pecifications teach. Claims claim."⁸¹⁷

In addition, adopting Metrologic's claim construction would not be consistent with the Examiner's interpretation of the claim term, as the Examiner interpreted the claim term to include

⁸¹³ SIB 32; SRB 8.

⁸¹⁴ SIB 32.

⁸¹⁵ SRB 8.

⁸¹⁶ JX-2 (the '308 patent) at col. 2:34-37.

⁸¹⁷ *SRI Int'l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1121 (Fed. Cir. 1985) ("*SRI Int'l*").

the center character in a UPC symbol, which is neither the “stop” or “start” character.⁸¹⁸ Furthermore, there is no support for Metrologic’s argument regarding UPC “block decoding,” as the ‘308 patent specifically refers to the UPC symbology as including a start, stop, and center character, rather than referring to the center character as the beginning or end of a block.⁸¹⁹

Accordingly, the phrase “**delimiting character**” in claims 2, 10, 11, and 21 is construed to mean: “**information encoded in or decoded from a set of bar code elements that is used to provide substantive information about the bar code and the bar code data characters.**”

(5) **“Scanning the symbol along a plurality of scan paths and decoding the scanned elements to obtain decoded sequences of characters”**

Symbol asserts that the claim term “scanning the symbol along a plurality of scan paths and decoding the scanned elements to obtain decoded sequences of characters” should be construed to include scanning and decoding more than twice in order to obtain two decoded sequences.⁸²⁰ Metrologic asserts that the claim term should be construed as requiring the two steps of scanning and decoding: (1) in the scanning step, several scans are made of the bar code symbol, (2) in the decoding step, the decoder searches the scanned elements (bars and spaces) and decodes groups of elements traversed by these scans into characters. According to Metrologic, the result after the two steps is one decoded sequence of characters from each of the scans.⁸²¹ Staff does not assert a claim construction for this claim term, other than the claim construction proposed below for the claim term “decoded sequences of characters.”

⁸¹⁸ JX-10 (the ‘308 prosecution history) at 191488.

⁸¹⁹ See JX-2 (the ‘308 patent) at col. 2:3-10.

⁸²⁰ CRB 21.

⁸²¹ RIB 60.

According to Symbol, Metrologic's claim construction requires a "one-to-one correspondence between each scan fragment and each decoded sequence." Symbol asserts that Metrologic's claim construction is contradicted by the claim language itself. For instance, claim 2 specifically refers to a plurality of scan paths to obtain decoded sequences of characters.⁸²²

Metrologic asserts that the scanning and decoding paragraphs is made of two distinct steps, including scanning and decoding. According to Metrologic, the scanning step is straightforward where the scanner scans the bar code symbol along several scan lines, some of which may go all the way through a symbol, and some that do not. As to the decoding step, Metrologic asserts that at the time of the '308 patent, all of the symbologies mentioned in the '308 patent, *i.e.* UPC, Codabar, Interleaved 2 of 5, Code 128, and Code 39, had a one-to-one correspondence between a group of bar code characters and a look-up table printed in the symbology's specification.⁸²³

The undersigned finds that there is no dispute between the parties that "plurality" refers to "more than two." Based on the claim language, which includes the term "plurality of scan paths," and the ordinary meaning of the term "plurality," the undersigned does not find either Symbol's or Metrologic's claim construction to be persuasive. The claim term only refers to a plurality of scan paths, with no mention of the number of times decoding takes place, therefore, there is neither two decoded sequences, as proposed by Symbol, nor a one-to-one, correspondence between each scan fragment and each decoded sequence, as proposed by Metrologic.

Accordingly, the phrase **"scanning the symbol along a plurality of scan paths and decoding the scanned elements to obtain decoded sequences of characters"** in claims 2, 10, 11,

⁸²² CRB 21 citing Chandler, Tr. 1439-40 [CFF 3.417-18].

⁸²³ RIB 60-61 citing JX-2 (the '308 patent) at col. 3:56-58; JX-197 (THE BAR CODE BOOK) at 28.

and 21 is construed to mean: **“scanning a symbol more than twice and decoding the previously scanned elements in order to obtain decoded sequences of characters.”**

(6) “Decoded sequences of characters”

Symbol asserts that the claim term “decoded sequences of characters” should be construed to allow “two decoded sequences to be constructed from more than two scans.”⁸²⁴ Metrologic discusses this claim term in connection with its discussion of the claim term “scanning the symbol along a plurality of scan paths and decoding the scanned elements to obtain decoded sequences of characters,” discussed above. According to Metrologic, the decoded sequence of characters can contain either zero, one, or two delimiting characters.⁸²⁵

As already noted above with reference to the claim term “scanning the symbol along a plurality of scan paths and decoding the scanned elements to obtain decoded sequences of characters,” according to Symbol, Metrologic’s claim construction requires a “one-to-one correspondence between each scan fragment and each decoded sequence.” Symbol asserts that Metrologic’s claim construction is contradicted by the claim language itself. In particular, Symbol asserts that if claim 2 required a one-to-one correspondence between scan paths and decoded sequences, the claim language would have read “two scan paths” rather than “a plurality of scan paths.”⁸²⁶

Staff asserts that the claim term should be construed as “the character information obtained as a result of the initial scanning process.”⁸²⁷ Symbol agrees, stating that the Staff’s claim

⁸²⁴ CIB 49; CRB 22.

⁸²⁵ RIB 60-61.

⁸²⁶ CIB 48-49 citing JX-2 (the ‘308 patent) at col. 7:4-9.

⁸²⁷ SIB 33.

construction makes clear that this claim term does not refer to the completion of reassembling the encoded message.⁸²⁸ Metrologic opposes Staff’s claim construction as being overly broad and being unsupported by the specification, which makes no reference to an “initial scanning process.”⁸²⁹ Symbol counters, stating that the patent makes clear that decoding is separate from combining.⁸³⁰

Unlike the undersigned’s construction for the previous claim term “scanning the symbol along a plurality of scan paths and decoding the scanned elements to obtain decoded sequences of characters,” the undersigned finds that this claim term, by itself, does not make any reference to a ratio between the scan fragments and decoded sequences. While Metrologic may assert that the Staff’s claim construction is overly broad, the undersigned finds that the Staff’s claim construction most closely represents the meaning of the claim term.

Accordingly, the phrase “**decoded sequences of characters**” in claims 2, 10, 11, and 21 is construed to mean: “**the character information obtained as a result of the initial scanning process.**”

(7) **“Determining whether the decoded sequences of characters includes one of the first and second delimiting characters”**

Symbol asserts that the claim term “determining whether the decoded sequences of characters includes one of the first and second delimiting characters” should be construed to mean that “the presence of a delimiting character is determined for the sequence before the data characters are decoded.”⁸³¹ Metrologic asserts that the claim term should be construed as “taking the decoded

⁸²⁸ CRB 22.

⁸²⁹ RIB 61.

⁸³⁰ CRB 22.

⁸³¹ CIB 47-48; CRB 22.

sequences of characters from the scanning and decoding paragraph and determining for each sequence of decoded characters whether that sequence includes a beginning or end character.” In addition, Metrologic asserts that the “result of this step is to remove those scans that have zero delimiting characters and retain those that have one or two delimiting characters.”⁸³² Staff asserts that the claim term should be construed as “requiring a step that determines whether a delimiting character was found.”⁸³³

The difference between Symbol’s and Metrologic’s claim construction is when the data characters in a sequence are decoded. According to Metrologic’s claim construction, the claim term requires the data characters in a sequence to be decoded before the presence of a delimiting characters in the sequence is determined. According to Symbol’s claim construction, the presence of a delimiting character is determined for the sequence before the data characters are decoded, which is shown by Figure 7 of the ‘308 patent.⁸³⁴ Symbol asserts that if Metrologic’s claim construction is adopted, it would improperly exclude the preferred embodiment, which is “rarely, if ever, correct.”⁸³⁵ Metrologic counters Symbol’s argument regarding the preferred embodiment by referring to the summary of the invention, which states

In general the invention features combining two decoded scan fragments of a bar code symbol using a character level technique. The bar code symbol is composed of bar code elements which represent an ordered sequence of data characters delimited by a “start” character on one end and a “stop” character on the other. The bar code is scanned and the fragments are decoded until a fragment with the “start”

⁸³² RIB 61.

⁸³³ SIB 33.

⁸³⁴ CIB 47-48 citing JX-2 (the ‘308 patent) at col. 5:25-34, Fig. 7; CX-112C (Payne Direct) at Q.234-37 [CFF 3.431-433].

⁸³⁵ CIB 47 citing *Vitronics*, 90 F.3d at 1583.

character and another with the “stop” character are found.⁸³⁶

Staff disagrees with Metrologic’s claim construction because it inserts an unnecessary limitation, *i.e.* whether a stop/start character is found, that is not found in the claim language or is justified by the specification.⁸³⁷

The undersigned does not find all of Metrologic’s arguments persuasive because they include a reference to beginning and end characters, which is not supported by the claim language, as already stated above in reference to the claim term “delimiting character.” The undersigned also does find Metrologic’s claim construction persuasive regarding when the determination of the presence of a delimiting characters is made.

While looking at this claim term by itself, there is no reference to when the decoding of data characters should take place because the “decoding” step is not at issue with regard to this claim term, which is consistent with the claim construction proposed by Staff. Analyzing the “scanning and decoding” and “determining” paragraphs together, however, shows that the data characters in a sequence are decoded before the presence of a delimiting character in the sequence is determined.

The two steps read as follows:

scanning the symbol along a plurality of scan paths and decoding the scanned elements to obtain *decoded sequences of characters*;

determining whether the *decoded sequences of characters* includes one of the first and second delimiting characters

The “determining” step specifically refers to “the decoded sequences of characters.” The previous “scanning and decoding” step references how “to obtain” a decoded sequences of characters.

⁸³⁶ RIB 62 citing JX-2 (the ‘308 patent) at col.2:35-39.

⁸³⁷ SIB 33.

Therefore, it follows that “the decoded sequences of characters” referred to in the “determining” step is obtained from the previous “scanning and decoding” step and that decoding should take place before determining the presence of delimiting characters.

The undersigned acknowledges that Symbol’s claim construction is consistent with the specification and algorithm in Figure 7 and that this claim construction could be considered to exclude the preferred embodiment. Metrologic, however, has made a reference to a more general description of the invention in the summary of the invention section, which is consistent with the adopted claim construction.⁸³⁸ The Federal Circuit has stated that, while a claim construction that excludes the preferred embodiment is rarely, if ever correct, that in rare cases such interpretation is compelled “in light of the prosecution history and the unambiguous language of the amended claim.”⁸³⁹ Therefore, in light of the description in the summary of the invention section and the unambiguous language of the claim, the undersigned finds that Metrologic’s claim construction most accurately reflects the meaning of this claim term.

Accordingly, the phrase “**determining whether the decoded sequences of characters includes one of the first and second delimiting characters**” in claims 2, 10, 11, and 21 is construed to mean: “**taking the decoded sequences of characters obtained from the scanning and decoding step and determining whether the decoded sequences of characters includes a delimiting character.**”

(8) “Data characters”

Symbol does not assert a specific claim construction for “data characters” other than the

⁸³⁸ JX-2 (the ‘308 patent) at col.2:35-39.

⁸³⁹ *Elekta*, 214 F.3d at 1308.

construction for “ordered sequence of data characters,” which is discussed below.⁸⁴⁰ Metrologic asserts that the claim term should be construed as “a group of bar and space elements that has a value according to a symbology.”⁸⁴¹ Staff asserts that the claim term should be construed as “alphanumeric information encoded into or decoded from a set of bar code elements in a bar code symbol.”⁸⁴² There does not appear to be much dispute between the parties regarding the construction of this term.

Accordingly, the phrase “**data characters**” in claims 2, 10, 11, and 21 is construed to mean: **“a group of bar and space elements that has a value according to a symbology.”**

(9) “Ordered sequence of data characters”

Symbol asserts that the claim term “ordered sequence of data characters” should be construed as “the set of data characters in a bar code symbol, generally not including delimiting characters.”⁸⁴³ Metrologic asserts that the claim term should be construed as “the group of characters between the first delimiting character and the second delimiting character.”⁸⁴⁴ Staff asserts that the claim term should be construed to mean “a sequence of bar code data characters.”⁸⁴⁵

Symbol asserts that this claim term refers to a set of data characters in a bar code symbol, generally not including delimiting characters. In support, Symbol points to the prosecution history where the Examiner states that the “ordered sequence” being produced was “i.e., the data of the bar

⁸⁴⁰ CRB 23.

⁸⁴¹ RIB 63.

⁸⁴² SIB 33.

⁸⁴³ CIB 45; CRB 23.

⁸⁴⁴ RIB 63.

⁸⁴⁵ SIB 33.

code being read.”⁸⁴⁶

Metrologic asserts that “ordered sequence of characters” and “delimiting characters” are intertwined; therefore, the ordered sequence of characters is defined by the characters between the delimiting characters. Metrologic also asserts that, in claims 2 and 21, “the ordered sequence of data characters” in the last paragraph of both claims has no antecedent basis because the preamble of both claims refer to an “ordered sequence of characters,” not an “ordered sequence of data characters.”⁸⁴⁷ In response, Symbol asserts that the “ordered sequence of characters” in the preamble is the antecedent for the “ordered sequence of data characters” in the final steps of claims 2 and 21.⁸⁴⁸ Both Symbol and Staff disagree with Metrologic’s claim construction because it inserts unnecessary limitations into the claim, *i.e.* requiring a stop and start character.⁸⁴⁹ According to the Symbol, Metrologic is attempting to read figure 5 into the claims.⁸⁵⁰

The undersigned finds Symbol and Staff’s arguments persuasive and finds that the claim term does not require the data characters to be in between a first and second delimiting character, or in between start and stop characters. As to Metrologic’s argument that there is no proper antecedent basis for “ordered sequence of data characters,” the undersigned agrees that the proper antecedent basis is “ordered sequence of characters” found in the preamble. The undersigned is not correcting or rewriting the claim language, which is prohibited.⁸⁵¹ Rather, the undersigned is

⁸⁴⁶ CIB 45 citing JX-10 (the ‘308 prosecution history) at 191490.

⁸⁴⁷ RIB 63-64.

⁸⁴⁸ CRB 23.

⁸⁴⁹ CIB 45; CRB 23; SIB 33.

⁸⁵⁰ CRB 23.

⁸⁵¹ *Chef America, Inc. v. Lamb-Weston, Inc.*, 358 F.3d 1371 (Fed. Cir. 2004) (“*Chef America*”).

interpreting the claim language consistent with the applicant's intention.⁸⁵²

Accordingly, the phrase “**ordered sequence of data characters**” in claims 2, 10, 11, and 21 is construed to mean: “**the set of data characters in a bar code symbol, but not necessarily in between delimiting characters.**”

b. Claim 2

(1) “Concatenating”

Symbol asserts that the claim term “concatenating” should be construed as its ordinary meaning, or “to link together or join, as in a chain.”⁸⁵³ Metrologic asserts that the claim term should be construed as “based on the results of comparing the predetermined length to the lengths of each of the decoded sequences, if the sum of the lengths of the two decoded sequences equals the predetermined length, combine the two sequences by appending or joining together the two sequences, including the delimiting characters, and then produce the single ordered sequences of data characters.”⁸⁵⁴ Staff asserts that the claim term should be construed to mean “linking together data.”⁸⁵⁵

Symbol asserts that the claim term “concatenating” does not need to be construed because it its ordinary meaning, *i.e.* “to link together or join, as in a chain” should govern.⁸⁵⁶ Staff agrees.⁸⁵⁷

⁸⁵² In construing claims and in assessing whether those claims are indefinite, tribunals may not rewrite them. *Certain Zero-Mercury-Added Alkaline Batteries*, Inv. No. 337-TA-493, Commission Opinion (November 10, 2004) (“*Certain Batteries*”). The Federal Circuit has repeatedly and consistently stated that “courts may not redraft claims, whether to make them operable or to sustain their validity.” *Chef America*, 358 F.3d at 1372.

⁸⁵³ CIB 43; CRB 23.

⁸⁵⁴ RIB 64.

⁸⁵⁵ SIB 33.

⁸⁵⁶ CIB 43.

⁸⁵⁷ SIB 33.

Specifically, Symbol asserts that several forms of concatenation are available to combine data items and that concatenation merely requires that the data items be linked together so that they maintain an ordered sequence and not move out of sequence.⁸⁵⁸

Metrologic asserts that concatenation requires decoding scan fragment sequences that include a delimiting character, and making sure that at least one of the decoded scan fragment sequence has a first delimiting character and another decoded scan fragment sequence has a different delimiting character, which are then combined to produce a single decoded message of the bar code symbol after the start and stop characters are dropped.⁸⁵⁹ According to Metrologic, a proper reading of the patent indicates that delimiting characters are included in the combining step.⁸⁶⁰

Both Symbol and Staff disagree with Metrologic's claim construction because it interjects unnecessary limitations, *i.e.* requiring that the delimiting characters be concatenated, and they argue this assertion is not supported by the claims or specification.⁸⁶¹ According to the Symbol, Metrologic is limiting the claim to a Code 39 symbol. Symbol also asserts that the claim term does not require overlap, or elimination of overlap.⁸⁶² According to Staff, persons of ordinary skill in the art would know that the delimiting characters are not combined with the regular data characters.⁸⁶³

The undersigned agrees with Symbol and Staff that the term "concatenating" does not need to be construed and that the ordinary meaning of the term "concatenating" shall govern. Adopting

⁸⁵⁸ CIB 43 citing CX-112C (Payne Direct) at Q. 201-03; CX-113C (Schuessler Direct) at Q. 181-85.

⁸⁵⁹ RIB 64-66.

⁸⁶⁰ RIB 65 citing RX-3C (Chandler Direct) at Q. 148, 223.

⁸⁶¹ CRB 23-24; SIB 33-34.

⁸⁶² CRB 23-24.

⁸⁶³ SIB 33-34.

Metrologic's claim construction would improperly import limitations from the specification into the claim.

Accordingly, the phrase "**concatenating**" in claim 2 is construed to mean: "**linking or joining together in a chain.**"

- (2) **"Combining the first and second sequences . . . if the sum of the character lengths of the first and second sequences is equal to the predetermined length"**

Symbol asserts that the claim term "combining the first and second sequences . . . if the sum of the character lengths of the first and second sequences is equal to the predetermined length" should be construed as requiring only one comparing step.⁸⁶⁴ Metrologic asserts that the claim term should be construed to require three comparing steps, where the combining in this step (concatenating) is only performed if the third comparison is successful.⁸⁶⁵ Staff does not propose a claim construction for this term, other than its claim construction proposed for the claim term "predetermined length," discussed below.

Metrologic asserts that, while similar claim language appears in claims 2 and 21 (*i.e.* comparing the predetermined length to lengths of the first and second decoded sequences of data characters), the difference between the two claims lies in the third comparison step required by claim 2. According to Metrologic, both claims 2 and 21 require the two steps of: (1) comparing the predetermined length to the length of the first decoded sequence of data characters (illustrated by step 103 in Figure 6 of the '308 patent), and (2) comparing the predetermined length to the length of the second decoded sequence of data characters (illustrated by step 106 in Figure 6 of the '308

⁸⁶⁴ CRB 25.

⁸⁶⁵ RIB 66.

patent).⁸⁶⁶ Metrologic asserts that claim 2 requires an additional third step or “repeating” step (illustrated by step 108 in Figure 6 of the ‘308 patent), the result of which is to choose two decoded sequences, one having a first delimiting character and one having a second delimiting character.⁸⁶⁷ Furthermore, Metrologic asserts that claim 1, which is not at issue, but contains similar claim language, only requires 1 comparison step, illustrated by step 108 in Figure 6 of the ‘308 patent.⁸⁶⁸

According to Symbol, Metrologic asserts that this claim term is governed by Figure 6 in the ‘308 patent, which has at least four comparison steps, shown by steps 103, 106, 108 and 114. Symbol asserts, however, that there is only one comparing step called out in claim 2, as explained by Dr. Payne during his trial testimony:

Q. Can we have the Figure 6 put up next to the text of Claim 2? We'll have Figure 6 up there. Now, how many comparison steps are shown in that flowchart?

A. At least four, four.

Q. Where are they?

A. 103, 106, 108, and 114.

Q. And 114, okay. Now, would you blow up Claim 2 again, please? Dr. Payne, how many comparison steps are claimed in Claim 2?

A. One.

Q. Now, go back to Figure 6, please. I think Mr. Mondolino asked you about leaving out boxes that are in Figure 6, but not in Claim 2. Remember that questioning?

A. Yes.

⁸⁶⁶ RIB 66 citing JX-2 (the ‘308 patent) at Fig. 6; RX-3C (Chandler Direct) at Q. 150-55; RDX-87.

⁸⁶⁷ RIB 66-67 citing JX-2 (the ‘308 patent) at Fig. 6; RX-3C (Chandler Direct) at Q. 150-55; RDX-87.

⁸⁶⁸ RIB 67 citing JX-2 (the ‘308 patent) at col. 6:57-59.

Q. How many other boxes in Figure 6 are not in Claim 2?

A. 112, 114, and 116.

Q. So there are at least five boxes in Figure 6 that aren't in Claim 2, is that right?

A. That's correct.⁸⁶⁹

The undersigned finds Symbol's arguments persuasive. The claim language itself refers to comparing **the sum** of the character lengths of the first and second sequences, which is illustrated by step 108 in Figure 6 of the '308 patent. While there are additional comparison steps shown in the flowchart algorithm in Figure 6, namely steps 103 and 106, the claim does not specifically mention these additional comparison steps. Therefore, adopting Metrologic's claim construction would improperly import limitations from the specification into the claims.

Accordingly, the phrase **"combining the first and second sequences . . . if the sum of the character lengths of the first and second sequences is equal to the predetermined length"** in claim 2 is construed to require one comparison step.

c. Claims 2 and 21

(1) "Predetermined length"

Symbol asserts that the claim term "predetermined length" has nothing to do with start and stop characters and does not include delimiting characters.⁸⁷⁰ Metrologic asserts that the term should be construed as "the ordered sequence has an expected or required number of data characters that are encoded in the bar code symbol between the first and second delimiting characters."⁸⁷¹ Staff asserts that the claim term should be construed to refer to "the number of data characters in a bar

⁸⁶⁹ CRB 25 citing Payne, Tr. 636 (3-24).

⁸⁷⁰ CRB 26.

⁸⁷¹ RIB 67.

code symbology.”⁸⁷²

Metrologic asserts that the predetermined length is the number of data characters between two delimiting characters. For example, in Figs. 4(a)-4(c) in the ‘308 patent, the predetermined length is 10.⁸⁷³ Symbol disagrees with Metrologic’s claim construction because it refers to start and stop characters.⁸⁷⁴ Staff also disagrees with Metrologic’s claim construction because it inserts unnecessary limitations, *i.e.* suggesting that the delimiting characters must be at the start and finish of a bar code, which are not supported by the claims or specification.⁸⁷⁵

The undersigned finds that Staff’s construction most closely reflects the meaning of the claim term. Adopting Metrologic’s claim construction would improperly import limitations from the specification into the claim.

Accordingly, the phrase “**predetermined length**” in claims 2 and 21 is construed to mean: **“a particular number of data characters in a bar code symbology that has been determined beforehand.”**

(2) **“Comparing the predetermined length to lengths of the first and second decoded sequences of data characters”**

Symbol asserts that the claim term “comparing the predetermined length to lengths of the first and second decoded sequences” should be construed as “a single comparison, in which the lengths of the first and second decoded sequences are compared to the predetermined length of the data character sequence in the bar code.” Furthermore, Symbol asserts that if, as a result of the

⁸⁷² SIB 34.

⁸⁷³ RIB 68 citing JX-2 (the ‘308 patent) at col. 4:34-42; RX-3C (Chandler Direct) at Q.134-35.

⁸⁷⁴ CRB 26.

⁸⁷⁵ SIB 34.

comparison, the sum of the first and second sequences equals the predetermined length, then combining takes place.⁸⁷⁶ Metrologic asserts that the claim term should be construed as requiring two steps, including: (1) comparing the predetermined length to the length of the first decoded sequence of data characters and (2) comparing the predetermined length to the length of the second decoded sequence of data characters, as shown in Figure 6, steps 103 and 106.⁸⁷⁷ Staff asserts that the claim term should be governed by its plain meaning, which does not require two comparing steps.⁸⁷⁸

Symbol asserts that this term requires a single comparison, as shown by step 108 in Figure 6 of the '308 patent.⁸⁷⁹ Metrologic asserts that its claim construction applies because of the differences shown among claims 1, 2, and 21. For example, Metrologic asserts that claim 1 only requires one length-comparing step, while claim 21 requires two length-comparing steps, and claim 2 requires three length-comparing steps.⁸⁸⁰ Staff disagrees with Metrologic's claim construction because it inserts unnecessary limitations, *i.e.* that there must be two comparisons, which is not supported by the claim language.⁸⁸¹

The undersigned agrees with Symbol and Staff that the plain meaning of the term "comparing the predetermined length to lengths of the first and second decoded sequences" should govern, showing only one comparison step. While figure 6 of the '308 patent shows that there are two comparison steps, steps 103 and 106, there is also a single comparison step 108 where L_{S1}

⁸⁷⁶ CIB 43; CRB 26.

⁸⁷⁷ RIB 68.

⁸⁷⁸ SIB 34.

⁸⁷⁹ CIB 43 citing Payne, Tr. 597.

⁸⁸⁰ RIB 68 citing RX-3C (Chandler Direct) at Q. 155; RDX-87.

⁸⁸¹ SIB 34. *See also* CRB 26.

(length of first decoded partial scan) + L_{S2} (length of second decoded partial scan) = L_P (predetermined length).⁸⁸²

Accordingly, the phrase **“comparing the predetermined length to lengths of the first and second decoded sequences”** in claims 2 and 21 is construed to mean: **“a single comparison in which the lengths of the first and second decoded sequences are compared to the predetermined length of the data character sequence in the bar code.”**

d. Claims 10 and 11

(1) “Combining the first and second sequences of data characters to form a test sequence of data characters”

Symbol asserts that the claim term “combining the first and second sequences of data characters to form a test sequence of data characters” should be not be limited to concatenating or concatenating after elimination of overlap.⁸⁸³ Metrologic asserts that the claim term should be construed as “without regard to the lengths of the two decoded sequences of characters, combining the two decoded sequences by concatenating or combining overlapping portions (as previously described in claims 2 and 21) to form a sequence used to verify the check sum.”⁸⁸⁴ Staff does not offer a claim construction for this particular claim term.

Metrologic asserts that claims 10 and 11 differ from claim 2 and 21 because claims 10 and 11 do not require the bar code symbol to have a predetermined length. Rather, in claims 10 and 11, a predetermined check value is encoded in the bar code symbol, as shown by Figures 9 and 11 of

⁸⁸² JX-2 (the ‘308 patent) at Fig. 6, col. 4: 34-66.

⁸⁸³ CRB 26.

⁸⁸⁴ RIB 68.

the '308 patent.⁸⁸⁵ According to Metrologic, in Figure 9, once the two decoded sequences are generated in steps 102 and 104, they are combined to form a test sequence in step 128 of Figure 11, a check value is determined in step 138, and in step 140 that check value is tested against the encoded check value for the bar code symbol. If the two check values are equal, the two decoded sequences are again combined in step 144 in the same manner as in step 128 to produce the ordered sequences of data characters.⁸⁸⁶ Furthermore, Metrologic asserts that the asserted language in claim 10 (referred to as Step "D") is nearly the same as used in the last paragraph of claims 2 and 21, which happens to be identical to the last paragraph of claim 10, namely "combining the first and second sequences to produce the ordered sequence of data characters." According to Metrologic, while the specification states that the "test sequence may be formed by concatenation, combining overlapping portions, or some other means," there is no disclosure in the patent, specification, or prosecution history other than forming the test sequence in Step D of claim 10, which is the same as the combining step performed in the last paragraphs of claims 2, 21, and 10.⁸⁸⁷

Symbol disagrees with Metrologic's claim construction, asserting that Metrologic is once again trying to import limitations from the specification into the claim. Symbol asserts that Metrologic's claim construction should be rejected because "concatenating" does not appear anywhere in the claim language. Furthermore, Symbol asserts that the specification specifically states that the test sequence can be formed by "concatenation, combining overlapping portions, or some other means."⁸⁸⁸ According to Symbol, Metrologic's claim construction limits forming the

⁸⁸⁵ RIB 68-69.

⁸⁸⁶ RIB 69 citing RX-3C (Chandler Direct) at Q. 156-59.

⁸⁸⁷ RIB 69 citing JX-2 (the '308 patent) at col. 6:30-32.

⁸⁸⁸ CRB 26 citing JX-2 (the '308 patent) at col. 6:10-32.

test sequence to concatenating or concatenating after elimination of overlap, which is even more narrow than what is called for in the specification.⁸⁸⁹

The undersigned agrees with Symbol that Metrologic's claim construction is too narrow. Accordingly, the phrase "**combining the first and second sequences of data characters to form a test sequence of data characters**" in claims 10 and 11 is not limited to concatenating or concatenating after elimination of overlap and includes forming a test sequence by other means.

(2) **"Comparing the test check value to the predetermined encoded check value"**

Symbol asserts that the claim term "comparing the test check value to the predetermined encoded check value" should be construed to cover a decoding method where more than one test check value is used.⁸⁹⁰ Metrologic asserts that the claim term should be construed as "once a test check value is determined for the test sequence, compare that value to the single check value encoded in the ordered sequence of data characters."⁸⁹¹ Staff does not offer a claim construction for this particular claim term.

Metrologic asserts that Step E of the claim does not contemplate more than a single test check value and Step F does not contemplate having to compare more than a single test check value; therefore, the claim should be construed to be limited to a single test check value. In support, Metrologic cites to the specification, which states that a:

check value, for example, a checksum, of the test sequence is determined at [step] 138. If the check value is determined to be a valid check value at [step] 140, then the two partial

⁸⁸⁹ CRB 26.

⁸⁹⁰ CRB 27.

⁸⁹¹ RIB 69.

sequences are combined at 144 and processing is done at 120.⁸⁹²

Symbol disagrees with Metrologic's claim construction. According to Symbol, Metrologic's claim construction violates two principles of claim construction. First, Symbol asserts that Metrologic ignores the principle that a claim using the transitional term "comprising" can be infringed even if additional steps beyond or between the steps stated in the claim are included in the infringing method.⁸⁹³ Second, Symbol asserts that Metrologic ignores the principle that the article "a" carries the meaning of "one or more" in open-ended claims containing the transitional phrase "comprising."⁸⁹⁴ For example, Symbol asserts that claim 10 reads "a predetermined test check value" and "a test check value." According to Symbol, a second test check does not avoid the claim language.⁸⁹⁵

The undersigned agrees with Symbol, and consistent with Federal Circuit precedent, that the presence of a second test check does not avoid the claim language. Accordingly, the phrase **"comparing the test check value to the predetermined encoded check value"** in claims 10 and 11 is construed to include decoding methods where more than one test check value is used.

- (3) **"In the event that the test check value is substantially equal to the predetermined check value, combining the first and second sequences of data characters to produce the ordered sequence of data characters"**

Symbol asserts that the claim term "in the event that the test check value is substantially equal to the predetermined check value, combining the first and second sequences of data characters

⁸⁹² RIB 69 citing JX-2 (the '308 patent) at col. 6:22-26.

⁸⁹³ CRB 27 citing *Georgia-Pacific Corp. v. United States Gypsum Co.*, 195 F.3d 1322, 1327 (Fed. Cir. 1999) ("*Georgia-Pacific*").

⁸⁹⁴ CRB 27 citing *KCJ Corp. v. Kinetic Concepts, Inc.*, 223 F.3d 1351, 1356 (Fed. Cir. 2000) ("*KCJ*").

⁸⁹⁵ CRB 27.

to produce the ordered sequence of data characters” should be construed as not being limited to a singular check, and that the forming of a test sequence is not limited to concatenating or eliminating overlap.⁸⁹⁶ Metrologic asserts that the claim term should be construed as “if the comparison step made in Step F between the test check value determined in Step E and the single check value encoded in the ordered sequence of data characters shows that the two check values are equal, then concatenate the first and second decoded sequences or combine overlapping portions of the first and second decoded sequences again as was done in Step D to form a single sequence.”⁸⁹⁷ Staff does not offer a claim construction for this particular claim term.

Metrologic asserts that the asserted claim term (referred to as Step “G”) is only performed if Steps D, E and F have been performed. According to Metrologic: (1) in Step D, the two decoded sequences were combined to form a single test sequence, which is the same combination that is performed by the last paragraphs of claims 2 and 21; (2) in Step E, a single test check value is determined from the test sequence; (3) in Step F, a single test check value is compared to the predetermined check value encoded in the bar code symbol; and (4) in Step G, once the equality is determined, the two decoded sequences, whose combination satisfied the test check, are combined again in the same manner as they were combined in Step D, which includes combination by concatenation or combining overlapping portions.⁸⁹⁸

Symbol asserts that Metrologic’s claim construction for this term should be rejected for the same reasons discussed above in reference to the claim terms “combining the first and second sequences of data characters to form a test sequence of data characters” and “comparing the test

⁸⁹⁶ CRB 27-28.

⁸⁹⁷ RIB 70.

⁸⁹⁸ RIB 70 citing RX-3C (Chandler Direct) at Q. 160.

check value to the predetermined encoded check value.”⁸⁹⁹

As the undersigned adopted Symbol’s claim construction above, with respect to the claim terms “combining the first and second sequences of data characters to form a test sequence of data characters” and “comparing the test check value to the predetermined encoded check value,” the undersigned also finds in Symbol’s favor with regard to this claim term. While the undersigned agrees with Metrologic that Step G cannot be performed unless Steps D, E, and F have been performed, the focus of the claim construction is only on Step G, which is, once again, not limited to combination by concatenation or combining overlapping portions.

Accordingly, the phrase **“in the event that the test check value is substantially equal to the predetermined check value, combining the first and second sequences of data characters to produce the ordered sequence of data characters”** in claims 10 and 11 is construed to include decoding methods where more than one test check value is used and includes forming test sequences by concatenating, concatenating after elimination of overlap, and by other means.

e. Claim 21

- (1) “Measuring the elapsed time between finding the first decoded sequence and finding the second decoded sequence”**

Symbol asserts that the claim term “measuring the elapsed time” should be construed as “to measure the elapsed time between scans for the purpose of determining whether the elapsed time is greater or less than the predetermined acceptable elapsed time.”⁹⁰⁰ Metrologic asserts that the claim term should be construed as “determining the actual time taken between a first event of

⁸⁹⁹ CRB 27.

⁹⁰⁰ CIB 45-46; CRB 28.

finding the first decoded sequence and a second event of finding the second decoded sequence by computing the difference between the times the first and second events occur; the two time measurements must be taken at the same point in the decoding algorithm.”⁹⁰¹ Staff asserts that the plain meaning of the claim term should govern.⁹⁰²

According to Symbol, there are at least three ways to perform the measuring and comparing steps:

- (1) loading the predetermined acceptable elapsed time into a register, measuring the elapsed time by decrementing the register with the clock beginning when the first scan is taken, discarding the first scan if the register reaches zero before the second scan is obtained, or accepting both scans if the second scan is obtained before the register decrements to zero;⁹⁰³
- (2) reading the time on a clock when the first scan is taken, and reading the time on a clock again when the second scan is taken, subtracting the first time from the second, subtracting the difference from a predetermined acceptable elapsed time, and throwing away the first scan if the difference is a negative number, or accepting both scans if the difference is positive;⁹⁰⁴ and
- (3) starting a stopwatch when the first scan is taken, stopping the stopwatch when the second scan is taken, subtracting the time shown on the stopwatch from a predetermined time, and throwing away the first scan if the difference is a negative number, or accepting both scans if the difference is positive.⁹⁰⁵

According to Symbol, Metrologic’s claim construction only encompasses the second and third methods above, and thus is too narrow. Symbol asserts that the applicants were merely interested in whether the elapsed time from the first to the second scan was less than the predetermined

⁹⁰¹ RIB 71.

⁹⁰² SIB 34.

⁹⁰³ CIB 46 citing CX-45C (Hejl Dep) at 191-94 [CFF 4.753-57].

⁹⁰⁴ CIB 46 citing CX-112C (Payne Direct) at Q. 376; CX-61C (Payne Claim Chart) at 11 CFF 4.1010].

⁹⁰⁵ CIB 46.

acceptable elapsed time, which does not necessarily require a “stopwatch.”⁹⁰⁶ Therefore, Symbol asserts that any method of measuring the time between finding the first scan and finding the second scan is sufficient.⁹⁰⁷

Metrologic asserts that the claim language specifically states that the elapsed time is measured between “finding the first decoded sequence” and “finding the second decoded sequence.” According to Metrologic, because the same word “finding” is used in the claim when referring to the first and second decoded sequences, the claim requires the two time measurements to be taken at the same point in the decoding algorithm.⁹⁰⁸ Metrologic also asserts that Symbol did not propose a claim construction for this term in its prehearing brief; therefore, the issue is waived. Furthermore, Metrologic asserts that Symbol is construing the claim term by blatantly citing to the accused software, which violates a cardinal rule of claim construction.⁹⁰⁹

Staff disagrees with Metrologic’s claim construction because it inserts additional limitations into the claim element that are not necessary or supported by the claim language, *i.e.* that the time measurement must be taken at some point in the flow chart.⁹¹⁰

The undersigned does not find Metrologic’s claim construction to be persuasive. The fact that the same word “finding” is used in connection with the “first decoded sequence” and “second decoded sequence” does not necessarily mean that the two time measurements need to be taken at the same point in the decoding algorithm. Based on the claim language, there is no requirement that the time measurement needs to be taken like a stopwatch, or at a specific point in time. Therefore,

⁹⁰⁶ CIB 46-47.

⁹⁰⁷ CRB 28.

⁹⁰⁸ RIB 71 citing RX-3C (Chandler Direct) at Q.161.

⁹⁰⁹ RRB 47-48 citing *SRI Int’l*, 775 F.2d at 1118.

⁹¹⁰ SIB 34.

adopting Metrologic's claim construction would be too narrow. As for Metrologic's argument **that** Symbol has waived this issue, upon a review of Symbol's prehearing brief, the undersigned **finds** that Symbol sufficiently preserved this claim construction argument in its prehearing brief.⁹¹¹

Accordingly, the phrase **"measuring the elapsed time"** in claim 21 is construed to mean: **"to measure the elapsed time between scans for the purpose of determining whether the elapsed time is greater or less than the predetermined acceptable elapsed time."**

(2) "Predetermined acceptable elapsed time"

Symbol does not propose a claim construction for this claim term. Metrologic asserts **that** the claim term should be construed as "a predetermined time between a first event of finding **the** first decoded sequence and a second event of finding the second decoded sequence."⁹¹² Staff asserts that the plain meaning of the claim term should govern.⁹¹³

Metrologic asserts that, based on the context of the claim, "scans found at a time **greater** than the predetermined acceptable elapsed time will be discarded and any other stored scans **will** be discarded."⁹¹⁴ Staff disagrees with Metrologic's claim construction because it inserts additional limitations into the claim element that are not necessary or supported by the claim language, *i.e.* **that** if time is greater than the predetermined value, the scan must be discarded.⁹¹⁵

The undersigned does not find Metrologic's arguments persuasive. While the result **of** a scan may be discarded if found at a time greater than the predetermined acceptable elapsed time, the specific meaning of this claim term itself does not imply such a result. Therefore the **plain**

⁹¹¹ See Complainant's Prehearing Brief at 70.

⁹¹² RIB 72.

⁹¹³ SIB 35.

⁹¹⁴ RIB 72.

⁹¹⁵ SIB 35.

meaning of this term shall govern, which does not include anything about discarding scans.

Accordingly, the phrase “**predetermined acceptable elapsed time**” in claim 21 is construed to mean: “**a particular elapsed time that has been determined beforehand.**”

B. Infringement

1. In General

Symbol asserts that Metrologic’s products infringe claims 2, 10, 11, and 21 of the ‘308 patent. Specifically, Symbol asserts that Metrologic’s Optimus products infringe claims 2, 10, 11, and 21, while Metrologic’s Voyager and Quantum/Fusion products infringe claims 2 and 21, and Metrologic’s Argus, InVista, Horizon and Orbit/Cubit products infringe claim 2 of the ‘308 patent.⁹¹⁶

Metrologic asserts that no products that decode RSS, including its own products and Symbol’s products, infringe the ‘308 patent.⁹¹⁷ According to Metrologic, the ‘308 patent is directed to combining two partial scans of a bar code symbol from the ends inward, with each scan containing a beginning or end delimiting character.⁹¹⁸ Metrologic asserts that the ‘308 patent works with bar code symbologies that have characters at the beginning and end of the symbols, such as Code 39, Code 128, Codabar, Interleaved 2 of 5, but that RSS-14 bar code symbology is designed much differently because it does not have beginning or end characters. Rather, the encoded message in an RSS-14 bar code symbol is distributed across all four data characters and cannot be

⁹¹⁶ CIB 68 citing CX-57C through CX-61C; CX-112C (Payne Direct) at Q. 148-71 [CFF 4.400-4.431].

⁹¹⁷ RIB 85-92.

⁹¹⁸ RIB 85-86 citing JX-2 (the ‘308 patent) at col. 1:6-8, 2: 32-41; RX-3C (Chandler Direct) at Q. 106).

determined just by looking at the specific bar code elements.⁹¹⁹

According to Metrologic, the structure of RSS-14 symbology is different from previous symbologies. RSS-14 is designed to more efficiently use bars and spaces to encode product codes. It has a unique symbol structure that includes two halves, each of which includes two characters separated by a finder pattern. Using mathematical algorithms, each pair of data characters (*i.e.*, each half of the bar code) can encode over 4.5 million values, allowing the entire symbol to encode 20 trillion values.⁹²⁰

Metrologic asserts that no products that decode RSS infringe the '308 patent based on the properties of RSS bar codes because: (1) there are no delimiting characters,⁹²¹ (2) the “scanning and decoding” and “determining” limitations are not met,⁹²² (3) the “repeating” limitation is not met,⁹²³ (4) there are no “scan fragments” in RSS-14 stacked bar codes,⁹²⁴ and (5) RSS-14 stacked bar codes are not decoded “independently of the respective lengths of the first and second decoded sequences” in step D of claims 10 and 11.⁹²⁵

Alternatively, Metrologic asserts that the software used to decode RSS bar codes does not infringe the '308 patent.⁹²⁶ Metrologic asserts that software used to decode RSS bar codes does not infringe the '308 patent because: (1) the “comparing the predetermined length” limitation is not

⁹¹⁹ RIB 86 citing JX-197 (THE BAR CODE BOOK) at 82-83.

⁹²⁰ RRB 25 citing JX-197 (THE BAR CODE BOOK) at 82-83; JX-18 (AIM specification) at 14.

⁹²¹ RIB 86-90.

⁹²² RIB 90-91.

⁹²³ RIB 91.

⁹²⁴ RIB 91.

⁹²⁵ RIB 91-92.

⁹²⁶ RIB 92-99.

met,⁹²⁷ (2) the last limitation of each asserted claim is not met,⁹²⁸ (3) the last limitation of claim 2 is not met,⁹²⁹ (4) the last limitation of claims 2 and 10 are not met,⁹³⁰ (5) the “measuring” and “comparing the elapsed time” limitations of claim 21 are not met,⁹³¹ and (6) the last limitation of claim 21 is not met.⁹³² In addition, Metrologic asserts that its Optimus products do not infringe claims 10 and 11 of the ‘308 patent because: (1) steps D and E of the claims 10 and 11 are not met,⁹³³ (2) step F of claims 10 and 11 are not met,⁹³⁴ and (3) step G of claims 10 and 11 are not met.⁹³⁵

Staff asserts that the evidence shows that all of Metrologic’s accused products practice all of the asserted claims of the ‘308 patent. According to Staff, although Metrologic raises various non-infringement arguments, most of the arguments are based on Metrologic’s faulty claim construction.⁹³⁶

The undersigned rejects a majority of Metrologic’s non-infringement arguments, as they are repetitive of Metrologic’s claim construction arguments, most of which were rejected above, and will not be discussed any further. A couple of Metrologic’s arguments, however, must be addressed, which is discussed in the following two sections below.

⁹²⁷ RIB 92-94.

⁹²⁸ RIB 94.

⁹²⁹ RIB 94-95.

⁹³⁰ RIB 95-96.

⁹³¹ RIB 96-97.

⁹³² RIB 97.

⁹³³ RIB 97-98.

⁹³⁴ RIB 98.

⁹³⁵ RIB 98-99.

⁹³⁶ SIB 44.

2. Whether the claims set forth a specific sequence of steps

Metrologic argues that, even if the undersigned adopts Symbol's claim construction of the term "delimiting character," any product decoding RSS-14 bar codes does not infringe the '308 patent because the "scanning and decoding" and "determining" paragraphs are not met. According to Metrologic, the "decoding" step is not met because no RSS data characters can be decoded until an RSS finder pattern is first decoded.⁹³⁷ Metrologic asserts that, because the claims require the delimiting characters to be determined in the "determining" step, the "decoding" step is not performed before the "determining" step. Metrologic also asserts that the "determining" step is not performed because the finder pattern was determined during the decoding step.⁹³⁸ In sum, Metrologic asserts that the plain order of the claim language is to scan, decode, and then determine the presence of a delimiting character.

Symbol counters Metrologic's argument and asserts that the sequence of steps in a method claim are not limiting when the preferred embodiment shows a different order.⁹³⁹ According to Symbol, the preferred embodiment shows that the delimiting character is located and decoded before the data characters, making the steps performed in the following order: scanning, determining, and decoding.⁹⁴⁰ Symbol argues that this order is consistent with the claim language to determine whether the decoded sequence includes the first or second delimiting character and that Metrologic's argument would amount to rewriting the claim to read "determining from the decoded

⁹³⁷ RIB 90 citing Payne, Tr. 612; RX-763C (Payne Rebuttal) at Q. 354.

⁹³⁸ RIB 90-91 citing RX-763C (Chandler Rebuttal) at Q. 353; RDX-101C; RDX-102C; RDX-103C.

⁹³⁹ CRB 35 citing *Interactive Gift Express*, 256 F.3d at 1343.

⁹⁴⁰ CRB 35 citing JX-2 (the '308 patent) at col. 5:23-35, Fig. 7; CX-112C (Payne Direct) at Q. 230-31, 237-39, 282, 293-94, 346, 371; CX-45C (Hejl Dep) at 106-08; RX-763C (Chandler Rebuttal) at 354. [CFF 3.433-3.441, 4.803-4.804].

sequences whether they contain one of the first or second delimiting characters.”⁹⁴¹

Metrologic counters that Symbol’s reliance on *Interactive Gift Express* is misplaced because that case states that steps of a claim are to be performed in the order written if the steps require, as a matter of logic or grammar, that they be performed in the written order.⁹⁴² Metrologic asserts that, in the ‘308 patent, the “scanning and decoding” paragraph produced the “decoded sequences of characters” and that the “determining” paragraph uses the “decoded sequences of characters;” therefore, “scanning and decoding” must be performed before “determining.”⁹⁴³ Metrologic argues that, by use of the definite article “the,” the “determining” paragraph requires the decoded sequences of characters to exist prior to the “determining” paragraph and that the only step that creates the “decoded sequences of characters” is the “scanning and decoding” paragraph.⁹⁴⁴ Metrologic asserts that when decoding RRS-14 bar code symbols, the bar code is scanned, the finder pattern is decoded, and then the data characters are decoded.⁹⁴⁵

In addition, Metrologic asserts that because the “repeating” paragraph repeats the aforementioned “scanning,” “decoding,” and “determining” steps, the “repeating” paragraph also is not infringed.⁹⁴⁶ Symbol counters that Metrologic is once again improperly relying on claim construction for its infringement analysis.⁹⁴⁷

Metrologic also asserts that the accused software does not infringe the ‘308 patent because

⁹⁴¹ CRB 35 (emphasis in original).

⁹⁴² RRB 41 citing *Altiris*, 318 F.3d at 1369; *Interactive Gift Express*, 256 F.3d at 1343.

⁹⁴³ RRB 41-42 citing RX-763C (Chandler Rebuttal) at Q. 337.

⁹⁴⁴ RRB 42 citing *Mantech Envtl. Corp. v. Hudson Envtl. Servs.*, 152 F.3d 1368, 1375-76 (Fed. Cir. 1998) (“*Mantech*”).

⁹⁴⁵ RRB 43 citing Payne, Tr. 612; RX-763C (Chandler Rebuttal) at Q. 354.

⁹⁴⁶ RIB 91 citing RX-763C (Chandler Rebuttal) at Q. 326-27; RDX-101C; RDX-102C; RDX-103C.

⁹⁴⁷ CRB 36.

the combining and concatenation process does not occur in the correct order as required by the claims.⁹⁴⁸ According to Metrologic, Symbol has basically conceded this point and is now trying to come forward with a “new” infringement analysis where the combining step is a process that occurs not only in the last paragraph of each claim, but also in the second (“determining”) paragraph, and third (“repeating”) paragraphs. Metrologic asserts that Symbol’s argument should be rejected because it was not presented in the prehearing brief.⁹⁴⁹ Regardless, Metrologic asserts that Symbol’s “new” infringement analysis is laughable.⁹⁵⁰ First, Metrologic asserts that Symbol’s “new” infringement theory requires redefinition of all the claim steps so that each one takes part in the “combining” process. Second, Metrologic asserts that Symbol is asserting that the order of the steps is not important, even though many of the steps are conditioned on each other. According to Metrologic, all of the “combining” steps, which appear in the last paragraph of each claim, are conditional because they are based on the prior claim step being successful; therefore, the steps must occur in a particular order.⁹⁵¹ Third, Metrologic asserts that Symbol does not identify a single “sequence” that is decoded in the “scanning and decoding” paragraph; rather, Symbol only refers to decoding single characters. Fourth, Metrologic asserts that Symbol identifies three different ways the “combining” step might be met.⁹⁵²

Symbol counters Metrologic’s arguments regarding the “combining” process. According to Symbol,

[t]he case law does not require steps to be performed in the sequence stated in the

⁹⁴⁸ RRB 44-47.

⁹⁴⁹ RRB 44-45 citing Ground Rule 8.2.

⁹⁵⁰ RRB 45.

⁹⁵¹ RRB 46-47.

⁹⁵² RRB 45-46.

claim, unless the sequence is stated to be critical to the invention. *See Interactive Gift Express*, cited *supra*. Here, there is no suggestion in the patent that the invention cannot be performed if the combining process commences before the condition is met, so long as the combining process is completed based upon the condition.⁹⁵³

Alternatively, Symbol asserts that, even if the claims were construed to require the combining step not to commence until after the comparing step was completed, the Metrologic and Optimus products infringe under the doctrine of equivalents.⁹⁵⁴

The undersigned finds Metrologic's arguments persuasive. The language of the claim sets forth a specific sequence of events which can be determined by analyzing the way the claim was written. For example, claim 2 states that the method of the claim comprises the following steps:

scanning the symbol along a plurality of scan paths and decoding the scanned elements to obtain *decoded sequences of characters*;

determining whether the *decoded sequences of characters* includes one of the first and second delimiting characters.

The "determining" step specifically refers to "the decoded sequences of characters." The previous "scanning and decoding" step references how "to obtain" a decoded sequence of characters. Therefore, it follows that "the decoded sequences of characters" referred to in the "determining" step is obtained from the previous "scanning and decoding" step and that decoding should take place before determining the presence of delimiting characters. This interpretation is consistent with the undersigned's claim construction of the term "determining whether the decoded sequences of characters includes one of the first and second delimiting characters," which was discussed above.

⁹⁵³ CRB 38.

⁹⁵⁴ CRB 38.

Likewise, the remaining steps in claim 2 comprise the following steps:

repeating the scanning and determining steps until at least a first decoded sequence with the first delimiting character and a second decoded sequence with the second delimiting character are found;

comparing the predetermined length to lengths of the first and second decoded sequences of data characters; and

based on the comparison, combining the first and second sequences to produce the ordered sequence of data characters by concatenating the first and second decoded sequences to produce the ordered sequence if the sum of the character lengths of the first and second sequences is equal to the predetermined length.

It is clear that the “repeating” step must take place after the initial “scanning and decoding” step, by virtue of the meaning of the term “repeat.” As for the “combining” step, such “combining” must take place after the “comparing” in the previous step, as the claim states “based on the comparison, combining . . .” Therefore, the undersigned agrees that, in this instance, the steps of the claim are to be performed in the order written because the steps require, as a matter of logic and grammar, that they be performed in the written order.⁹⁵⁵ While the undersigned agrees with Symbol’s point that there is no suggestion in the patent that the invention cannot be performed in a different sequence of steps, the language of the claim itself requires the specific sequence of steps.

As already addressed above, the undersigned does not agree with Symbol that requiring that the claim steps be following in a strict sequence would exclude the preferred embodiment.⁹⁵⁶ As noted by Metrologic, while Figure 7 is a specific embodiment showing this step, the summary of the invention also refers to the invention that includes the steps of “scanning, decoding, and

⁹⁵⁵ *Altiris*, 318 F.3d at 1369; *Interactive Gift Express*, 256 F.3d at 1343.

⁹⁵⁶ CRB 35 citing *Vitronics*, 90 F.3d at 1583.

determining.”⁹⁵⁷

3. Whether the “scan fragments” preamble limitation is met in RSS-14 stacked bar codes

The undersigned also finds it necessary to address whether there are any “scan fragments” in RSS-14 stacked bar codes. According to Metrologic, Symbol has only alleged that the decoding of RSS-14 stacked bar codes infringes the asserted claims.⁹⁵⁸ Metrologic asserts that RSS-14 stacked bar codes were designed to be read with a minimum of two scans; therefore, decoding RSS-14 stacked bar codes does not include the use of a “scan fragment.”⁹⁵⁹

Metrologic asserts that, according to the ‘308 patent, the basic problem to be solved involved incomplete or partial scans that result in “scan fragments” which were discarded prior to the development of prior art scan stitching techniques.⁹⁶⁰ According to Metrologic, determining what was intended to be covered by the ‘308 patent claims at the time of the invention—September 1993—is the task at hand that should not be construed through 20/20 hindsight.⁹⁶¹

Metrologic argues that RSS-14 stacked bar codes were designed to be read and decoded using separate bar code scans for each row; therefore, the scans are never “discarded,” and are therefore, not “scan fragments.”⁹⁶² Because the term “scan fragments” appears in the preamble for each of the asserted claims, Metrologic asserts that RSS-14 stacked bar codes do not infringe any

⁹⁵⁷ RX-763C (Chandler Rebuttal) at Q. 354.

⁹⁵⁸ RIB 91 citing Amended Complaint, ¶¶ 68, 72.

⁹⁵⁹ RIB 91 citing RX-763C (Chandler Rebuttal) at Q. 330-31.

⁹⁶⁰ RRB 27 citing JX-2 (the ‘308 patent) at col. 1:51-2:2.

⁹⁶¹ RRB 28 citing *Bayer*, 279 F.3d at 1348; *NeoMagic Corp. v. Trident Microsystems, Inc.*, 287 F.3d 1062, 1074 (Fed. Cir. 2002) (“*NeoMagic*”); *SRI Int’l*, 775 F.2d at 1118.

⁹⁶² RRB 27 citing RX-3C (Chandler Direct) at Q. 97.

of the asserted claims.⁹⁶³ Metrologic asserts that the RSS-14 specification itself makes clear that the scan of a whole row of a multi-row symbol, such as in RSS-14 stacked bar codes, is the most complete scan that one could hope for when reading one row of a multiple row symbol and certainly would not be discarded.⁹⁶⁴

Symbol counters that Metrologic is once again improperly relying on claim construction for its infringement analysis.⁹⁶⁵

“In general, a preamble limits the invention if it recites essential structure or steps, or if it is ‘necessary to give life, meaning, and vitality’ to the claim.”⁹⁶⁶ A preamble is not limiting, however, “where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention.”⁹⁶⁷ There does not appear to be much dispute between the parties that the preamble of the asserted claims recites an essential step to the claim.

The undersigned finds Metrologic’s arguments persuasive. As noted above in the claim construction section, the patent specifically refers to “scan fragments” in the context of “discarded” fragments, which is the claim construction adopted by the undersigned. There does not appear to be much dispute between the parties that “partial scans” of RSS-14 stacked bar codes were never

⁹⁶³ RRB 34.

⁹⁶⁴ RRB 27 citing RX-3C (Chandler Direct) at Q. 128.

⁹⁶⁵ CRB 36.

⁹⁶⁶ *Catalina Mktg. Int’l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002) (“*Catalina*”) (citing *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305 (Fed. Cir. 1999) (“*Pitney Bowes*”)).

⁹⁶⁷ *Catalina*, 289 F.3d at 808 (citing *Rowe v. Dror*, 112 F.3d 473, 478 (Fed. Cir. 1997) (“*Rowe*”)).

intended to be discarded.⁹⁶⁸ Therefore, RSS-14 stacked bar codes do not infringe any of the asserted claims.

4. Accused Products in General

According to Symbol, Metrologic's software for decoding RSS-14 symbols [

] ⁹⁶⁹ Therefore, Symbol asserts that [

] ⁹⁷⁰ Based

on the general agreement between the parties and their experts, Dr. Payne and Mr. Chandler, [

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Symbol asserts that [

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⁹⁶⁸ RX-3C (Chandler Direct) at Q. 97.

⁹⁶⁹ CIB 68-69 citing CX-45C (Hejl Dep) at 17-19; RX-7C (Hejl Direct) at Q. 98, 102, 106; [CFF 4.627, 4.729, 4.515, 4.628, 4.782, 4.781].

⁹⁷⁰ CIB 68-69 citing CX-45C (Hejl Dep) at 25, 144, 172-73 [CFF 4.631, 4.725].

⁹⁷¹ CIB 70.

⁹⁷² CIB 69 citing CX-45C (Hejl Dep) at 200; CX-112C (Payne Direct) at Q. 266-71 [CFF 3.427].

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Metrologic asserts that Symbol has a failure of proof on infringement because Dr. Payne failed to testify completely regarding these products because his analysis was performed mostly in claim charts, which are merely treated as demonstrative exhibits and “are only useful to the extent there is testimony to back them up.”⁹⁷⁴ In response to Symbol’s argument that Metrologic has not offered any explanation on how the accused software actually works, Metrologic asserts that the burden of proof is on Symbol to show infringement, including how the accused software works.⁹⁷⁵

Symbol describes how Metrologic’s accused products decode RSS bar codes through the testimony of Metrologic employee, Benjamin Hejl.⁹⁷⁶ According to Mr. Hejl, the [

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⁹⁷³ CIB 69 citing CX-112C (Payne Direct) at Q. 259 [CFF 4.475, 4.485].

⁹⁷⁴ RRB 49-50 citing Bullock, Tr. 1266.

⁹⁷⁵ RRB 52.

⁹⁷⁶ CIB 65 citing CX-45C (Hejl Dep) at 13 [CFF 1.615].

⁹⁷⁷ CIB 65 citing CX-45C (Hejl Dep) at 91-92, 107 [CFF 4.667-75, 4.691-93].

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⁹⁷⁸ CIB 66 citing CX-45C (Hejl Dep) at 25, 105, 107 [CFF 4.631-32, 687, 692-94].

⁹⁷⁹ CIB 66 citing CX-45C (Hejl Dep) at 107-09, 121-24 [CFF 4.694-4.696, 4.705-4.708].

⁹⁸⁰ CIB 66 citing CX-45C (Hejl Dep) at 130 [CFF 4.712].

⁹⁸¹ CIB 66 citing CX-45C (Hejl Dep) at 126-27, 130, 136-37 [CFF 4.709-4.712, 4.718-4.720].

⁹⁸² CIB 66 citing Chandler, Tr. 1386-88 [CFF 3.390-91].

⁹⁸³ CIB 66 citing CX-45C (Hejl Dep) at 151-52 [CFF 4.734].

⁹⁸⁴ CIB 66 citing CX-45C (Hejl Dep) at 138, 166-67 [CFF 4.741].

⁹⁸⁵ CIB 66 citing CX-45C (Hejl Dep) at 166-67, 169 [CFF 4.741-4.743]; Chandler, Tr. 1417-18 [CFF 3.483-3.486] (where Mr. Chandler admits the importance of placing the data character in the right location).

⁹⁸⁶ CIB 66 citing CX-45C (Hejl Dep) at 101 [CFF 4.684].

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] symbol.⁹⁸⁸ [

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⁹⁸⁷ CIB 66 citing CX-45C (Hejl Dep) at 103, 185-86 [CFF 4.685, 4.745-4.747].

⁹⁸⁸ CIB 66 citing CX-45C (Hejl Dep) at 161-62, 164 [CFF 4.739-4.740].

⁹⁸⁹ CIB 66 citing CX-45C (Hejl Dep) at 157 [CFF 4.738].

⁹⁹⁰ CIB 66-67 citing CX-45C (Hejl Dep) at 139 [CFF 4.722].

⁹⁹¹ CIB 67 citing CX-45C (Hejl Dep) at 189-90, 258-59, 263 [CFF 4.749-4.750, 4.763-65].

⁹⁹² CIB 67 citing CX-45C (Hejl Dep) at 151-52 [CFF 4.733-4.734].

⁹⁹³ CIB 67 citing CX-45C (Hejl Dep) at 187, 192-93 [CFF 4.748, 4.755].

⁹⁹⁴ CIB 67 citing CX-45C (Hejl Dep) at 190-94 [CFF 4.750-4.757].

⁹⁹⁵ CIB 67 citing CX-45C (Hejl Dep) at 190 [CFF 4.750].

⁹⁹⁶ CIB 67 citing CX-45C (Hejl Dep) at 191-92 [CFF 4.751-4.754].

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5. Claim 2

Symbol asserts that all of Metrologic's accused devices practice the preamble and all limitations of claim 2 through the testimony of its expert, Dr. Payne, regarding Metrologic's "Voyager" software as an exemplary device.¹⁰⁰¹ According to Symbol, all of Metrologic's accused devices practice the preamble because all of the accused devices decode and combine scan fragments of RSS-14 bar code symbols, which are composed of an ordered sequence of data characters delimited by a left finder pattern and a right finder pattern, having a predetermined length of four data characters.¹⁰⁰²

According to Symbol, all of Metrologic's accused devices practice the first limitation of claim 2 because all of the accused Metrologic scanners are capable of reading and decoding RSS symbols by "scanning the symbol along a plurality of scan paths and decoding the scanned elements

⁹⁹⁷ CIB 67 citing CX-45C (Hejl Dep) at 192-93 [CFF 4.755].

⁹⁹⁸ CIB 67 citing CX-45C (Hejl Dep) at 258-59, 263 [CFF 4.763-4.765].

⁹⁹⁹ CIB 67 citing CX-45C (Hejl Dep) at 258-59 [CFF 4.764].

¹⁰⁰⁰ CIB 67 citing CX-45C (Hejl Dep) at 258-59, 263 [CFF 4.764-4.765].

¹⁰⁰¹ CIB 70 citing CX-112C (Payne Direct) at Q. 273-96.

¹⁰⁰² CIB 70 citing CX-112C (Payne Direct) at Q. 274, 299 [CFF 4.783-92].

to obtain decoded sequences of data characters.”¹⁰⁰³ To test this capability, Dr. Payne operated various accused products to decode successfully a Stacked RSS symbol.¹⁰⁰⁴

According to Symbol, all of Metrologic’s accused devices practice the second limitation of claim 2 because [

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As summarized above, Metrologic asserts that its accused products do not infringe the “scanning, decoding and determining” limitations because its products do not perform these steps in this order. As the undersigned ruled above, the steps of the claim are to be performed in the order written because the steps require, as a matter of logic and grammar, that they be performed in the written order. Symbol does not offer any alternative argument should the undersigned find that the

¹⁰⁰³ CIB 70 citing CX-112C (Payne Direct) at Q. 277 and associated claim charts at CX-57C at 1-2; CX-58C at 1-2; CX-59C at 1-2; CX-60C at 1-2; and CX-61C at 1-2 [CFF 4.794].

¹⁰⁰⁴ CIB 70 citing CX-112C (Payne Direct) at Q.253-55 [CFF 4.444-4.464].

¹⁰⁰⁵ CIB 71 citing CX-112C (Payne Direct) at Q. 280 [CPFF 4.805].

¹⁰⁰⁶ CIB 71 citing CX-112C (Payne Direct) at Q. 280-81 [CFF 4.800-02].

¹⁰⁰⁷ CIB 71 citing JX-2 (the ‘308 patent) [CFF 4.804].

¹⁰⁰⁸ CIB 71 citing CX-045C (Hejl Dep) at 106-08; RX-763C (Chandler Rebuttal) at Q.354 [CFF 4.803].

order of steps needs to be performed in the written order. All of the evidence presented by Symbol shows that Metrologic's accused products: locate the finder pattern in a scan, decode the finder pattern, and based on the finder information, decode the accompanying data characters in the ordered sequence.¹⁰⁰⁹

Accordingly, because the "scanning and decoding" and "determining" limitations are not performed by Metrologic's accused products in the written order as required by the claims, Metrologic's accused products do not infringe claim 2. Therefore, there is no need to discuss the other arguments raised by the parties with regard to whether the other claim limitations are infringed.

In addition, as noted above, RSS-14 stacked bar codes also do not infringe the asserted claims of the '308 patent because they do not contain "scan fragments" as required by the preamble.

Accordingly, the undersigned finds that Symbol has failed to prove, by a preponderance of the evidence, that Metrologic's accused products infringe claim 2 of the '308 patent.

6. Claim 10

Symbol is only asserting that the Optimus device infringes claims 10 and 11.¹⁰¹⁰ Optimus differs from the remaining accused scanners because [

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¹⁰⁰⁹ CX-112C (Payne Direct) at Q. 280 [CPFF 4.805].

¹⁰¹⁰ CIB 75.

¹⁰¹¹ CIB 75 citing CX-45C (Hejl Dep) at 200; CX-112C (Payne Direct) at Q. 266-71 [CFP 3.427].

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patterns.¹⁰¹⁵

As summarized above, Metrologic asserts that its accused products do not infringe the “scanning, decoding and determining” limitations because its products do not perform these steps in this order. As the undersigned ruled above, the steps of the claim are to be performed in the order written because the steps require, as a matter of logic and grammar, that they be performed in the written order. Symbol does not offer any alternative argument should the undersigned find that the

¹⁰¹² CIB 75.

¹⁰¹³ CIB 75 citing CX-112C (Payne Direct) at Q. 311 [CFF 3.427, 4.886-4.888].

¹⁰¹⁴ CIB 75 citing CX-112C (Payne Direct) at Q.113-14, 266-71 [CFF 4.889-91].

¹⁰¹⁵ CIB 75 citing CX-112C (Payne Direct) at Q. 316-17 [CFF 4.892-4.896].

order of steps needs to be performed in the written order. All of the evidence presented by Symbol shows that Optimus scanners: [

] ¹⁰¹⁶

Accordingly, because the “scanning and decoding” and “determining” limitations are not performed by the Optimus scanners in the written order as required by the claims, the Optimus scanners do not infringe claim 10. Therefore, there is no need to discuss the other arguments raised by the parties with regard to whether the other claim limitations are infringed.

In addition, as noted above, RSS-14 stacked bar codes also do not infringe the asserted claims of the ‘308 patent because they do not contain “scan fragments” as required by the preamble.

Accordingly, the undersigned finds that Symbol has failed to prove, by a preponderance of the evidence, that Metrologic’s accused products infringe claim 10 of the ‘308 patent.

7. Claim 11

Claim 11 depends from claim 10 and merely requires that if the test check value is not substantially equal to the predetermined encoded check value, steps A through G are repeated.

Symbol asserts that the Optimus software performs claim 11 [

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The undersigned found that the accused products do not infringe claim 10, as noted above. As claim 11 depends from claim 10, the additional limitation in claim 11 is not met as well.

¹⁰¹⁶ CX-112C (Payne Direct) at Q. 316-17.

¹⁰¹⁷ CIB 77 citing CX-112C (Payne Direct) at Q.335-36 [CFF 4.928].

¹⁰¹⁸ CIB 77 citing CX-61C at 10.

Accordingly, the undersigned finds that Symbol has failed to prove, by a preponderance of the evidence, that Metrologic's accused products infringe claim 11 of the '308 patent.

8. Claim 21

Symbol asserts that claim 21 substantially duplicates the preamble and first three steps of claim 2 and that three Metrologic scanner families practice the additional claim limitation regarding the time-out sequence: the Voyager, the Quantum Fusion, and the Optimus.¹⁰¹⁹ According to Symbol, all three of Metrologic's accused product families practice the preamble of claim 21 because for the same reasons all of Metrologic's accused devices practice the identical preamble in claim 2.¹⁰²⁰ For claim 21, Dr. Payne shows that both the Voyager and Quantum Fusion products can [

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According to Symbol, all three of Metrologic's accused product families practice the first two steps of claim 21 ("scanning and decoding" and "determining"), which is substantially identical to the first two steps of claim 2.¹⁰²²

As summarized above, Metrologic asserts that its accused products do not infringe the "scanning, decoding and determining" limitations because its products do not perform these steps in this order. As the undersigned ruled above, the steps of the claim are to be performed in the order written because the steps require, as a matter of logic and grammar, that they be performed in the

¹⁰¹⁹ CIB 78 citing CX-112C (Payne Direct) at Q. 259, 339-40 [CFF 4.475, 4.931].

¹⁰²⁰ CIB 78.

¹⁰²¹ CIB 78 citing CX-112C (Payne Direct) at Q.342, 365 [CFF 4.940-4.943].

¹⁰²² CIB 78 citing CX-112C (Payne Direct) at Q.343-46, 368-71 [CFF 4.945-4.954].

written order. Symbol does not offer any alternative argument should the undersigned find that the order of steps needs to be performed in the written order. All of the evidence presented by Symbol shows that Metrologic's accused products: locate the finder pattern in a scan, decode the finder pattern, and based on the finder information, decode the accompanying data characters in the ordered sequence.¹⁰²³

Accordingly, because the "scanning and decoding" and "determining" limitations are not performed by Metrologic's accused products in the written order as required by the claims, Metrologic's accused products do not infringe claim 21. Therefore, there is no need to discuss the other arguments raised by the parties with regard to whether the other claim limitations are infringed.

In addition, as noted above, RSS-14 stacked bar codes also do not infringe the asserted claims of the '308 patent because they do not contain "scan fragments" as required by the preamble.

Accordingly, the undersigned finds that Symbol has failed to prove, by a preponderance of the evidence, that Metrologic's accused products infringe claim 21 of the '308 patent.

C. Domestic Industry - Technical Prong

Symbol asserts that each of its DS660x, Corona/SE2223, MC9000, MC3000, MC1000, MC70, MC50, SE950, SE440, SE1500, SE923, SE800, SE1200, LS2208, LS40xx, LS42x8, LS5800, LS9208, LS/DS34xx, LS7708, LS1900, MS2000, MSx2xx, PDT6800, PDT7200, PDT7500, PDT8000, PDT8100/2800, and PPT8800 product families, as well as Symbol's "Portable Shopping System" ("PSS") (collectively, "Symbol's devices") satisfy all of the limitations of claims

¹⁰²³ CX-112C (Payne Direct) at Q. 280 [CPFF 4.805].

2, 10, and 11 of the ‘308 patent under Symbol’s claim construction.¹⁰²⁴ According to Symbol, its products meet domestic industry technical prong for the same reasons Metrologic’s scanners infringe claims 2, 10, and 11 of the ‘308 patent. Symbol asserts that all of its RSS-capable scanners employ the same software for decoding RSS symbologies; therefore, the analysis for the technical prong of Symbol’s products is the same for all of its products that are capable of decoding RSS.¹⁰²⁵

According to Symbol, Metrologic does not dispute: (1) that Symbol actively induces its domestic customers to practice claims 2, 10, and 11, (2) that Symbol’s employees have actually used the Symbol scanners in the United States to decode RSS, and (3) the operation of the software loaded in Symbol’s products.¹⁰²⁶

Metrologic asserts that any product which decodes the RSS family of bar codes is not covered by the ‘308 patent.¹⁰²⁷ According to Metrologic, Symbol’s products do not practice the ‘308 patent for the same reasons its own accused products do not practice the ‘308 patent, including: (1) RSS bar codes do not have “delimiting characters,” (2) [

] (3) decoding RSS-14 stacked bar codes in two scans requires scanning full rows of the bar codes, and such decoding does not include “scan fragments,” (4) decoding RSS-14 stacked bar codes in two scans requires decoding two sequences of two characters each, so the decoding is not “independent[] of the respective lengths of the first

¹⁰²⁴ CIB 88 citing CX-112C (Payne Direct) at Q. 174-811 CX-56C (claim chart) at 1-9; CX-113C (Schuessler Direct) at 84-121; CX-114C (Spitz Direct) at Q. 89-106 [CFF 5.191-5.193].

¹⁰²⁵ CIB 89 citing CX-112C (Payne Direct) at Q. 174-81 ; CX-113C (Schuessler Direct) at 84-91; CX-114C (Spitz Direct) at Q. 89-95 [CFF 5.198].

¹⁰²⁶ CIB 88-89 citing CX-154C (Schuessler Supplemental Direct) at Q. 121; RX-3C (Chandler Direct); RX-763C (Chandler Rebuttal) [CFF 5.194-5.197, 5.204].

¹⁰²⁷ RIB 102-104; RRB 52-53.

and second decoded sequences.”¹⁰²⁸

Additionally, Metrologic asserts that decoding of RSS bar codes by Symbol products is not covered by claims 2, 10, and/or 11 because: [

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¹⁰²⁸ RIB 103 citing RX-763C (Chandler Rebuttal) at Q. 286, 442-446; RDX-102C (non-infringement table).

¹⁰²⁹ RIB 103 citing RX-3C (Chandler Direct) at Q. 152-55, 286; RDX-87 (claim 2 of the ‘308 patent); RX-763C (Chandler Rebuttal) at Q. 361-64; RDX-101C (non-infringement table).

¹⁰³⁰ RIB 103 citing RX-763C (Chandler Rebuttal) at Q. 310, 365, 371, 377-80.

¹⁰³¹ RIB 103 citing RX-3C (Chandler Direct) at Q. 286; RX-763C (Chandler Rebuttal) at Q. 310, 365, 371, 377, 380.

¹⁰³² RIB 103 citing RX-763C (Chandler Rebuttal) at Q. 385-90; RDX-101C (non-infringement table); RDX-102C (non-infringement table).

¹⁰³³ RIB 104 citing RX-763C (Chandler Rebuttal) at Q. 447-48.

¹⁰³⁴ RIB 104 citing RX-763C (Chandler Rebuttal) at Q. 451-53; RDX-102C (non-infringement table)

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Staff asserts that the evidence shows that Symbol practices all the elements of claims 2, 10 and 11 of the ‘308 patent.¹⁰³⁷ According to Staff, Metrologic offered no evidence displaying how Symbol’s software implements the scanning process and only offered its repeated claim construction arguments.¹⁰³⁸

The parties arguments for technical prong are virtually identical to their arguments for infringement. Therefore, there appears to be little dispute between the parties that, if there is infringement, the technical prong is met, while if there is no infringement, the technical prong is not met.

As noted above, the undersigned rejects a majority of Metrologic’s technical prong arguments, as they are repetitive of Metrologic’s claim construction arguments, which were rejected above, and will not be discussed any further. The undersigned did find, however, Metrologic’s argument persuasive regarding “scan fragments” and the required order of the steps in the claim to be persuasive.

The undersigned finds that Symbol has not shown, by a preponderance of the evidence, that its products practice the ‘308 patent. Symbol has based its entire technical prong analysis on its

¹⁰³⁵ RIB 104 citing RX-3C (Chandler Direct) at Q. 286; RX-763C (Chandler Rebuttal) at Q. 454-55, 458.

¹⁰³⁶ RIB 104 citing RX-3C (Chandler Direct) at Q. 286; RX-763C (Chandler Rebuttal) at Q. 466-72; RDX-102C (non-infringement table).

¹⁰³⁷ CIB 52 citing CX-112C (Payne Direct) at Q.174-81; CX-56C (claim chart).

¹⁰³⁸ SIB 52-53 citing RX-3C (Chandler Direct) at Q.284-86.

own claim construction. As already discussed above, the undersigned has not adopted all of Symbol's claim construction on a few key terms including the meaning of "scan fragments" and the "scanning, decoding, and determining" steps. Because Symbol has not presented arguments in the alternative, *i.e.* based on Metrologic's or Staff's claim construction,¹⁰³⁹ the undersigned is unable to determine whether Symbol's products practice the '308 patent. As the burden of proof lies with Symbol for domestic industry, the undersigned finds that such burden has not been met.

D. Invalidity

Metrologic has withdrawn all of its assertions of invalidity of the '308 patent. Therefore there undersigned makes no findings regarding invalidity of the '308 patent.

E. Equitable Estoppel

Metrologic asserts that, if the undersigned finds that its products infringe the '308 patent, then Symbol should be estopped from asserting the '308 patent against Metrologic's scanning devices because Symbol, through its misleading conduct, led Metrologic to reasonably infer that Symbol did not intend to enforce the '308 patent against Metrologic's use of the Reduced Space Symbology ("RSS") standard.¹⁰⁴⁰ Metrologic asserts that its primary argument is, however, that when the '308 patent is properly construed, its products do not infringe the '308 patent.¹⁰⁴¹

There is no dispute between the parties that the RSS standard was published in 1999 by an industry organization known as the Association of Automatic Identification and Mobility

¹⁰³⁹ The undersigned notes that Symbol did propose an alternative argument under the doctrine of equivalents if the undersigned adopted Metrologic's claim construction regarding when the "combining" step begins.

¹⁰⁴⁰ RIB 139.

¹⁰⁴¹ RRB 68.

(“AIM”).¹⁰⁴² AIM standards are accepted by virtually the entire industry and AIM standards often become international standards when adopted by the American National Standards Institute (“ANSI”) and the International Standards Organization (“ISO”).¹⁰⁴³ AIM’s mission is to create open symbology standards, or standards that are placed in the public domain that are “free from all use restrictions, licenses and fees.”¹⁰⁴⁴

According to Metrologic, Symbol was fully aware of AIM’s policy to refuse to establish standards that are not in the public domain. Metrologic asserts that, in the early 1990’s, Symbol proposed a symbology called PDF417 for standardization. AIM refused to standardize PDF417 until Symbol agreed to license the technology in the public domain.¹⁰⁴⁵

Metrologic asserts that during the development of the RSS standard within AIM, Symbol failed to disclose the existence of the ‘308 patent and that this intellectual property would prohibit the open use of the RSS standard by the industry.¹⁰⁴⁶ According to Metrologic, Symbol was aware that AIM members were expected to disclose relevant intellectual property relating to a proposed specification regardless of whether the disclosing member was the proponent of the standard.¹⁰⁴⁷ Metrologic asserts that Symbol had various representatives in AIM, including Symbol’s CEO Tomo Razmilovic, who was on the AIM Board of Directors; Symbol’s marketing director and director of global standards development, Tina Barken, who served on AIM’s Bar Code Council Criteria Work Group; and Symbol employees Rick Schuessler and Richard Bravman, who served on AIM’s

¹⁰⁴² Ackley, Tr. 1276-77, 1280. Sprague Ackley was a member of AIM’s TSC and was an employee of Intermec.

¹⁰⁴³ Ackley, Tr. 1275.

¹⁰⁴⁴ RIB 140 citing Ackley, Tr. 1344-45.

¹⁰⁴⁵ RIB 141-42 citing RX-51C (Longacre Dep) at 44-50.

¹⁰⁴⁶ RIB 129 citing Ackley, Tr. 1301-02.

¹⁰⁴⁷ RIB 139-40 citing JX-94 (Symbol Press Release); Ackley, Tr. 1303-04, 1290.

Technical Symbology Committee (“TSC”).¹⁰⁴⁸ According to Metrologic, Rick Schuessler in particular was aware of the ‘308 patent while actively contributing to the development of RSS, yet failed to disclose this patent to AIM.¹⁰⁴⁹

Once the RSS standard was adopted by the industry, Symbol began to enforce the ‘308 patent against industry members, such as Intermec and Metrologic.¹⁰⁵⁰ Metrologic asserts that, because Symbol participated in the standard-setting process and failed to disclose the existence of the ‘308 patent and its intention to enforce the ‘308 patent, Symbol should be precluded from asserting its patent rights under the doctrine of equitable estoppel.¹⁰⁵¹

Symbol asserts that: (1) it has consistently followed the procedures of AIM regarding disclosure of intellectual property; (2) Symbol and its representatives were unaware at the time of the specification process that the method of scan-stitching described in the ‘308 patent, which predated the invention of RSS by several years,¹⁰⁵² might be employed when laser bar code scanners read RSS symbols; and (3) Metrologic could not reasonably rely upon the mere publication of the RSS specification to support their belief that Symbol would not enforce its patent rights.¹⁰⁵³

Symbol asserts that Ted Williams, a self-employed engineer working under contract for the

¹⁰⁴⁸ RIB 141 citing Schuessler, Tr. 1209-10; CX-167C (Schuessler Rebuttal) at 2.

¹⁰⁴⁹ RIB 139, 142 citing CX-113C (Schuessler Direct) at Q. 147; CX-167C (Schuessler Rebuttal) at Q. 76.

¹⁰⁵⁰ RIB 140 citing Ackley, Tr. 1343-44.

¹⁰⁵¹ RIB 144-47.

¹⁰⁵² The patent application that became the ‘308 patent was filed nearly five years before work began on the RSS specification at AIM. In addition, the ‘308 patent was issued on October 10, 1995, and the RSS specification was published on October 29, 1999. CIB 144 citing JX-2 (the ‘308 patent); JX-18 (AIM RSS specification); Ackley, Tr. 1297; Schuessler, Tr. 1224-25 [CFF 7.79, 7.84-85].

¹⁰⁵³ CIB 139.

Uniform Code Council (“UCC”), an industry organization different from AIM, invented RSS.¹⁰⁵⁴ According to Symbol, UCC submitted the RSS specification to AIM for publication; therefore UCC was the “sponsor” of the RSS specification, not Symbol.¹⁰⁵⁵ Symbol asserts that AIM’s policy required the “sponsor” of a proposed specification to provide “assurance that either the Technology is in the Public Domain . . . or that a license will be made available.”¹⁰⁵⁶ According to Symbol, AIM’s policies do not impose an obligation on non-sponsor members to disclose patents that may relate to a proposed specification.¹⁰⁵⁷ Symbol asserts that Metrologic’s assertion that non-sponsors also had a duty to disclose is based on the testimony of Mr. Ackley, who acknowledged that he had not studied the AIM policy in JX-112, and did not know whether that policy obligated non-sponsor AIM members to bring intellectual property to the attention of AIM.¹⁰⁵⁸ Therefore, Symbol asserts that it had no duty to disclose the ‘308 patent to AIM during review of RSS. Symbol also asserts that neither Mr. Schuessler nor Symbol were aware that laser bar code scanners could practice claims of the ‘308 patent when decoding RSS.¹⁰⁵⁹ Finally, Symbol asserts that Metrologic has failed to present evidence that Metrologic relied upon Symbol’s participation in AIM and appears to be

¹⁰⁵⁴ CIB 141 citing CX-167C (Schuessler Rebuttal) at Q. 15; CX-178C (Mullen Dep) at 172; CX-114C (Spitz Direct) at Q. 75; Schuessler, Tr. 1233; Ackley, Tr. 1297; RX-51C (Longacre Dep) at 81 [CFF 7.51, 7.48].

¹⁰⁵⁵ CIB 141-42 citing JX-120 (letter submitting RSS to AIM); CX 167C (Schuessler Rebuttal) at Q. 9, 32, 36; Ackley, Tr. 1297-98, 1333-34; JX 117 (update on AIM standards activities); CX 178C (Mullen Dep) at 161-62; Schuessler, Tr. 1231; RX 51C (Longacre Dep) at 134; JX 112 (AIM approval procedures), p. 5, Section 5.a. [CFF 7.56-57].

¹⁰⁵⁶ CIB 142 citing JX-112 (AIM approval procedures) [CFF 7.16].

¹⁰⁵⁷ CIB 142 citing CX 178C (Mullen Dep) at 105, 158, 184; CX-167C (Schuessler Rebuttal) at Q. 67; Schuessler, Tr. 1231-32; RX-51C (Longacre Dep) at 148 [CFF 7.33-34].

¹⁰⁵⁸ CRB 67 citing Ackley, Tr. 1326-28, 1331-33, 1348 [CORFF 1782L-M].

¹⁰⁵⁹ CIB 143 citing CX 167C (Schuessler Rebuttal) at Q. 78 [CFF 7.83].

depending upon the mere fact that the RSS specification was published.¹⁰⁶⁰ Symbol notes that the RSS specification specifically provides a statement that “AIM, Inc. believes that Technology presented in this standard is entirely in the public domain and free from all use restrictions, licenses, and fees, but does not warrant or indemnify this to be the case,” which is language that is required by the AIM intellectual property policy.¹⁰⁶¹

Staff asserts that Metrologic has not met its burden to prove that Symbol is estopped from asserting the ‘308 patent because the evidence does not show that Symbol had any duty to disclose the ‘308 patent in connection with the development of the RSS bar code standards by the AIM Committee. Specifically, the AIM Committee required disclosure by a “sponsor” of a proposal and the sponsor of the RSS bar code proposal was the UCC, not Symbol.¹⁰⁶² Staff also asserts that the evidence does not show that the asserted method claims of the ‘308 patent are the only methods that one can use to read the RSS bar codes; therefore, even if the claims of the ‘308 patent cover certain methods of reading RSS bar codes, other non-infringing methods are likely available and that could be adopted by Metrologic.¹⁰⁶³

Metrologic counters Staff’s argument regarding alternative non-infringing methods, stating that Symbol itself, asserts that “any laser bar code scanner that reads an RSS-14 stacked bar code necessarily infringes the ‘308 patent.”¹⁰⁶⁴

Metrologic also counters both Symbol’s and Staff’s arguments regarding the duty to disclose because Symbol was not the “official” sponsor of RSS. According to Metrologic, Mr. Schuessler’s

¹⁰⁶⁰ CIB 144.

¹⁰⁶¹ CIB 144-45 citing JX-112 (AIM approval procedures) at ¶ A7.1 [CFF 7.80].

¹⁰⁶² SIB 68; SRB 10.

¹⁰⁶³ SIB 69.

¹⁰⁶⁴ RRB 68 citing Symbol’s Second Amended Complaint, ¶ 72.

role was so instrumental in the development of RSS and its standardization that he was perceived by others as being the sponsor of the RSS standard in AIM.¹⁰⁶⁵ Furthermore, Metrologic asserts that there is precedent that, in a standard-setting process, a patent holder may be estopped from asserting patent rights based on its conduct even absent any rules requiring disclosure.¹⁰⁶⁶ Metrologic asserts that *Rambus*, which is relied upon by both Symbol and Staff, has been overruled in essence by a recent decision by the FTC.¹⁰⁶⁷ In response, Symbol counters that the cases relied upon by Metrologic are distinguishable because other courts have stated that in those cases, the patentees had an affirmative duty to disclose.¹⁰⁶⁸

Metrologic counters Symbol's arguments that neither Mr. Schuessler or anyone at Symbol was aware that laser bar code scanners could practice claims of the '308 patent when decoding RSS as not being credible considering that Mr. Schuessler was working along side the same individuals who were developing Symbol's decode algorithms for RSS.¹⁰⁶⁹

A party raising equitable estoppel must prove, by a preponderance of the evidence, three elements:

- (1) The patentee, who usually must have knowledge of the true facts, communicates something in a misleading way, either by words, conduct or silence;
- (2) The accused infringer relies upon that communication; and
- (3) The accused infringer would be harmed materially if the [patentee] is later permitted to

¹⁰⁶⁵ RRB 69-70 citing RX-51C (Longacre Dep) at 177-78.

¹⁰⁶⁶ RRB 71-72 citing *Stambler v. Diebold, Inc.*, 11 U.S.P.Q.2d 1709 (E.D.N.Y. 1988) ("*Stambler*").

¹⁰⁶⁷ RRB 72, n. 38. See *Rambus Inc.*, FTC Docket No. 9302 (Aug. 2, 2006) ("*Rambus*").

¹⁰⁶⁸ CRB 68 citing *Lucas Aerospace Ltd. v. Unison Indus., L.P.*, 899 F.Supp. 1268, 1294 (D. Del. 1995) ("*Lucas Aerospace*") referring to *Stambler and Potter Instrument Co. v. Storage Technology Corp.*, 207 U.S.P.Q. 763, 769 (E.D. Va. 1980) ("*Potter Instrument*").

¹⁰⁶⁹ RRB 71 citing CX-167C (Schuessler Rebuttal) at Q. 84.

assert any claim inconsistent with his earlier conduct.’¹⁰⁷⁰

In cases where the allegation concerns participation with a standards setting body and a failure to disclose intellectual property to that body, the standards setting body must have a clear, unambiguous policy concerning disclosure.¹⁰⁷¹ In the absence of affirmative misrepresentations, equitable estoppel in the standard-setting context requires a “misleading silence.” In order for such a “misleading inaction” to rise to the level of equitable estoppel, the inaction must be combined with other facts respecting the relationship or contacts between the parties to give rise to the necessary inference that the claim against the defendant is abandoned.¹⁰⁷²

The undersigned finds Symbol’s and Staff’s arguments to be persuasive. UCC was the “sponsor” of RSS to AIM, not Symbol; therefore Symbol had no affirmative duty to disclose the ‘308 patent to AIM.¹⁰⁷³ Furthermore, the undersigned finds that the evidence does not show that Mr. Schuessler was so involved in the RSS specification publication process to be considered an implicit “sponsor.” Therefore, Metrologic has failed to show a misleading communication within the meaning of the equitable estoppel test. In light of Metrologic’s failure to meet the first part of the equitable estoppel test, there is no need to discuss the remaining two tests.¹⁰⁷⁴

¹⁰⁷⁰ *Vanderlande*, 366 F.3d at 1324 citing *A.C. Aukerman*, 960 F.2d at 1041. *See also Certain Encapsulated Integrated Circuit Devices and Products Containing Same*, Inv. No. 337-TA-501, Initial Determination at 379-85 (November 18, 2004).

¹⁰⁷¹ *Rambus v. Infineon Technologies AG*, 318 F.3d 1081, 1102 (Fed. Cir. 2003) (“*Infineon*”).

¹⁰⁷² *Aukerman*, 960 F.2d at 1042-43.

¹⁰⁷³ JX 120 (letter submitting RSS to AIM); CX 167C (Schuessler Rebuttal) at Q. 9, 32, 36; Ackley, Tr. 1297-98, 1333-34; JX 117 (update on AIM standards activities); CX 178C (Mullen Dep) at 161-62; Schuessler, Tr. 1231; RX 51C (Longacre Dep) at 134; JX 112 (AIM approval procedures), p. 5, Section 5.a. [CFF 7.56-57].

¹⁰⁷⁴ *Vanderlande*, 366 F.3d at 1325.

VIII. Domestic Industry - Economic Prong

As noted above, the undersigned issued an initial determination on July 17, 2006 granting Complainants' motion for summary determination on domestic industry, economic prong.¹⁰⁷⁵ On August 25, 2006, the Commission issued a notice of decision to review and modify the initial determination. The Commission modified the initial determination "to the extent necessary to clarify that the Commission relies not only on Symbol's engineering investments in adopting the ALJ's determination with regard to the economic prong of the domestic industry requirement, but also on that portion of Symbol's service and repair investments which Metrologic concedes are associated with the products allegedly covered by the '627 patent and the '173 patent."¹⁰⁷⁶ Accordingly, no further discussion regarding the economic prong is required.

¹⁰⁷⁵ See Order No. 25 (July 17, 2006).

¹⁰⁷⁶ See Commission Notice at 2 (August 25, 2006).

CONCLUSIONS OF LAW

1. The Commission has subject matter jurisdiction in this investigation.
2. The Commission has personal jurisdiction over Metrologic.

THE '173 PATENT

3. Metrologic's accused products infringe claims 17 and 18 of U.S. Patent No. 5,917,173 in violation of 35 U.S.C. § 271(a).
4. An industry in the United States exists with respect to Symbol's products that is protected by claim 17 of U.S. Patent No. 5,917,173, as required by 19 U.S.C. § 1337(a)(2) and (3).
5. Claims 17 and 18 of U.S. Patent No. 5,917,173 are not invalid under 35 U.S.C. § 102 for anticipation based on any of the following references:
 - a. U.S. Patent No. 4,632,501; and
 - b. U.S. Patent No. 4,732,440.
6. Claims 17 and 18 of U.S. Patent No. 5,917,173 are not invalid under 35 U.S.C. § 103 for single-reference obviousness based on the following references:
 - a. U.S. Patent No. 4,632,501; and
 - b. U.S. Patent No. 4,732,440.
7. Claims 17 and 18 of U.S. Patent No. 5,917,173 are not invalid under 35 U.S.C. § 112, ¶ 1 for lack of written description/enablement.

THE '627 PATENT

8. Metrologic's accused products infringe claim 48 of U.S. Patent No. 5,262,627 in violation of 35 U.S.C. § 271(a).
9. An industry in the United States exists with respect to Symbol's products that is protected

- by claim 48 of U.S. Patent No. 5,262,627, as required by 19 U.S.C. § 1337(a)(2) and (3).
10. Claim 48 of U.S. Patent No. 5,262,627 is not invalid under 35 U.S.C. § 102 for anticipation based on any of the following references:
 - a. U.S. Patent No. 4,632,501; and
 - b. U.S. Patent No. 4,732,440.
 11. Claim 48 of U.S. Patent No. 5,262,627 is not invalid under 35 U.S.C. § 103 for single-reference obviousness based on the following references:
 - a. U.S. Patent No. 4,632,501; and
 - b. U.S. Patent No. 4,732,440.
 12. Claim 48 of U.S. Patent No. 5,262,627 is not invalid under 35 U.S.C. § 112, ¶ 1 for lack of written description/enablement.

THE '889 PATENT

13. Metrologic's accused products do not infringe claims 7, 8, 11, 13, and 14 of U.S. Patent No. 5,545,889 in violation of 35 U.S.C. § 271(a).
14. Metrologic's accused products infringe claim 18 of U.S. Patent No. 5,545,889 in violation of 35 U.S.C. § 271(a).
15. An industry in the United States does not exist with respect to Symbol's products that is protected by claims 7 and 8 of U.S. Patent No. 5,545,889, as required by 19 U.S.C. § 1337(a)(2) and (3).
16. Claims 7, 11, 13 and 14 of U.S. Patent No. 5,545,889 are not invalid under 35 U.S.C. § 102 for anticipation based on U.S. Patent No. 4,409,470.
17. Claims 7, 11, 13, and 14 of U.S. Patent No. 5,545,889 are not invalid under 35 U.S.C. § 102

for anticipation based on U.S. Patent No. 4, 971,410.

18. Claims 8 and 18 of U.S. Patent No. 5,545,889 are not invalid under 35 U.S.C. § 103 for single-reference obviousness based on U.S. Patent No. 4,409,470.
19. Claim 18 of U.S. Patent No. 5,545,889 is not invalid under 35 U.S.C. § 103 for single-reference obviousness based on U.S. Patent No. 4, 971,410.
20. Claims 7, 8, 11, 13, 14, and 18 of U.S. Patent No. 5,545,889 are not invalid under 35 U.S.C. § 103 for single-reference obviousness based on the MH-132/MS131 Products or SS-100 Product, or for obviousness based on the MH-132/MS131 Products in combination with its SS-100 product.
21. Claims 7, 8, 11, 13, 14, and 18 of U.S. Patent No. 5,545,889 are not invalid under 35 U.S.C. § 112, ¶ 2 for indefiniteness.
22. Claim 17 of U.S. Patent No. 5,545,889 is invalid under 35 U.S.C. § 112, ¶ 2 for indefiniteness.

THE '308 PATENT

23. Metrologic's accused products do not infringe claims 2, 10, 11, and 21 of U.S. Patent No. 5,457,308 in violation of 35 U.S.C. § 271(a).
24. An industry in the United States does not exist with respect to Symbol's products that is protected by claims 2, 10, 11, and 21 of U.S. Patent No. 5,457,308, as required by 19 U.S.C. § 1337(a)(2) and (3).
25. U.S. Patent No. 5,457,308 is not unenforceable by reason of equitable estoppel in connection with Symbol's conduct before AIM.

INITIAL DETERMINATION

Based on the foregoing opinion, findings of fact, conclusions of law, the evidence, and the record as a whole, and having considered all pleadings and arguments, including the proposed findings of fact and conclusions of law, it is the Administrative Law Judge's Initial Determination that a violation of Section 337 of the Tariff Act of 1930, as amended, has been found in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain laser bar code scanners and scan engines, components thereof, and products containing same, in connection with claim 48 of U.S. Patent No. 5,262,627; and claims 17 and 18 of U.S. Patent No. 5,917,173; and has not been found in connection with claims 7, 8, 11, 13, 14, 17, and 18 of U.S. Patent No. 5,545,889; and claims 2, 10, 11, and 21 of U.S. Patent No. 5,457,308. Furthermore, the Administrative Law Judge hereby determines that a domestic industry in the United States exists that practices U.S. Patent Nos. 5,262,627 and 5,917,173 and does not exist that practices U.S. Patent Nos. 5,545,889 and 5,457,308.

The Administrative Law Judge hereby CERTIFIES to the Commission this Initial Determination, together with the record of the hearing in this investigation consisting of the following: the transcript of the evidentiary hearing, with appropriate corrections as may hereafter be ordered by the Administrative Law Judge; and further the exhibits accepted into evidence in this investigation as listed in the attached exhibit lists.

Pursuant to 19 C.F.R. § 210.42(h), this Initial Determination shall become the determination of the Commission unless a party files a petition for review pursuant to 19 C.F.R. § 210.43(a) or the Commission, pursuant to 19 C.F.R. § 210.44, orders on its own motion a review of the Initial Determination or certain issues therein.

IX. Remedy and Bonding

A. Limited Exclusion Order

Under section 337(d), the Commission may issue either a limited or a general exclusion order. A limited exclusion order instructs the U.S. Customs Service to exclude from entry all articles that are covered by the patent at issue and that originate from a named respondent in the investigation. A general exclusion order instructs the U.S. Customs Service to exclude from entry all articles that are covered by the patent at issue, without regard to source. Symbol requests that a limited exclusion order be issued that prohibits the importation of all infringing bar code scanners and components of those scanners, for all purposes, including testing, sampling, sale, promotion and demonstration.¹⁰⁷⁷ Staff agrees that, if a violation of Section 337 is found, a limited exclusion order directed at the infringing products is warranted.¹⁰⁷⁸ Metrologic asserts that its products do not infringe; therefore, a limited exclusion order should not be issued.¹⁰⁷⁹ The undersigned recommends a limited exclusion order to all Metrologic products that are found to infringe the asserted patents.

B. Cease and Desist Order

Under Section 337(f)(1), the Commission may issue a cease and desist order in addition to, or instead of, an exclusion order. Cease and desist orders are warranted primarily when the respondent maintains a commercially significant inventory of the accused products in the United States.¹⁰⁸⁰

Symbol requests a cease and desist order against Metrologic because Metrologic maintains

¹⁰⁷⁷ CIB 145-46.

¹⁰⁷⁸ SIB 70.

¹⁰⁷⁹ RIB 147.

¹⁰⁸⁰ *Crystalline Cefadroxil Monohydrate*, 15 U.S.P.Q.2d at 1277-79.

a significant inventory of accused products in the United States.¹⁰⁸¹ The parties have stipulated that Metrologic maintains a commercially significant inventory of accused products in the United States.¹⁰⁸² Staff agrees that the evidence shows that there is a commercially significant inventory of accused products in the United States.¹⁰⁸³ Metrologic asserts that its products do not infringe; therefore, a cease and desist order should not be issued.¹⁰⁸⁴

The evidence shows that Metrologic maintains significant inventories of accused products in the United States. Therefore, the undersigned finds that a cease and desist order is warranted.

C. Bond During Presidential Review Period

If the Commission enters an exclusion order or cease and desist order, parties may continue to import and sell their products during the pendency of the Presidential review under a bond in an amount determined by the Commission to be “sufficient to protect the Complainants from any injury.”¹⁰⁸⁵ Symbol and Metrologic request a bond in the amount of \$10 per unit, []¹⁰⁸⁶ Staff agrees that \$10 per unit appears adequate.¹⁰⁸⁷ The undersigned finds that \$10 per unit is appropriate and is recommended here.

¹⁰⁸¹ CIB 146.

¹⁰⁸² CIB 146 citing CX-209C (Stipulation) at ¶ 2 [CFF 8.1].

¹⁰⁸³ SIB 70.

¹⁰⁸⁴ RIB 147.

¹⁰⁸⁵ 19 U.S.C. § 1337(e); 19 C.F.R. § 210.50(a)(3).

¹⁰⁸⁶ CIB 146-47; RIB 147-48 citing CX-209C (Stipulation) at ¶ 1 [CFF 8.5].

¹⁰⁸⁷ SIB 71.