

*In the Matter of*

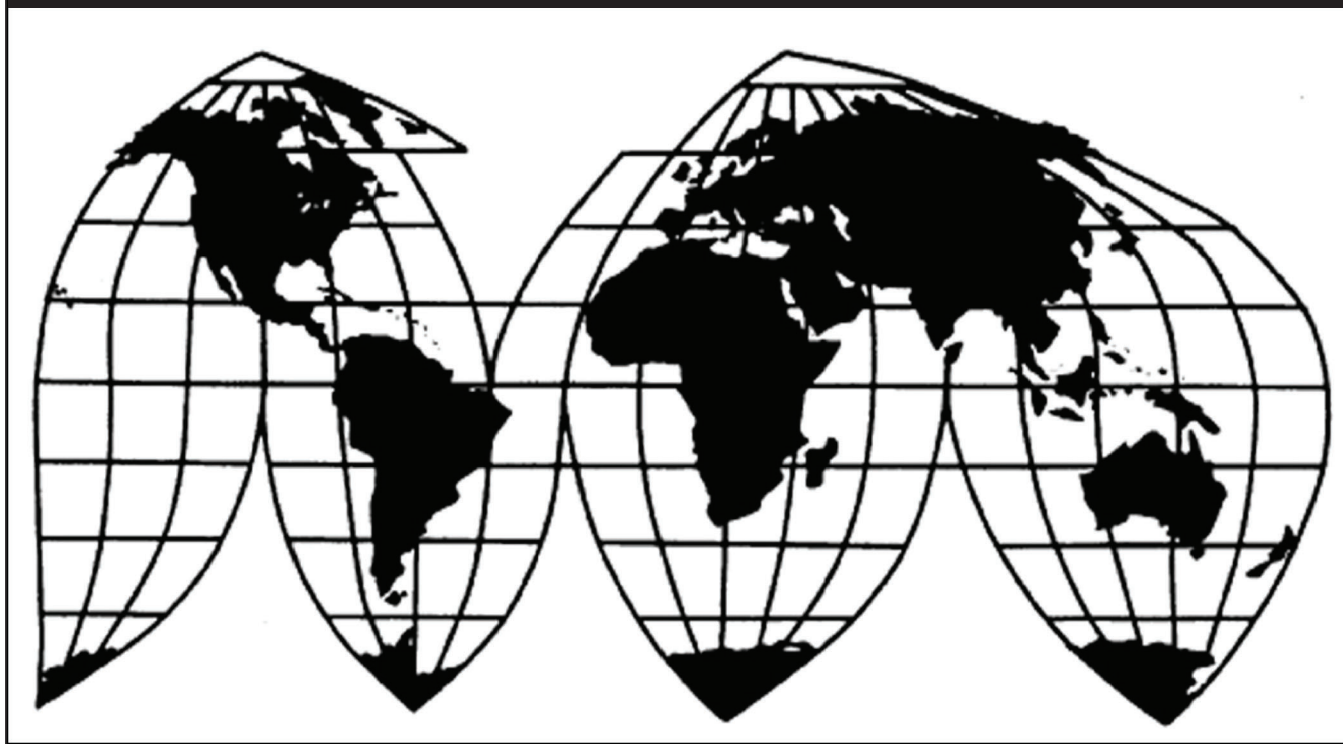
**CERTAIN MAGNETIC TAPE CARTRIDGES  
AND COMPONENTS THEREOF**

Investigation No. 337-TA-1036

Publication 4963

September 2019

**U.S. International Trade Commission**



Washington, DC 20436

# **U.S. International Trade Commission**

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Washington, DC 20436**

# U.S. International Trade Commission

Washington, DC 20436  
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*In the Matter of*

## **CERTAIN MAGNETIC TAPE CARTRIDGES AND COMPONENTS THEREOF**

Investigation No. 337-TA-1036



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

**In the Matter of**

**CERTAIN MAGNETIC TAPE  
CARTRIDGES AND COMPONENTS  
THEREOF**

**Investigation No. 337-TA-1036**

**NOTICE OF COMMISSION DETERMINATION TO REVIEW IN PART THE FINAL  
INITIAL DETERMINATION; AND, ON REVIEW, TO FIND NO VIOLATION OF  
SECTION 337; TERMINATION OF THE INVESTIGATION**

**AGENCY:** U.S. International Trade Commission.

**ACTION:** Notice.

**SUMMARY:** Notice is hereby given that the U.S. International Trade Commission has determined to review in part the Chief Administrative Law Judge's ("ALJ") final initial determination ("ID"), issued on January 25, 2018, finding no violation of section 337 of the Tariff Act of 1930, as amended (19 U.S.C. 1337) ("section 337"), in the above-captioned investigation. On review, the Commission has determined to find no violation of section 337. The investigation is terminated in its entirety.

**FOR FURTHER INFORMATION CONTACT:** Cathy Chen, Esq., Office of the General Counsel, U.S. International Trade Commission, 500 E Street SW, Washington, DC 20436, telephone (202) 205-2392. 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 SW, Washington, DC 20436, telephone (202) 205-2000. General information concerning the Commission may also be obtained by accessing its Internet server at <https://www.usitc.gov>. The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at <https://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:** The Commission instituted the above-captioned investigation on January 24, 2017, based on a complaint filed by Sony Corporation of Tokyo, Japan; Sony Storage Media and Devices Corporation of Miyagi, Japan; Sony DADC US Inc. of Terre Haute, Indiana; and Sony Latin America Inc. of Miami, Florida (collectively, "Sony"). See 82 FR 8209-10 (Jan. 24, 2017). The complaint, as supplemented, alleges violations of section 337 based upon the importation into the United States, the sale for importation, and the sale within the United States after importation of certain magnetic tape cartridges and components thereof by reason of infringement of certain claims of U.S. Patent No. 6,345,779

("the '779 patent"); U.S. Patent No. 7,115,331 ("the '331 patent"); U.S. Patent No. 6,896,959 ("the '959 patent"); and U.S. Patent No. 7,016,137 ("the '137 patent"). *Id.* The notice of investigation named Fujifilm Holdings Corporation of Tokyo, Japan; Fujifilm Corporation of Tokyo, Japan; Fujifilm Holdings America Corporation of Valhalla, New York; and Fujifilm Recording Media U.S.A., Inc. of Bedford, Massachusetts (collectively, "Fujifilm") as respondents in this investigation. *Id.* The Office of Unfair Import Investigations is also a party to this investigation. *Id.*

All asserted claims of the '959 patent and the '137 patent and one asserted claim of the '331 patent have been terminated from the investigation. *See* Order Nos. 20 and 21; Comm'n Notices (Sep. 25, 2017). The evidentiary hearing was held on September 25-28, 2017.

On January 25, 2018, the Chief ALJ issued his final ID and his recommended determination ("RD") on remedy and bonding in this investigation. The ID finds no violation of section 337 by Fujifilm in connection with claims 1-6 of the '779 patent and claims 1-3, 9-11, 13-14, and 16-17 of the '331 patent (collectively, "the Asserted Patents"). Specifically, the ID finds that Fujifilm does not infringe the asserted claims of the Asserted Patents. The ID also finds that the asserted claims of the '331 patent have not been proven invalid but that the asserted claims of the '779 patent are anticipated and/or obvious. The ID further finds that the technical prong of the domestic industry requirement has not been satisfied for the '779 patent but has been satisfied for the '331 patent. And, finally, the ID finds the economic prong of the domestic industry requirement has not been satisfied for the Asserted Patents.

On February 7, 2018, Sony and the Commission's Investigative Attorney each filed a timely petition for review of the ID and Fujifilm filed a contingent petition for review of the ID. On February 15, 2018, the parties filed timely responses to the petitions for review. No public interest comments were filed by the public in this investigation.

Having examined the record of this investigation, including the ID, the petitions for review, and the responses thereto, the Commission has determined to review the ID in part. First, the Commission has determined to correct three typographical errors on page 51 of the ID. In line 16 of the ID, "securing the leader pin spring in the tape cartridge" is replaced with "securing the leader pin in the tape cartridge." In line 18 of the ID, "claim" is replaced with "claim 1" and "leader pin sits loosely" is replaced with "leader pin spring sits loosely."

Second, with respect to the '779 patent, the Commission has determined to review the ID's finding that the 15<sup>th</sup> embodiment in U.S. Patent No. 6,236,539 ("Morita") does not anticipate the asserted claims, and the ID's finding that claims 5 and 6 are rendered obvious by a combination of Morita's 6<sup>th</sup> and 15<sup>th</sup> embodiments.

Third, with respect to the '331 patent, the Commission has determined to review the ID's finding that the Fujifilm's accused products do not infringe and that IBM's domestic industry products do not practice the asserted claims of the '331 patent; the ID's construction of the claim term "metallic magnetic particulate pigment;" the ID's finding that JP 2002-074641 ("Mori") does not anticipate the asserted claims; and the ID's finding that JP 2003-123226 ("Naoe") does not anticipate the asserted claims.

Finally, the Commission has determined to review the ID's finding that the economic prong of the domestic industry requirement has not been satisfied for the Asserted Patents.

On review, the Commission has determined to construe the "magnetic metallic particulate pigment" limitation in claims 1 and 16 of the '331 patent to mean the "magnetic metal particle pigments have a composition including, but not limited to, metallic iron and/or alloys of iron with cobalt and/or nickel, and magnetic or non-magnetic oxides of iron, other elements, or mixtures thereof." JX-0004 at 4:36-39.

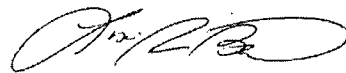
The Commission has also determined to affirm the ID's finding that Fujifilm's accused products do not infringe and that IBM's domestic industry products do not practice the asserted claims of the '331 patent. The Commission adopts the ID's analysis on pages 99-120 and 125-128, and further relies on Dr. Wang's coercivity measurements for Fujifilm's accused products and IBM's domestic industry products as a basis for finding Sony's expert's conclusions unreliable. *See* RX-0010C (Wang RWS) Q/A 282, 296, 303. Dr. Wang's coercivity measurements demonstrate that these products do not meet the "coercivity of at least about [2300/2500] Oe" limitation as required by claims 1 and 16 of the '331 patent.

The Commission has determined to take no position on the other issues under review.

The Commission has further determined not to review the remainder of the ID, including the ID's findings that Fujifilm does not infringe the asserted claims of the '779 patent; that claims 1-4 of the '779 patent are anticipated by Morita's 6<sup>th</sup> embodiment; and that the technical prong of the domestic industry requirement has not been satisfied for the '779 patent. Accordingly, the Commission has determined to affirm with modifications the ID's finding of no violation of section 337. The investigation is terminated in its entirety.

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 Part 210 of the Commission's Rules of Practice and Procedure (19 CFR Part 210).

By order of the Commission.



Lisa R. Barton  
Secretary to the Commission

Issued: March 26, 2018

**PUBLIC CERTIFICATE OF SERVICE**

I, Lisa R. Barton, hereby certify that the attached **NOTICE** has been served by hand upon the Commission Investigative Attorney, Andrew Beverina, Esq., and the following parties as indicated, on **March 26, 2018**.



Lisa R. Barton, Secretary  
U.S. International Trade Commission  
500 E Street, SW, Room 112  
Washington, DC 20436

**On Behalf of Complainants Sony Corporation, Sony Storage Media Solutions, Sony Storage Media Manufacturing Corporation, Sony DADC US Inc., and Sony Latin America Inc.:**

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- Via First Class Mail
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**PUBLIC VERSION**

**UNITED STATES INTERNATIONAL TRADE COMMISSION**

**Washington, D.C.**

**In the Matter of**

**CERTAIN MAGNETIC TAPE CARTRIDGES  
AND COMPONENTS THEREOF**

**INV. NO. 337-TA-1036**

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

Chief Administrative Law Judge Charles E. Bullock

(January 25, 2018)

**Appearances:**

*For the Complainants Sony Corporation, Sony Storage Media Solutions Corporation, Sony Storage Media Manufacturing Corporation, Sony DADC US Inc., and Sony Latin America Inc.:*

Jeffrey S. Gerchick, Esq. and S. Alex Lasher, Esq. of Quinn Emanuel Urquhart & Sullivan, LLP of Washington DC.

Edward J. DeFranco, Esq., Joseph Milowic III, Esq. and John T. McKee, Esq. of Quinn Emanuel Urquhart & Sullivan, LLP of New York, NY.

Kevin P.B. Johnson, Esq. and Andrew J. Bramhall, Esq. of Quinn Emanuel Urquhart & Sullivan, LLP of Redwood City, CA.

David F. Nickel, Esq. and Matthew N. Duescher, Esq. of Foster, Murphy, Altman & Nickel, PC of Washington, DC.

*For the Respondents Fujifilm Holdings Corporation, Fujifilm Corporation, Fujifilm Holdings America Corporation, and Fujifilm Recording Media U.S.A., Inc.:*

Robert C. Scheinfeld, Esq., Robert L. Maier, Esq., Paul A. Ragusa, Esq. and Jennifer C. Tempesta, Esq. of Baker Botts L.L.P. of New York, NY.

Lisa M. Kattan, Esq. and Thomas C. Martin, Esq. of Baker Botts L.L.P. of Washington, DC.

Syed Fareed, Esq. of Baker Botts L.L.P. of Austin, TX.

Eliot D. Williams, Esq. of Baker Botts L.L.P. of Palo Alto, CA.



**PUBLIC VERSION**

*For the Commission Investigative Staff:*

Margaret D. Macdonald, Esq., Director; David O. Lloyd, Esq., Supervisory Attorney; Andrew Beverina, Esq., Investigative Attorney of the Office of Unfair Import Investigations, U.S. International Trade Commission, of Washington, D.C.

PUBLIC VERSION

TABLE OF CONTENTS

I. INTRODUCTION ..... 2

    A. Procedural History..... 2

    B. The Parties..... 3

        1. Complainants..... 3

        2. Respondents..... 5

    C. Overview of the Technology..... 6

    D. Asserted Patents ..... 6

        1. U.S. Patent No. 6,345,779 (the “779 patent”)..... 6

        2. U.S. Patent No. 7,115,331 (the “331 patent”)..... 7

II. JURISDICTION & IMPORTATION..... 7

    A. Subject Matter Jurisdiction..... 7

    B. Personal Jurisdiction ..... 8

    C. *In Rem* Jurisdiction..... 8

    D. Importation..... 8

III. RELEVANT LAW ..... 8

    A. Claim Construction ..... 8

    B. Infringement..... 11

        1. Literal Infringement..... 11

        2. Doctrine of Equivalents..... 12

    C. Validity..... 12

        1. Anticipation (35 U.S.C. § 102)..... 13

        2. Obviousness (35 U.S.C. § 103) ..... 13

        3. Indefiniteness (35 U.S.C. § 112, (b)/¶ 2)..... 14

    D. Domestic Industry ..... 15

        1. Economic Prong ..... 15

        2. Technical Prong..... 16

IV. U.S. PATENT NO. 6,345,779 ..... 16

    A. Overview ..... 16

        1. Asserted Claims..... 16

    B. Level of Ordinary Skill in the Art..... 18

    C. Claim Construction ..... 19

        1. “a first spring” and “a second spring” ..... 19

        2. “a first and second section operatively connected to form the housing”..... 27

    D. Infringement..... 37

        1. Independent Claim 1..... 37

        2. Dependent Claims 2-6..... 54

    E. Domestic Industry – Technical Prong..... 54

    F. Validity..... 56

        1. Anticipation ..... 56

        2. Obviousness..... 80

PUBLIC VERSION

V. U.S. PATENT NO. 7,115,331 ..... 88

    A. Overview ..... 88

        1. Asserted Claims ..... 88

    B. Level of Ordinary Skill in the Art ..... 90

    C. Claim Construction ..... 91

    D. Infringement ..... 99

        1. Independent Claim 1 ..... 99

        2. Dependent Claims 2, 3, 9-11, 13 and 14 ..... 115

        3. Independent Claim 16 ..... 115

        4. Dependent Claim 17 ..... 119

    E. Domestic Industry – Technical Prong ..... 120

        1. Sony Domestic Industry Products ..... 120

        2. IBM Domestic Industry Products ..... 125

    F. Validity ..... 128

        1. Anticipation ..... 128

        2. Obviousness ..... 137

        3. Indefiniteness ..... 147

VI. DOMESTIC INDUSTRY – ECONOMIC PRONG ..... 156

    A. Sony Subsidiaries ..... 157

        1. SOLA ..... 158

        2. Sony DADC ..... 160

        3. SSOA ..... 165

        4. Analysis ..... 166

    B. IBM ..... 171

        1. Analysis of Sony-IBM License ..... 176

        2. Analysis of Unpatented Tape Drives ..... 178

        3. Analysis of Research and Development Under Section 337(a)(3)(B) ..... 183

        4. Analysis of Research and Development Under Section 337(a)(3)(C) ..... 186

        5. Analysis of the Significance of IBM’s Investments ..... 187

    C. Summary ..... 189

VII. CONCLUSIONS OF LAW ..... 190

VIII. RECOMMENDED DETERMIANTION ON REMEDY & BOND ..... 191

    A. Limited Exclusion Order ..... 191

    B. Cease and Desist Order ..... 193

    C. Bond During Presidential Review ..... 194

IX. PUBLIC INTEREST ..... 196

    A. Public Health and Welfare ..... 197

    B. Competitive Conditions in the U.S. Economy ..... 198

    C. Production of Like or Directly Competitive Products in U.S. .... 201

    D. U.S. Consumers ..... 202

X. INITIAL DETERMINATION ..... 204

**PUBLIC VERSION**

**TABLE OF ABBREVIATIONS**

<b>CDX</b>	Complainant's demonstrative exhibit
<b>CIB</b>	Complainant's initial post-hearing brief
<b>CPB</b>	Complainant's pre-hearing brief
<b>CPX</b>	Complainant's physical exhibit
<b>CRB</b>	Complainant's reply post-hearing brief
<b>CX</b>	Complainant's exhibit
<b>Dep.</b>	Deposition
<b>JX</b>	Joint Exhibit
<b>RDX</b>	Respondent's demonstrative exhibit
<b>RIB</b>	Respondent's initial post-hearing brief
<b>RPX</b>	Respondent's physical exhibit
<b>RPB</b>	Respondent's Pre-hearing brief
<b>RRB</b>	Respondent's reply post-hearing brief
<b>RRX</b>	Respondent's rebuttal exhibit
<b>RX</b>	Respondent's exhibit
<b>SIB</b>	Staff's initial post-hearing brief
<b>SPB</b>	Staff's Pre-hearing brief
<b>SRB</b>	Staff's reply post-hearing brief
<b>Tr.</b>	Transcript

PUBLIC VERSION

UNITED STATES INTERNATIONAL TRADE COMMISSION

Washington, D.C.

In the Matter of

CERTAIN MAGNETIC TAPE CARTRIDGES  
AND COMPONENTS THEREOF

INV. NO. 337-TA-1036

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

Chief Administrative Law Judge Charles E. Bullock

(January 25, 2018)

Pursuant to the Notice of Investigation, 82 *Fed. Reg.* 8209 (Jan. 27, 2017), this is the Initial Determination in the matter of *Certain Memory Magnetic Tape Cartridges and Components Thereof*, Investigation No. 337-TA-1036.

For the reasons stated herein, the undersigned has determined that **no violation** of section 337 of the Tariff Act of 1930, as amended, has occurred in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain magnetic tape cartridges and components thereof with respect to U.S. Patents Nos. 6,345,779 and 7,115,331.

**PUBLIC VERSION**

**I. INTRODUCTION**

**A. Procedural History**

On December 15, 2016, Complainants Sony Corporation, Sony Storage Media Solutions Corporation, Sony Storage Media Manufacturing Corporation, Sony DADC US Inc., and Sony Latin America Inc. (“Sony” or “Complainants”) filed a complaint “alleg[ing] violations of section 337 based upon the importation into the United States, the sale for importation, and the sale within the United States after importation of certain magnetic tape cartridges and components thereof by reason of infringement of certain claims of U.S. Patent No. 6,345,779 (“the ’779 patent”); U.S. Patent No. 6,896,959 (“the ’959 patent”); U.S. Patent No. 7,016,137 (“the ’137 patent”); and U.S. Patent No. 7,115,331 (“the ’331 patent”).” (*See* 82 *Fed. Reg.* 8209-8210 (Jan. 27, 2017).) On January 5, 2017, Complainants supplemented the complaint. (*Id.* at 8209.)

On January 24, 2017, the Commission instituted this Investigation to determine:

whether there is a violation of subsection (a)(1)(B) of section 337 in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain magnetic tape cartridges and components thereof by reason of infringement of one or more of claims 1–6 of the ’779 patent; claims 1, 2, 4–9, 13, 16, and 17 of the ’959 patent; claims 1–5 of the ’137 patent; and claims 1–3, 7, 9–11, 13, 14, 16, and 17 of the ’331 patent, and whether an industry in the United States exists as required by subsection (a)(2) of section 337.

(*Id.* at 8210.)

The named respondents are Fujifilm Holdings Corporation of Tokyo, Japan, Fujifilm Corporation of Tokyo, Japan, Fujifilm Holdings America Corporation of Valhalla, NY and Fujifilm Recording Media U.S.A., Inc. of Beford, MA (collectively, “Fujifilm” or “Respondents”). (*Id.*)

The Commission Investigative Staff (“Staff”) is also a party to this Investigation. (*Id.*)

## PUBLIC VERSION

On August 25, 2017, Complainants moved without opposition for partial termination of this Investigation with respect to claim 5 of the '137 patent, claim 13 of the '959 patent and claim 7 of the '331 patent. (Mot. 1036-014.) This motion was granted on August 29, 2017. (Ord. No. 20; *see also* Notice of Comm'n. Determination Not to Review Initial Determinations Granting Complainant's Unopposed Motions for Partial Termination of the Investigation Based on Withdrawal of Certain Claims (Sep. 25, 2017).)

On August 31, 2017, Complainants moved without opposition for partial termination of this Investigation with respect to all asserted claims of the '959 patent. (Mot. 1036-016.) This motion was granted on September 1, 2017. (Ord. No. 21; *see also* Notice of Comm'n. Determination Not to Review Initial Determinations Granting Complainant's Unopposed Motions for Partial Termination of the Investigation Based on Withdrawal of Certain Claims (Sep. 25, 2017).)

The evidentiary hearing was held September 25-28, 2017.

Subsequent to the evidentiary hearing, Complainants moved on December 1, 2017 without opposition for partial termination of this Investigation with respect to all asserted claims of the '137 patent. (Mot. 1036-030.) This motion was granted on December 6, 2017. (Ord. No. 45; *see also* Notice of Comm'n. Decision Not to Review an Initial Determination Granting an Unopposed Motion for Partial Termination of the Investigation Based on Withdrawal of Patent (Jan. 3, 2018).)

### **B. The Parties**

#### **1. Complainants**

##### *a) Sony Corporation*

Sony Corporation "is a corporation duly organized and existing under the laws of Japan, with a principal place of business located at 1-7-1 Konan, Minato-ku, Tokyo 108-0075, Japan."

## PUBLIC VERSION

(Complaint at ¶ 11.) Sony “is the parent company and owner of all right, title, and interest in and to the Asserted Patents.” (Complaint at ¶ 2.)

### *b) Sony Storage Media Solutions Corporation*

Sony Storage Media Solutions Corporation “is a corporation organized and existing under the laws of Japan, with a principal place of business located at 1-7-1 Konan Minato-ku, Tokyo, 108-0075 Japan” and “is a wholly owned subsidiary of Sony Corporation.” (Complaint at ¶ 12.) Sony Storage Media Solutions Corporation “is responsible for business-related functions associated with Sony’s storage media products—*e.g.*, research and development, design, product planning, and marketing.” (CIB at 5.)

### *c) Sony Storage Media Manufacturing Corporation*

Sony Storage Media Manufacturing Corporation “is a corporation organized and existing under the laws of Japan, with a principal place of business located at 3-4-1 Sakuragi, Tagajo, Miyagi 985-0842, Japan” and “is a wholly owned subsidiary of Sony Storage Media Solutions Corporation” (which is a wholly owned subsidiary of Sony Corporation). (Complaint at ¶ 13.) Sony Storage Media Manufacturing Corporation “is responsible for the manufacturing operations associated with Sony’s storage media products.” (CIB at 5.)

### *d) Sony DADC US Inc.*

Sony DADC US Inc. “is a corporation duly organized and existing under the laws of Delaware, with a principal place of business located at 1800 North Fruitridge Avenue, Terre Haute, Indiana 47804, USA” and “is a wholly owned subsidiary of Sony Corporation of America” (which is a wholly owned subsidiary of Sony Corporation). (Complaint at ¶ 14.)



## PUBLIC VERSION

### *e) Sony Latin America Inc.*

Sony Latin America Inc. “is a corporation duly organized and existing under the laws of Florida, with a principal place of business located at 5201 Blue Lagoon Drive, Suite 400, Miami, Florida 33126, USA” and “is a wholly owned subsidiary of Sony Corporation of America” (which is a wholly owned subsidiary of Sony Corporation). (Complaint at ¶ 15.)

## **2. Respondents**

### *a) Fujifilm Holdings Corporation of Tokyo, Japan,*

Fujifilm Holdings Corporation “is a Japanese corporation with its principal place of business at 7-3 Akasaka 9-chome, Minato-ku, Tokyo 107-0052, Japan.” (Resp. to Complaint at ¶ 20.) Fujifilm Holdings Corporation is a holding company, and Respondents Fujifilm Corporation, Fujifilm Holdings America Corporation and Fujifilm Recording Media U.S.A., Inc. are subsidiaries of Fujifilm Holdings Corporation. (*Id.*)

### *b) Fujifilm Corporation*

Fujifilm Corporation “is a Japanese corporation with its principal place of business at 7-3 Akasaka 9-chome, Minato-ku, Tokyo 107-0052, Japan.” (Resp. to Complaint at ¶ 21.) Fujifilm Corporation is an operating company and a wholly owned subsidiary of Fujifilm Holdings Corporation and “leads the FUJIFILM Group’s imaging and information solutions, and that this includes the design, manufacture, and sale of magnetic tape media.” (*Id.*)

### *c) Fujifilm Holdings America Corporation*

Fujifilm Holdings America Corporation “is a Delaware corporation with its principal place of business at 200 Summit Lake Drive, Valhalla, New York 10595.” (Resp. to Complaint at ¶ 22.) Fujifilm Holdings America Corporation “is a holding company for U.S.-based

**PUBLIC VERSION**

FUJIFILM companies engaged in the marketing and sales of FUJIFILM-branded magnetic tape cartridges” and is a wholly owned subsidiary of Fujifilm Corporation. (*Id.*)

**d) Fujifilm Recording Media U.S.A., Inc.**

Fujifilm Recording Media U.S.A., Inc. “is a Delaware corporation with its principal place of business at 45 Crosby Dr., Bedford, MA, 01730-1401.” (Resp. to Complaint at ¶ 23.) Fujifilm Recording Media U.S.A., Inc. “is the U.S.-based manufacturing, marketing and sales arm for FUJIFILM Corporation’s professional broadcast video and data tape recording media business” and is a wholly owned subsidiary of Fujifilm Holdings America Corporation (which, as noted above, is a wholly owned subsidiary of Fujifilm Corporation). (*Id.*)

**C. Overview of the Technology**

The technology in this investigation relates to Linear Tape-Open (“LTO”) magnetic tape cartridges and components thereof used for data storage. (Complaint at ¶ 3.) According to Complainants, LTO magnetic tapes facilitate the storage of large amounts of data and are used by companies across a wide range of industries for data storage backup systems and fast access data libraries.” (Complaint at ¶ 3.) LTO tapes are used in single server to complex networked environments and “are used to store large quantities of data by companies in a wide range of industries, including health care, education, finance and banking, government; security, and technology.” (Complaint at ¶ 6.)

**D. Asserted Patents**

**1. U.S. Patent No. 6,345,779 (the “779 patent”)**

The ’779 patent, entitled “Data Storage Cartridge Having a Retainer for a Leader Pin,” issued to G. Phillip Rambosek as a U.S. patent on February 12, 2002 from U.S. Patent Application No. 09/476,623 filed December 31, 1999. (JX-0001 at Cover.) The ’779 patent was

**PUBLIC VERSION**

initially assigned to Imation Corporation and was later acquired by Sony Corporation. (*See* JX-0082C, CX-0006.) The '779 patent generally relates to data storage cartridges. (*See* JX-0001 at Abstract.)

Complainants assert claims 1-6 of the '779 patent in this Investigation.

**2. U.S. Patent No. 7,115,331 (the “331 patent”)**

The '331 patent, entitled “Magnetic Recording Medium Having Narrow Pulse Width Characteristics,” issued to Bruce H. Edwards as a U.S. patent on October 3, 2006 from U.S. Patent Application No. 11/089,067 filed March 24, 2005 which was a continuation of U.S. Patent Application No. 10/441,419 filed May 19, 2003 (now U.S. Patent No. 6,896,959). (JX-0004 at Cover.) The '331 patent was initially assigned to Imation Corporation and was later acquired by Sony Corporation. (*See* JX-0082C; CX-0006; CX-0074.) The '331 patent generally relates to a dual-layer magnetic recording medium. (*See* JX-0004 at Abstract and Claims.)

Complainants assert claims 1-3, 9-11, 13, 14, 16 and 17 of the '331 patent in this Investigation.

**II. JURISDICTION & IMPORTATION**

**A. Subject Matter Jurisdiction**

Section 337 confers subject matter jurisdiction on the Commission to investigate, and if appropriate, to provide a remedy for, unfair acts and unfair methods of competition in the importation, the sale for importation, or the sale after importation of articles into the United States. *See* 19 U.S.C. §§ 1337(a)(1)(B) and (a)(2). Complainants filed a complaint alleging a violation of this subsection. Accordingly, the Commission has subject matter jurisdiction over this Investigation under section 337 of the Tariff Act of 1930. *See Amgen, Inc. v. U.S. Int'l. Trade Comm'n.*, 902 F.2d 1532, 1536 (Fed. Cir. 1990).

## PUBLIC VERSION

### B. Personal Jurisdiction

Respondents have appeared and participated in this Investigation. The Commission therefore has personal jurisdiction over Respondents. *See, e.g., Certain Optical Disk Controller Chips & Chipsets & Prods. Containing Same, Including DVD Players & PC Optical Storage Devices*, Inv. No. 337-TA-506, Initial Determination at 4-5 (May 16, 2005) (unreviewed in relevant part).

### C. In Rem Jurisdiction

Respondents do not dispute that the Commission has *in rem* jurisdiction over the accused products that have been imported into the United States. (RIB at 9.) In fact, Respondents have stipulated to the importation of the accused products into the United States. (JX-0039C at ¶¶ 2-4.) Accordingly, the Commission has *in rem* jurisdiction over the accused products.

### D. Importation

As noted above, Respondents have stipulated to the importation of the accused products into the United States. (JX-0039C at ¶¶ 2-4.) Accordingly, the importation requirement of section 337 is satisfied.

## III. RELEVANT LAW

### A. Claim Construction

“An infringement analysis 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 accused of infringing.” *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995) (en banc) (internal citations omitted), *aff’d*, 517 U.S. 370 (1996). Claim construction is a “matter of law exclusively for the court.” *Id.* at 970-71. “The construction of claims is simply a way of elaborating the normally terse claim

## PUBLIC VERSION

language in order to understand and explain, but not to change, the scope of the claims.” *Embrex, Inc. v. Serv. Eng’g Corp.*, 216 F.3d 1343, 1347 (Fed. Cir. 2000).

Claim construction focuses on the intrinsic evidence, which consists of the claims themselves, the specification, and the prosecution history. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005) (*en banc*); *see also Markman*, 52 F.3d at 979. As the United States Court of Appeals for the Federal Circuit (“Federal Circuit”) explained in *Phillips*, courts must analyze each of these components to determine the “ordinary and customary meaning of a claim term” as understood by a person of ordinary skill in the art at the time of the invention. 415 F.3d at 1313. “Such intrinsic evidence is the most significant source of the legally operative meaning of disputed claim language.” *Bell Atl. Network Servs., Inc. v. Covad Commc’ns Grp., Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001).

“It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the patentee is entitled the right to exclude.’” *Phillips*, 415 F.3d at 1312 (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). “Quite apart from the written description and the prosecution history, the claims themselves provide substantial guidance as to the meaning of particular claims terms.” *Id.* at 1314; *see also Interactive Gift Express, Inc. v. Compuserve Inc.*, 256 F.3d 1323, 1331 (Fed. Cir. 2001) (“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[ ] out and distinctly claim[ ] the subject matter which the patentee regards as his invention.’”). The context in which a term is used in an asserted claim can be “highly instructive.” *Phillips*, 415 F.3d at 1314. Additionally, other claims in the same patent, asserted or unasserted, may also provide guidance as to the meaning of a claim term. *Id.*

## PUBLIC VERSION

The specification “is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.” *Id.* at 1315 (quoting *Vitronics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). “[T]he specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess. In such cases, the inventor’s lexicography governs.” *Id.* at 1316. “In other cases, the specification may reveal an intentional disclaimer, or disavowal, of claim scope by the inventor.” *Id.* As a general rule, however, the particular examples or embodiments discussed in the specification are not to be read into the claims as limitations. *Id.* at 1323. In the end, “[t]he construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be . . . the correct construction.” *Id.* at 1316 (quoting *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998)).

In addition to the claims and the specification, the prosecution history should be examined, if in evidence. *Id.* at 1317; *see also Liebel-Flarsheim Co. v. Medrad Inc.*, 358 F.3d 898, 913 (Fed. Cir. 2004). The 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.” *Phillips*, 415 F.3d at 1317; *see also Chimie v. PPG Indus. Inc.*, 402 F.3d 1371, 1384 (Fed. Cir. 2005) (“The purpose of consulting the prosecution history in construing a claim is to ‘exclude any interpretation that was disclaimed during prosecution.’”).

When the intrinsic evidence does not establish the meaning of a claim, then extrinsic evidence (*i.e.*, all evidence external to the patent and the prosecution history, including dictionaries, inventor testimony, expert testimony, and learned treatises) may be considered. *Phillips*, 415 F.3d at 1317. Extrinsic evidence is generally viewed as less reliable than the patent

## PUBLIC VERSION

itself and its prosecution history in determining how to define claim terms. *Id.* at 1317. “The court may receive extrinsic evidence to educate itself about the invention and the relevant technology, but the court may not use extrinsic evidence to arrive at a claim construction that is clearly at odds with the construction mandated by the intrinsic evidence.” *Elkay Mfg. Co. v. Ebco Mfg. Co.*, 192 F.3d 973, 977 (Fed. Cir. 1999).

If, after a review of the intrinsic and extrinsic evidence, a claim term remains ambiguous, the claim should be construed so as to maintain its validity. *Phillips*, 415 F.3d at 1327. Claims, however, cannot be judicially rewritten in order to fulfill the axiom of preserving their validity. *See Rhine v. Casio, Inc.*, 183 F.3d 1342, 1345 (Fed. Cir. 1999). Thus, “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.” *Id.*

### **B. Infringement**

In a section 337 investigation, the complainant bears the burden of proving infringement of the asserted patent claims by a preponderance of the evidence. *See Spansion, Inc. v. Int’l Trade Comm’n*, 629 F.3d 1331, 1349 (Fed. Cir. 2010). This standard “requires proving that infringement was more likely than not to have occurred.” *Warner-Lambert Co. v. Teva Pharm. USA, Inc.*, 418 F.3d 1326, 1341 n.15 (Fed. Cir. 2005).

#### **1. Literal Infringement**

Literal infringement is a question of fact. *Finisar Corp. v. DirecTV Grp., Inc.*, 523 F.3d 1323, 1332 (Fed. Cir. 2008). “Literal infringement requires the patentee to prove that the accused device contains each limitation of the asserted claim(s). If any claim limitation is absent, there is no literal infringement as a matter of law.” *Bayer AG v. Elan Pharm. Research Corp.*, 212 F.3d 1241, 1247 (Fed. Cir. 2000).

**PUBLIC VERSION**

**2. Doctrine of Equivalents**

Where literal infringement is not found, infringement nevertheless can be found under the doctrine of equivalents. Determining infringement under the doctrine of equivalents “requires an intensely factual inquiry.” *Vehicular Tech. Corp. v. Titan Wheel Int’l, Inc.*, 212 F.3d 1377, 1381 (Fed. Cir. 2000). The Supreme Court has described the essential inquiry of the doctrine of equivalents analysis in terms of whether the accused product or process contains elements identical or equivalent to each claimed element of the patented invention. *Warner-Jenkinson Co., Inc. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 40 (1997). The Federal Circuit applies two articulations of the test for equivalents, as one phrasing may be more suitable for particular fact patterns or technologies.

Under the insubstantial differences test, “[a]n element in the accused device is equivalent to a claim limitation if the only differences between the two are insubstantial.” Alternatively, under the function-way-result test, an element in the accused device is equivalent to a claim limitation if it “performs substantially the same function in substantially the same way to obtain substantially the same result.” *Voda v. Cordis Corp.*, 536 F.3d 1311, 1326 (Fed. Cir. 2008) (citations omitted). In *Warner-Jenkinson*, the Supreme Court noted that the doctrine of equivalents is subject to several limitations, including applying the doctrine to individual elements of a claim and not to the invention as a whole. *Warner-Jenkinson*, 520 U.S. at 29.

**C. Validity**

A patent is presumed valid. 35 U.S.C. § 282; *Microsoft Corp. v. i4i Ltd. P’ship*, 131 S. Ct. 2238, 2242 (2011). A respondent who has raised patent invalidity as an affirmative defense has the burden of overcoming this presumption by clear and convincing evidence. *See Microsoft*, 131 S. Ct. at 2242. As with an infringement analysis, an analysis of invalidity involves two steps:



## PUBLIC VERSION

determining the scope of the claim and comparing the properly construed claim with the prior art to determine whether the claimed invention is anticipated and/or rendered obvious.

### 1. Anticipation (35 U.S.C. § 102)

Under 35 U.S.C. § 102, a claim is anticipated and therefore invalid when “the four corners of a single, prior art document describe every element of the claimed invention, either expressly or inherently, such that a person of ordinary skill in the art could practice the invention without undue experimentation.” *Advanced Display Sys., Inc. v. Kent State Univ.*, 212 F.3d 1272, 1282 (Fed. Cir. 2000), *cert. denied*, 532 U.S. 904 (2001). 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. *Helifix Ltd. v. Blok-Lok, Ltd.*, 208 F.3d 1339, 1346 (Fed. Cir. 2000).

### 2. Obviousness (35 U.S.C. § 103)

Under 35 U.S.C. §103, a patent may be found invalid as obvious if “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.” 35 U.S.C. §103(a). Because obviousness is determined at the time of invention, rather than the date of application or litigation, “[t]he great challenge of the obviousness judgment is proceeding without any hint of hindsight.” *Star Scientific, Inc. v. R.J. Reynolds Tobacco Co.*, 655 F.3d 1364, 1375 (Fed. Cir. 2011) (“*Star IP*”).

When a patent is challenged as obvious, the critical inquiry in determining the differences between the claimed invention and the prior art is whether there is an apparent reason to combine the known elements in the fashion claimed by the patent at issue. *See KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 417-418 (2007). The Federal Circuit has since held that when a patent is challenged

## PUBLIC VERSION

as obvious, based on a combination of several prior art references, “the burden falls on the patent challenger to show by clear and convincing evidence that a person of ordinary skill in the art would have had reason to attempt to make the composition or device, or carry out the claimed process, and would have had a reasonable expectation of success in doing so.” *PharmaStem Therapeutics, Inc. v. ViaCell, Inc.*, 491 F.3d 1342, 1360 (Fed. Cir. 2007) (citations omitted).

Obviousness is a determination of law based on underlying determinations of fact. *Star II*, 655 F.3d at 1374. The factual determinations behind a finding of obviousness include: (1) the scope and content of the prior art, (2) the level and content of the prior art, (3) the differences between the claimed invention and the prior art, and (4) secondary considerations of non-obviousness. *KSR*, 550 U.S. at 399 (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966)). These factual determinations are referred to collectively as the “*Graham* factors.” Secondary considerations of non-obviousness include commercial success, long felt but unresolved need, and the failure of others. *Id.* When present, secondary considerations “give light to the circumstances surrounding the origin of the subject matter sought to be patented,” but they are not dispositive on the issue of obviousness. *Geo. M. Martin Co. v. Alliance Mach. Sys. Int’l.*, 618 F.3d 1294, 1304-06 (Fed. Cir. 2010). A court must consider all of the evidence from the *Graham* factors before reaching a decision on obviousness. For evidence of secondary considerations to be given substantial weight in the obviousness determination, its proponent must establish a nexus between the evidence and the merits of the claimed invention. *See W. Union Co. v. MoneyGram Payment Sys. Inc.*, 626 F.3d 1361, 1372-73 (Fed. Cir. 2010) (citing *In re GPAC Inc.*, 57 F.3d 1573, 1580 (Fed. Cir. 1995)).

### **3. Indefiniteness (35 U.S.C. § 112, (b)/¶ 2)**

A claim must also be definite. Pursuant to 35 U.S.C. § 112(b): “The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject

**PUBLIC VERSION**

matter which the inventor or joint inventor regards as the invention.” 35 U.S.C. § 112(b). In *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120 (2014), the Supreme Court held that §112(b) requires “that a patent’s claims, viewed in light of the specification and prosecution history inform those skilled in the art about the scope of the invention with reasonable certainty.” *Id.* at 2129. A patent claim that is indefinite is invalid. 35 U.S.C. § 282(b)(3)(A).

**D. Domestic Industry**

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.” 19 U.S.C. § 1337(a)(2). Under Commission precedent, this “domestic industry requirement” of section 337 consists of an economic prong and a technical prong. *See Certain Stringed Musical Instruments and Components Thereof*, Inv. No. 337-TA-586, Comm’n. Op. at 12-14, 2009 WL 5134139 (U.S.I.T.C. Dec. 2009). The complainant bears the burden of establishing that the domestic industry requirement is satisfied. *See Certain Set-Top Boxes and Components Thereof*, Inv. No. 337-TA-454, Final Initial Determination at 294, 2002 WL 31556392 (U.S.I.T.C. June 21, 2002) (unreviewed by Commission in relevant part).

**1. Economic Prong**

Section 337(a)(3) sets forth the following economic criteria for determining the existence of a domestic industry in such investigations:

(3) For purposes of paragraph (2), an industry in the United States shall be considered to exist if there is in the United States, with respect to the articles protected by the patent, copyright, trademark, mask work, or design concerned –

- (A) significant investment in plant and equipment;
- (B) significant employment of labor or capital; or
- (C) substantial investment in its exploitation, including engineering, research and development, or licensing.

## PUBLIC VERSION

Given that these criteria are listed in the disjunctive, satisfaction of any one of them will be sufficient to meet the economic prong of the domestic industry requirement. *See Certain Integrated Circuit Chipsets and Prods. Containing Same*, Inv. No. 337-TA-428, Order No. 10, Initial Determination (unreviewed) (May 4, 2000).

### 2. Technical Prong

The technical prong of the domestic industry requirement is satisfied when the complainant in a patent-based section 337 investigation establishes that it is practicing or exploiting the patents at issue. *See* 19 U.S.C. § 1337(a)(2) and (3); *Certain Microsphere Adhesives, Process for Making Same and Prods. Containing Same, Including Self-Stick Repositionable Notes*, Inv. No. 337-TA-366, Comm'n Op. at 8, 1996 WL 1056095 (U.S.I.T.C. Jan. 16, 1996). "The test for satisfying the 'technical prong' of the industry requirement is essentially [the] same as that for infringement, i.e., a comparison of domestic products to the asserted claims." *Alloc, Inc. v. Int'l Trade Comm'n*, 342 F.3d 1361, 1375 (Fed. Cir. 2003). 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. *See Bayer*, 212 F.3d at 1247. It is sufficient to show that the products practice any claim of that patent, not necessarily an asserted claim of that patent. *See Certain Microsphere Adhesives*, Comm'n Op. at 7-16.

## IV. U.S. PATENT NO. 6,345,779

### A. Overview

#### 1. Asserted Claims

Complainants assert claims 1-6 of the '779 patent. Each of the asserted claims depends from independent claim 1. Those claims provide as follows:

1. A data storage cartridge comprising:

PUBLIC VERSION

- a) a housing having a first section and a second section operatively connected to form the housing;
- b) the housing defining a tape access opening;
- c) a first positioning member operatively connected to the first section and a second positioning member operatively connected to the second section, the positioning members in axial alignment;
- d) an end of tape attachment member having a first end positioned in the first positioning member and a second end positioned in the second positioning member;
- e) a first spring having a first portion operatively connected to the first section and a moveable second portion securing the end of tape attachment member in position; and
- f) a second spring having a first portion operatively connected to the second section and a moveable second portion securing the end of tape attachment member in position.

\* \* \* \* \*

- 2. The data storage cartridge of claim 1, wherein the end of tape attachment member is a leader pin.

\* \* \* \* \*

- 3. The data storage cartridge of claim 2, wherein the positioning members are arcuate.

\* \* \* \* \*

- 4. The data storage cartridge of claim 3, wherein the arcuate members have an opening proximate the tape access opening to allow the leader pin to be inserted through the access opening.

\* \* \* \* \*

- 5. The data storage cartridge of claim 2, wherein the springs are generally L-shaped having a base member and an elongate member, the elongate member having a first end operatively connected to the base member and a second end forming the second portion.

\* \* \* \* \*

**PUBLIC VERSION**

6. The data storage cartridge of claim 5, wherein the first portions of the springs are operatively connected to the sections proximate both their base members and elongate members.

(JX-0001 at Cls. 1-6.)

**B. Level of Ordinary Skill in the Art**

Complainants assert that a person of ordinary skill in the art would have “a bachelor’s degree in mechanical engineering, product design, or a closely related field with two years of experience in the field of magnetic tape systems, or similar post-graduate education in this area” where “‘similar post-graduate education in this area’ includes education in the area of the mechanical components that constitute the constituent elements of the ’779 Patent—*e.g.*, mechanical enclosures, such as plastic housings, and springs—and evaluation of the response of these physical structures to being placed under load (*e.g.*, study of deflection and strength of materials)”. (CIB at 15 (citing CX-0970C at Q/A at 31); 15, n. 4 (citing Klopp, Tr. at 220:23-222:21).) Complainants further offer that “Fujifilm’s proposed level of skill is substantially the same.” (*Id.* (citing CX-0970C at Q/A at 32).)

Respondents contend that “a person of ordinary skill in the art of the ’779 Patent would be a person with a bachelor’s degree in mechanical engineering or a closely related field with two years of experience in the field of magnetic tape systems, or similar advanced post-graduate education in this area” but also acknowledge that “[t]he Private Parties’ positions on the level of ordinary skill in the art are not materially different from one another and Dr. Messner’s opinion would not change if the ALJ adopted Sony’s proposal.” (RIB at 10-11.)

Both private parties acknowledge that for their respective definitions of a person of ordinary skill that an individual “with less education but more relevant practical experience may also meet this standard.” (CIB at 15 (citing CX-0970C at Q/A at 31); RIB at 11 (citing RX-0004C at Q/A at 55).)

**PUBLIC VERSION**

Staff contends that the proposed definitions for a person of ordinary skill are not materially different, and thus proposes adopting Sony's proffered definition for a person of ordinary skill "because it is slightly more detailed." (SIB at 15.)

Given (i) the evidence of record cited above by the private parties and Staff and (ii) that the parties' positions would not be changed or materially altered under either of the proposed definitions, the undersigned finds that the level of ordinary skill in the art for the '779 patent is consistent with the definition proposed by Complainants and Staff which is a person having "a bachelor's degree in mechanical engineering, product design, or a closely related field with two years of experience in the field of magnetic tape systems, or similar post-graduate education in this area."

**C. Claim Construction**

There are two (2) disputed claim terms relevant to the asserted claims of the '779 patent:

1. "a first spring" and "a second spring;" and
2. "a first and second section operatively connected to form the housing"

Each is addressed in turn below.

**1. "a first spring" and "a second spring"**

The terms "a first spring" and "a second spring" appear in independent claim 1, and are incorporated by dependency into claims 2 through 6. The parties propose the following constructions for these terms:

**PUBLIC VERSION**

<b>Term</b>	<b>Sony’s Proposed Construction</b>	<b>Fujifilm’s Proposed Construction</b>	<b>Staff’s Proposed Construction</b>
“a first spring”	Plain and ordinary meaning. The plain and ordinary meaning of this term does not require a first spring “separate and detached” from a second spring	Plain and ordinary meaning. The plain and ordinary meaning of “a first spring” and “a second spring” requires a first spring and a second spring (i.e. two distinct springs), and does not cover a single spring.	No construction necessary.
“a second spring”	Plain and ordinary meaning. The plain and ordinary meaning of this term does not require a second spring “separate and detached” from a first spring	Plain and ordinary meaning. The plain and ordinary meaning of “a first spring” and “a second spring” requires a first spring and a second spring (i.e. two distinct springs), and does not cover a single spring.	No construction necessary.

(SIB at 16; *see also* CIB at 16-19; RIB at 11.)

Complainants submit that “there is nothing in the ’779 Patent that requires these [first and second] springs to be ‘distinct and unconnected’ or precludes two springs from being formed from a unitary structure.” (CIB at 16–17.) Complainants frame the dispute over this construction as one of disclaimer, arguing that “nothing in the intrinsic record, or the plain language of claim 1, evinces an intent by the patentee to disclaim from the claim scope any types of ‘springs’ or otherwise suggests the inventor acted as his own lexicographer to establish a specialized meaning for the term ‘spring.’” (*Id.* at 17.) Consistent with that approach, Complainants note that the ’779 patent does not explicitly state that “the ‘first spring’ cannot be connected to any other structure that operates as a spring (*e.g.*, the claimed ‘second spring’).” (*Id.*) Similarly, Complainants note that “the ’779 Patent [does not] state that a connection between a ‘first spring’ and ‘second spring’



## PUBLIC VERSION

would transform them into ‘a single spring.’” (*Id.*) Sony also points to the hearing testimony of Fujifilm’s expert, Dr. Messner, for the proposition that “[i]f two portions of a single structure each independently provide a ‘controlled application of force’ to the respective ends of a leader pin, then . . . each portion is itself a ‘spring.’” (*Id.* (citing Messner, Tr. at 333:10-334:3).)

Complainants reject the Staff and Fujifilm’s position that the first and second springs must be separate and unconnected structures as violating the rule against importing limitations from the specification into the claims of a patent. (*See id.* at 17–18 (citing *Akamai Techs., Inc. v. Limelight Networks, Inc.*, 805 F.3d 1368, 1375-76 (Fed. Cir. 2015)).) Complainants also criticize Staff and Fujifilm’s position as placing an unsupported negative limitation into the claims. (*See id.* at 18 (citing *Linear Tech. Corp. v. Int’l Trade Comm’n*, 566 F.3d 1049, 1055 (Fed. Cir. 2009)).) Regarding a portion of the prosecution history upon which Staff and Fujifilm rely, Sony argues that the examiner’s statements therein stand only for the proposition that “the first spring is (operatively) connected to the first section and the second spring is (operatively) connected to the second section, irrespective of how the first spring and second spring may relate to one another.” (*Id.* at 19.)

Finally, turning to extrinsic evidence, Sony points to various statements by the inventor of the ’779 patent, Mr. Rambosek, to support its assertion that “the ‘first spring’ and ‘second spring’ need not be physically separate from one another, but rather need only operate (*i.e.*, provide their ‘spring’ function) independently.” (*Id.*)

Respondents emphasize that their proposed construction is consistent with the Staff’s interpretation of the plain and ordinary meaning of “a first spring” and “a second spring.” (*See* RIB at 12.) Like Staff, Respondents note that the claims use the phrase “operatively connected” where two structures should be connected, but that the claim does not require that the first and second spring be operatively connected. (*See id.*) Respondents also argue that the explicit

## PUBLIC VERSION

recitation of a first and a second spring in the claims supports a construction requiring the springs to be separate and distinct. (*See id.*) Respondents also argue that the absence of any discussion or disclosure in the specification of the first and second springs being connected or otherwise attached further supports the conclusion that the springs must be separate and distinct. (*See id.*) Additionally, Respondents point to a portion of the prosecution history “which calls out *each* spring being ‘respectively’ (i.e., separately) attached to its cartridge section” as evidence that the springs must be separate and distinct. (*Id.* at 12–13.)

Finally, Respondents point to extrinsic evidence from the inventor, Mr. Rambosek, to support their position that the springs must be separate and distinct. (*See id.* at 13 (citing JX-0027C at 177:8-11, 177:14-16).) Respondents also point to “[t]he commercial embodiment of the ’779 Patent—the Imation LTO cartridge—[which] likewise includes two distinct and detached springs” to support its construction. (*Id.* (citing RX-0004C at Q/A at 155-156; RX-0591C at 31).)

Staff submits that “[u]nder the plain language of the claims, with no further construction necessary, the first spring and second spring are two distinct and unconnected springs.” (SIB at 16.) Staff supports its position by reference to the intrinsic evidence. First, Staff argues that the claim language itself supports a construction wherein the first and second springs are distinct and unconnected elements. (*See id.* at 17.) Staff quotes *Becton, Dickinson & Co. v. Tyco Healthcare Group, LP*, 616 F.3d 1249, 1253 (Fed. Cir. 2010), for the proposition that “[w]here a claim lists elements separately, ‘the clear implication of the claim language’ is that those elements are ‘distinct component[s]’ of the patented invention,” and then notes that claim 1 of the ’779 patent recites the first spring and second spring as two distinct elements out of six total elements in the claim. (*See* SIB at 17.) Further, Staff notes that where claim one requires a connection between two structures, that connection is clearly indicated with the phrase “operatively connected.” (*See*

## PUBLIC VERSION

*id.*) Given the absence of claim language indicating that the first spring and second spring are connected, Staff submits that the claim language does not support a construction wherein the first and second spring share a common connected portion. (*See id.*)

Second, Staff argues that the specification of the '779 patent supports construing the first spring and second spring to be separate and unconnected elements. (*See id.* at 18.) Staff notes that of the three embodiments described in the "Summary of the Invention," the two that discuss a first and second spring describe them as separate structures. (*See id.* (citing JX-0001 at 1:43-2:30, 1:53-59; 2:19-24).) Staff elaborates on its point by referring to Figure 3 and Figure 5 of the '779 patent, which show a first and a second spring that are separate structures. (*See id.* at 18-20.) Staff submits that the embodiments disclosed in the specification are consistent with, and support the construction indicated by, the plain language of the claims, *i.e.*, that the first spring and second spring are separate and unconnected structures. (*See id.* at 20.)

Third, Staff points to a statement made by the examiner during prosecution of the '779 patent as evidence that "the examiner understood the first spring and second spring to be separate." (*Id.* at 20-21 (citing JX-0005 at SONYITC2-000323 (April 11, 2001 Office Action)).) Relying on *3M Innovative Properties Co. v. Avery Dennison Corp.*, 350 F.3d 1365, 1371 (Fed. Cir. 2003), Staff explains that "[t]he examiner's consistent use of 'first' and 'second' shows that he understood the springs to be separate from each other." (SIB at 21.) Staff thus concludes that "the intrinsic evidence shows that the 'first spring' and the 'second spring' are separate pieces." (*Id.*)

The undersigned notes that the parties all appear to agree that "first spring" and "second spring" should be construed according to their plain and ordinary meanings, as opposed to according to a special definition given by the patentee as lexicographer or through the operation of disclaimer or estoppel. The undersigned agrees that "first spring" and "second spring" should

## PUBLIC VERSION

be construed according to the plain and ordinary meaning that a person of ordinary skill in the art would ascribe to the terms in light of the intrinsic evidence of the '779 patent.

The parties do, however, dispute what the plain and ordinary meaning of a “first spring” and a “second spring” actually is. The crux of the dispute revolves around what type of relationship the two springs can have with each other. The parties approach this issue from a variety of angles, such as whether the springs must be “unconnected,” whether they can be part of a “unitary structure,” whether they are “distinct,” and whether they are “separate.”

Beginning with the intrinsic evidence, the undersigned notes that the claim language does not include any explicit limitation requiring the springs to be unconnected or precluding them from being part of a unitary structure. (*See* JX-0001 at Cl. 1.) The absence of such language strongly suggests that such limitations should not be layered upon the language that is present in the claim. At the same time, claim 1 clearly recites a first and a second spring, and indeed does so as separate and distinct lettered elements. (*See id.*) Thus the claim language also supports the conclusion that the first and second springs are separate and distinct structures.

While Respondent and Staff are correct that the phrase “operatively connected” appears elsewhere in claim 1 to indicate a connection between two structures, the law does not support the conclusion that the absence of that phrase elsewhere in the claim precludes any connection. Particularly, in *Kara Technology Inc. v. Stamps.com Inc.*, the Federal Circuit explained that it was improper to ascribe an implicit limitation to one claim where other independent claims explicitly included the same limitation. *See* 582 F.3d 1341, 1347 (Fed. Cir. 2009) (declining to add a data “key” limitation to a claim that did not recite the term but where other claims in the same patent explicitly recited “encryption key” or “key data” limitations). *Kara* does not, as Respondent

## PUBLIC VERSION

suggests, stand for the proposition that the presence of the phrase “operatively connected” in other parts of claim 1 necessarily *requires* the springs of claim 1 to be unconnected. *See id.*

Further, the undersigned agrees with Complainants’ reading of *Becton, Dickinson & Co. v. Tyco Healthcare Group, LP*, 616 F.3d 1249, 1254 (Fed. Cir. 2010). In that case, the Federal Circuit explained that a claim which recited “a hinged arm” and a “spring means” as separate elements clearly implied that each element was a distinct component of the patented invention. *See id.* *Becton* did not, however, equate being distinct with being unconnected. Indeed, such a conclusion would have been contrary to other portions of the claim language, which recited “*spring means* connected to said hinged arm . . . .” *Id.* Thus, applied to the ’779 patent, *Becton* reinforces the conclusion that the first spring and second spring must be distinct components, *i.e.*, the same structure cannot be both the first and the second spring. *Becton* does not, however, support the conclusion that the first spring and second spring cannot be connected in some way.

Though not squarely identified in the post-hearing briefing, the undersigned notes that much of the parties’ disagreement over the construction of these terms revolves around whether the phrases “separate” and “distinct” mean the same thing as “unconnected” or “not part of a unitary structure.” Sony finds a distinction between the two, and thus argues that a first spring and a second spring can be distinct and separate, but may also be connected. (*See* CRB at 3 (“long-standing case law holds that a claim’s recitation of two separate limitations does not mean that the claim also requires the structures that satisfy those limitations be unconnected or detached from one another.”).) Staff, however, characterizes Sony’s position as inconsistent. (*See* SRB at 5 (“Sony does not dispute that the first and second positioning members and the first and second sections are separate pieces. Yet Sony inconsistently argues that ‘first’ and ‘second’ springs can be a single piece.”).) In this particular instance, the undersigned cannot agree that it

## PUBLIC VERSION

is inconsistent to require the first and second springs to be separate and distinct structures while also acknowledging that the springs may be connected in some fashion. Indeed, the structures at issue in *Becton* were separate and distinct, and yet also connected together. *See* 616 F.3d at 1254.

There is an additional problem with requiring the first and second springs to be “unconnected” or “not part of a unitary structure.” Namely, the intrinsic evidence does not appear to support such negative limitations on the claim. *Cf. Linear Tech. Corp. v. Int’l Trade Comm’n*, 566 F.3d 1049, 1060 (Fed. Cir. 2009) (“Thus, because there is no basis in the patent specification for adding the negative limitation—excluding monitoring voltage—we hold that the Commission erred in construing this limitation.”). While Fujifilm and Staff are correct that none of the embodiments in the specification that describe a first and a second spring disclose a unitary structure with two distinct springs, the mere absence of a feature in an exemplary embodiment is not enough to justify importing a limitation into the language of the claims. *See Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004) (“this court 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.”).

With respect to the prosecution history relied on by Fujifilm and Staff, the undersigned disagrees that the examiner’s statement in the reasons for allowance support the conclusion that the first and second spring cannot be part of a unitary structure or must be unconnected. The portion relied on states:

Claims 1 and 10 are allowed over the prior art of record because the prior art of record does not teach or fairly suggest the entire combination of elements set forth including both a first and second positioning member and first and second springs connected to the first and second sections, respectively.

**PUBLIC VERSION**

(JX-0005 at 227.) This statement supports the conclusion that the first and second springs must be separate and distinct, *i.e.*, the same structure cannot satisfy both limitations, but is completely silent on whether the two springs cannot be connected or each part of a larger unitary structure.

In total, the undersigned finds that the intrinsic evidence supports a construction that requires the first and second springs to be separate and distinct structures, but does not support the additional requirement that the springs be unconnected or not part of a larger unitary structure. Accordingly, “a first spring” and “a second spring” are construed to have their ***“plain and ordinary meaning, which requires two separate and distinct springs, but does not necessarily require those springs to be unconnected.”***

**2. “a first and second section operatively connected to form the housing”**

The claim term “a first and second section operatively connected to form the housing” appears in independent claim 1, and is incorporated by dependency into claims 2 through 6. The parties propose the following constructions for this term:

<b>Sony’s Proposed Construction</b>	<b>Fujifilm’s Proposed Construction</b>	<b>Staff’s Proposed Construction</b>
a first section and a second section arranged in a manner capable of performing the function of forming the housing	a first and second section arranged in a manner capable of performing the function of forming the housing	a first and second section arranged in a manner capable of performing the function of forming the housing

(SIB at 22; *see also* CIB at 20-23; RIB at 14.)

Complainants acknowledge that it provided the above construction during the time the parties initially exchanged proposed constructions in this investigation. (*See* CIB at 20.) Complainants further claim that the above construction “is substantively identical to, but worded slightly differently from, Staff’s proposed construction.” (*Id.*) However, Complainants now propose a different construction because “[i]t has since become clear that, while using almost the

## PUBLIC VERSION

same language, Sony's and Staff's understanding and application of their respective proposed constructions substantially differ."<sup>1</sup> (*Id.*) Oddly, Complainants then bury their expanded construction in the last paragraph of their briefing for this term. (*See id.* at 23.) Therein, Sony takes the position that:

[T]he phrase "a first section and a second section operatively connected to form the housing" of claim 1 should construed to mean "a first section and a second section arranged in a manner capable of performing the function of forming the housing" **with the "function of forming the housing" being forming a housing that is secure in the area of the tape access opening.**

(*Id.* (emphasis added).) The emphasized portion of the above quote represents the expanded portion of Sony's construction.

Complainants argue that their expanded construction is correct because the phrase "operatively connected" means "arranged in a manner capable of performing a function," and therefore "[i]n the context of the '779 Patent, this 'function' must be more than merely connecting the first and second sections to form a housing . . . ." (CIB at 20.) Complainants submit that finding otherwise would read the word "operatively" out of the claim. (*See id.* at 20–21 (citing *Merck & Co., Inc. v. Teva Pharm. USA, Inc.*, 395 F.3d 1364, 1372 (Fed. Cir. 2005)).)

Next Complainants turn to the background of the invention section of the '779 patent to support its expanded construction. Specifically, Complainants rely on a section that identifies one problem in the prior art being that the leader pin in prior art cartridges may become dislodged during handling or if the cartridge is dropped because the pin is not "held firmly in place between the cover and the base." (CIB at 21 (quoting JX-0001 at 1:14-39).) Complainants

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<sup>1</sup> Complainants also submit the fact that Fujifilm abandoned its earlier proposed construction in favor of Staff's as an additional reason for expanding its original construction. Given, however, the Complainants did not agree with Fujifilm's initial proposed construction, it is unclear why Fujifilm's abandonment of that construction would justify Complainants' expansion of their own construction.



## PUBLIC VERSION

then note that “[t]he ’779 Patent discloses an invention that ‘addresses the problems associated in the prior art.’” (*Id.* (quoting JX-0001 at 1:40-41).)

Sony then looks to three embodiments from the summary of the invention section of the ’779 patent for support. Sony explains that “[i]n one embodiment, the invention is a data storage cartridge having a housing with first and second sections *operatively connected to form the housing.*” (*Id.* (quoting JX-0001 at 1:44-46 (emphasis Sony’s)).) Sony points to a second embodiment with “‘a data storage cartridge having a housing with first and second sections,’ wherein the first and second sections have features such as an ‘opening’ and a ‘flexible locking post’ that ‘form a snap fit *to operatively connect the first section to the second section.*” (*Id.* (quoting JX-0001 at 1:60-2:4 (emphasis Sony’s)).) And in a third embodiment, Sony notes that “‘the invention is a data storage cartridge having a housing having first and second sections *operatively connected to form the housing,*” and also includes “‘features that ‘form a snap fit *to operatively connect the first section to the second section.*” (*Id.* (quoting JX-0001 at 2:5-7, 2:24-30).)

Based on these exemplary embodiments, Sony submits that “the claimed operative connection functions to provide security in the area of the tape access opening of the cartridge.” (*Id.* at 22.) Ultimately, Sony concludes that “one of ordinary skill in the art reading the ‘housing’ limitation of claim 1 in view of the ’779 Patent would understand that it is not enough to merely connect the ‘first section’ and ‘second section’ to form a housing; instead, these sections must be connected in a manner that provides security in the area of the tape access opening.” (*Id.*)

Sony criticizes Staff’s proposed construction by arguing that it would “merely require that the first section and second section be connected, without more.” (*Id.* at 22-23.) Sony further submits that “the claim limitation as a whole indicates that the performed ‘function’ is not simply

## PUBLIC VERSION

connecting the first section to the second section.” (*Id.* at 23.) Thus, under Staff’s construction, Sony argues that the word “operatively” has no meaning. (*See id.*)

Fujifilm indicates that it has adopted the construction proposed by Staff. (*See* RIB at 14.) Accordingly, Fujifilm does not independently advance a construction for this phrase, but relies on Staff’s construction and Staff’s justification therefore. However, Fujifilm disagrees extensively with Sony’s expanded construction. (*See id.*)

First, Fujifilm argues that Sony’s expanded construction is untimely, and thus improper, because it was only first disclosed in the rebuttal report of Sony’s expert on invalidity. (*See* RRB at 6.) Fujifilm also notes that Sony’s claim construction position continues to be inconsistent, as the expanded construction adopted in Sony’s initial post-hearing brief differs from the construction employed by its expert. (*See id.*) Fujifilm explains that “[w]hen the Parties exchanged proposed constructions, Sony agreed to construe the term ‘a first section and a second section operatively connected to form the housing’ as ‘a first section and a second section arranged in a manner capable of performing the function of forming the housing.’” (*Id.* at 6-7 (citing EDIS Doc ID 612223).) Fujifilm further submits that “Sony’s expert Dr. Klopp admitted during the hearing that he provided an infringement analysis that did not include any further construction of this term.” (*Id.* at 7 (citing Klopp, Tr. at 214:21-216:16).) In support of that submission, Fujifilm points to a different portion of the hearing transcript where Dr. Klopp stated:

[C]laim 1 does not specify *what type* of operative connection must be used to form the housing or *where* that operative connection must be located. ***It simply requires that the two housing sections be operatively connected to form the housing.***

(*Id.* (quoting Klopp, Tr. at 620:21-25).) And, Fujifilm points to another portion of the hearing transcript to support its assertion that Dr. Klopp adopted a new construction “in an effort to circumvent the prior art.” (*Id.* (citing Klopp, Tr. at 615:6-616:24; CX-1151C at Q/A at 84-88).)

**PUBLIC VERSION**

Fujifilm’s second argument against Sony’s expanded construction is that it is applied inconsistently. Fujifilm again points to Dr. Klopp’s hearing testimony to argue that Sony applies one construction for infringement and another for invalidity, (*see id.* at 8 (citing Klopp, Tr. 215:15-21, 619:19-621:2)), and also provides the following chart to demonstrate what it alleges are inconsistencies between Sony’s constructions within Sony’s initial post-hearing brief:

<b>Sony’s Proposed Construction for Non-Infringement ([CIB] at 22, 24)</b>	<b>Sony’s Proposed Construction for Invalidity ([CIB] at [40])</b>
<p>“a first section and a second section arranged in a manner capable of performing the function of forming the housing” with the “function of forming the housing” <i>“being forming a housing that is secure in the area of the tape access opening.”</i></p>	<p>“a first section and second section arranged in a manner capable of performing the function of forming the housing . . . that ‘function’ is <i>providing a sufficiently secure housing in the area of the tape access opening such that the leader pin will not become dislodged due to a weakness in the connection between the two halves.</i>”</p>

(*Id.* at 9). Fujifilm submits that “Sony’s various claim construction positions should be rejected in favor of the Staff’s and Fujifilm’s proposed construction.” (*Id.*)

Third, Fujifilm argues that Sony’s expanded construction improperly imports a limitation from the specification of the ’779 patent into the claims. (*See id.*) Fujifilm notes that none of the language that forms the expanded portion of Sony’s construction appears in the claims themselves, and that “[w]hile the claims recite a connection of the housing, the claims do not reference securing the housing in a particular area or securing the leader pin in case the cartridge is dropped.” (*Id.*) Fujifilm further notes that Sony’s expert, Dr. Klopp, admitted that “‘deliberate importing of limitations from the specifications into the claims is contrary to, and ignores, the statement in the specification that the inventor did not intend to be limited to the embodiments disclosed.’” (*Id.* at 10 (quoting CX-0970C at Q/A at 74-75).) Fujifilm rejects Sony’s suggestion that the prior art problem of securing the leader pin supports Sony’s expanded construction by noting the ’779 patent identifies several problems in the prior art, of which the leader pin issue

**PUBLIC VERSION**

was but one. (*See id.*) Fujifilm explains that there is no rule that each claim of the '779 patent must address all of identified problems, and points out that Sony's own expert stated as much in his direct witness statement. (*See id.* (citing CX-0970C at Q/A at 74).) Fujifilm also notes that the examiner did not rely on any particular prior art problem as a reason for allowing the asserted claims of the '779 patent. (*See id.*) Finally, Fujifilm argues that the prior art problem of securing the leader pin was not newly addressed in the '779 patent, and that the prior art disclosed sufficiently secure housings. (*See id.*)

Fourth, Fujifilm argues that Sony's expanded construction fails to consider the parties' agreed upon constructions. Specifically, Fujifilm submits that "the Parties agreed to construe the term 'a first section and a second section operatively connected to form the housing' *separately* from the term 'operatively connected,' which separately appears in other instances throughout the claims." (*Id.* at 10-11.) Fujifilm argues that "all Parties specifically agreed to construe the housing limitation as 'arranged in a manner capable of performing a function of forming the housing,'" (*id.* at 11 (citing SIB at 22; RIB at 11; CIB at 19; EDIS Doc ID 612223)), and that "Sony specifically defined the 'function' of the operative connection of this housing limitation as the 'function of forming the housing' such that no further definition beyond what the Parties proposed is needed." (*Id.* (citing RX-0004C at Q/A at 143).) Finally, Fujifilm argues that the word "operatively" still has meaning under Staff's construction because it makes clear that the connection between the two sections can be either direct or indirect. (*See id.*) Based on these four arguments, Fujifilm opposes Sony's expanded construction.

Staff's proposed construction for this term is "a first and second section arranged in a manner capable of performing the function of forming the housing." (SIB at 22.) This construction essentially takes the words of the claim term as they appear in the claim, but

**PUBLIC VERSION**

substitutes in the parties' agreed construction for the phrase "operatively connected," *i.e.*, "capable of performing a function," and identifies the function as "forming the housing." (*See id.* at 15, 22.) Like Fujifilm, Staff argues that Sony's expanded construction was not timely disclosed, and that Sony's expert, Dr. Klopp, did not apply the expanded construction for infringement. (*See id.* at 22; SRB at 6-7.) Staff also argues that Sony's expanded construction lacks support in the language of the claims themselves, or in the prosecution history. (*See* SIB at 23; SRB at 7.) Ultimately, Staff dismisses Sony's expanded construction as an "attempt to import language from the specification into the plain language of the claim." (SIB at 23.)

As an initial matter, the undersigned agrees with Fujifilm and Staff that the expanded construction Sony now asserts for this claim term appears to be a relatively recent creation in the timeline of the case. A review of the parties' joint list of proposed claim constructions, (EDIS Doc ID 612223 at 4), and the relevant claim construction section of Sony's pre-hearing brief, (CPB at 20-22), reveals no suggestion that Sony had adopted the position that the phrase "a first and second section operatively connected to form the housing," (JX-0001 at Cl. 1), should require the additional structural limitation that the housing be "secure in the area of the tape access opening." (CIB at 23.) And while Sony disputes whether its expert, Dr. Klopp, *applied*, its expanded construction in all of his expert reports, (*see* CRB at 7-8), there appears to be no dispute that Dr. Klopp did not *articulate* this expanded construction prior to writing his rebuttal report on invalidity. (*See* Klopp, Tr. at 214:21-216:16.)

Ground Rule 8.2, which addresses the requirements for pre-hearing briefs, states that "[t]he parties shall provide complete proposed claim construction for all patent claims at issue," and that "[a]ny contentions not set forth in detail as required herein shall be deemed abandoned or withdrawn, except for contentions of which a party is not aware and could not be aware in the

## PUBLIC VERSION

exercise of reasonable diligence at the time of filing the pre-trial brief.” (See Notice of Amended Ground Rules, Attachment A at G.R. 8.2 (Aug. 18, 2017).) Here, Sony’s failure to assert its expanded construction of “a first and second section operatively connected to form the housing” in its pre-hearing brief requires that the contention be deemed abandoned.

Additionally, even if Sony’s expanded construction is considered to be merely an explanation of its disclosed construction, as opposed to a new contention, the undersigned finds that Sony’s expanded construction is unsupported by the record in this investigation and by the legal principles that govern claim construction. Sony’s expanded construction has one significant feature that distinguishes it from the construction proposed by Staff (and now adopted by Fujifilm): it requires the housing formed by the first and second sections to be “secure in the area of the tape access opening.” (CIB at 23.) However, there is no language at all in the asserted claims of the ’779 patent that addresses, let alone requires, security in the area of the tape access opening. (See JX-0001 at Cl. 1.) That fact leaves Sony in the tenuous position of arguing that the limitation is implicit in the phrase “operatively connected.” The remaining intrinsic evidence, however, does not support that conclusion.

With respect to the specification, Sony relies on a portion of the “Background of the Invention” that identifies dislodged leader pins as a problem in the prior art to argue that this term should be construed such that it solves that prior art problem. (See CIB at 21.) However, the problem of easily dislodged leader pins is not the only problem discussed in the Background of the Invention. (See JX-0001 at 1:39-40 (noting that invention of the ’779 patent address multiple “problems associated in the prior art”).) Other prior art problems, such as read/errors caused by the debris from sonic welding and a lack of space to use screws as a fastening method, are also discussed. (See *id.* at 1:16-20.) There is no legal requirement that every claim of a patent must

## PUBLIC VERSION

address every prior art problem identified in the specification. *See Honeywell Inc. v. Victor Co. of Japan*, 298 F.3d 1317, 1325-26 (Fed. Cir. 2002) (reversing district court claim construction that required claimed structure to solve all identified prior art problems). Indeed, Sony acknowledged as much in its prehearing brief in response to Fujifilm’s proposed construction. (*See* CPB at 21 (citing *Honeywell Inc.*, 298 F.3d at 1325-26).)

Sony’s reliance on the “Summary of the Invention” is no more availing. The three embodiments described in that section do not discuss a requirement for security around the tape access opening. (*See* JX-0001 at 1:44-2:30.) Instead, they merely recite that a first and second section must be “operatively connected” to form a tape housing. (*See id.*) Despite Sony’s contentions, these embodiments add nothing in combination with the Background of the Invention that would justify adding what is effectively a structural limitation—the requirement for a secure tape access opening in the housing—to the asserted claims, which do not recite such a limitation.

Sony is also mistaken inasmuch as it argues that the asserted claims must require a secure tape access opening limitation to give the word “operatively” any meaning. The parties agree that “operatively connected” means “arranged in a manner capable of performing a function.” (*See* CIB at 16.) With respect to the instant disputed claim term, the function being performed by arranging the first and second sections is *forming the housing*. This follows directly from the plain language of the asserted claim, which recites “a housing having a first section and a second section operatively connected *to form the housing*.” (JX-0001 at Cl. 1.) Sony fails to explain why the word “operatively” has no meaning under this construction, and the undersigned does not agree that it would not. The claim recites that the first section and the second section must be connected in a particular manner, *i.e.*, they must be connected in such a way that they form the tape housing. Contrary to Sony’s assertions, neither Staff nor Fujifilm has advocated a

## PUBLIC VERSION

construction that allows any type of connection between the two sections, regardless of whether a housing is formed. Accordingly, there is no need to import an additional secure tape access opening limitation into the asserted claims to give meaning to the word “operatively.”

Finally, Sony’s reliance of the Detailed Description of the Preferred Embodiment does not support adding a secure tape access opening limitation to the asserted claims. The portion on which Sony relies states that “[t]he snap fit provided by the post **82** and opening **92** more firmly secures the sections **13** and **14** together, thereby providing a more secure fastening in the area of the leader pin **30**.” (JX-0001 at 5:7-10.) This portion of the specification deals with a single preferred embodiment. (*See id.*) Further, the particular embodiment being described involves a snap-fit between the housing sections, a feature not included in the asserted claims, but recited in other claims in the patent. (*Compare* JX-0001 at Cl. 1 *with* JX-0001 at Cl. 10.) Given not only that it is inappropriate to import claim limitations from the specification into the claims, *see Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1371 (Fed. Cir. 2014) (“While we read claims in view of the specification, of which they are a part, we do not read limitations from the embodiments in the specification into the claims.”), but also that the asserted claims need not cover every embodiment or feature disclosed in the specification, *see AllVoice Computing PLC v. Nuance Commc’ns, Inc.*, 504 F.3d 1236, 1248 (Fed. Cir. 2007) (“each claim need not include every feature of an invention”), Sony’s reliance on the description of the preferred embodiment is misplaced. This is particularly true here where other allowed but unasserted claims cover the snap-fit method of securing the housing. *See Aug. Tech. Corp. v. Camtek, Ltd.*, 655 F.3d 1278, 1285 (Fed. Cir. 2011).

Accordingly, even if Sony had timely disclosed its contention that the term “a first and second section operatively connected to form the housing” in the asserted claims includes a requirement that the housing be secure in the area of the tape access opening, the undersigned



**PUBLIC VERSION**

would still find that such a requirement is not supported by the intrinsic evidence. Therefore, the undersigned finds that “a first and second section operatively connected to form the housing” should be given its *“plain and ordinary meaning, which is a first and second section arranged in a manner capable of performing the function of forming the housing.”*

**D. Infringement**

As an initial matter, Sony represents that “[i]t is undisputed that Fujifilm’s accused LTO products are identical to one another in all respects relevant to the analysis of infringement of the ’779 Patent.” (CIB at 23 (citing CX-970C at Q/A at 86-89; RX-0008C at Q/A at 106).) Sony thus uses Fujifilm’s LTO-4 product as representative of all accused products for the purposes of its infringement analysis. (*See id.*) Neither Fujifilm nor Staff appear to dispute that Fujifilm’s LTO-4 product is representative of all of the accused products for the purpose of analyzing infringement of the ’779 patent. The undersigned agrees also that the evidence cited by Sony supports the conclusion that Fujifilm’s LTO-4 products are representative of the accused products for the purposes of the ’779 patent infringement analysis. (*See* CX-0970C at Q/A at 89; RX-0008C at Q/A at 106.)

**1. Independent Claim 1**

**a) “A data storage cartridge”**

Sony asserts that each of Fujifilm’s LTO-4, -5, and -6 products satisfy the preamble, i.e., “a data storage cartridge,” of claim 1. (CIB at 24.) Fujifilm and Staff do not dispute this point. (*See* RIB at 14-21; SIB at 23-24.)

Based on the evidentiary record in this investigation, the undersigned finds that Fujifilm’s LTO-4, -5, and -6 products satisfy the preamble of claim 1. (*See* CX-0970C at Q/A at 92.)

PUBLIC VERSION

***b) “a housing having a first section and a second section operatively connected to form the housing”***

Sony asserts that Fujifilm’s LTO-4, -5, and -6 products satisfy the “a housing having a first section and a second section operatively connected to form the housing” limitation of claim 1 based on the V0 cartridge incorporated into those products. (CIB at 24.) Fujifilm and Staff do not dispute this point. (See RIB at 14-21; SIB at 23-24.)

Based on the evidentiary record in this investigation, the undersigned finds that Fujifilm’s LTO-4, -5, and -6 products satisfy the “a housing having a first section and a second section operatively connected to form the housing” limitation of claim 1. (See CX-0970C at Q/A at 46, 95-96; CDX-0003C.0117.)

***c) “the housing defining a tape access opening”***

Sony asserts that Fujifilm’s LTO-4, -5, and -6 products satisfy the “the housing defining a tape access opening” limitation of claim 1 based on the V0 cartridge incorporated into those products. (CIB at 24.) Fujifilm and Staff do not dispute this point. (See RIB at 14-21; SIB at 23-25.)

Based on the evidentiary record in this investigation, the undersigned finds that Fujifilm’s LTO-4, -5, and -6 products satisfy the “the housing defining a tape access opening” limitation of claim 1. (See CX-0970C at Q/A at 118; CDX-0003C.0119.)

***d) “a first positioning member operatively connected to the first section and a second positioning member operatively connected to the second section, the positioning members in axial alignment”***

Sony asserts that Fujifilm’s LTO-4, -5, and -6 products satisfy the “a first positioning member operatively connected to the first section and a second positioning member operatively connected to the second section, the positioning members in axial alignment” limitation of claim 1 based on the V0 cartridge incorporated into those products. (CIB at 24.) Fujifilm and Staff do not dispute this point. (See RIB at 14-21; SIB at 23-25.)

**PUBLIC VERSION**

Based on the evidentiary record in this investigation, the undersigned finds that Fujifilm's LTO-4, -5, and -6 products satisfy the "a first positioning member operatively connected to the first section and a second positioning member operatively connected to the second section, the positioning members in axial alignment" limitation of claim 1. (See CX-0970C at Q/A at 120-21; CDX-0003C.0120.)

- e) "an end of tape attachment member having a first end positioned in the first positioning member and a second end positioned in the second positioning member"*

Sony asserts that Fujifilm's LTO-4, -5, and -6 products satisfy the "an end of tape attachment member having a first end positioned in the first positioning member and a second end positioned in the second positioning member" limitation of claim 1 based on the V0 cartridge incorporated into those products. (CIB at 24.) Fujifilm and Staff do not dispute this point. (See RIB at 14-21; SIB at 23-25.)

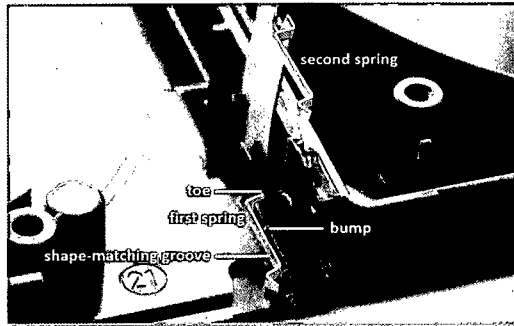
Based on the evidentiary record in this investigation, the undersigned finds that Fujifilm's LTO-4, -5, and -6 products satisfy the "an end of tape attachment member having a first end positioned in the first positioning member and a second end positioned in the second positioning member" limitation of claim 1. (See CX-0970C at Q/A at 123; CDX-0003C.0121.)

- f) "a first spring having a first portion operatively connected to the first section and a moveable second portion securing the end of tape attachment member in position" and "a second spring having a first portion operatively connected to the second section and a moveable second portion securing the end of tape attachment member in position"*

All parties acknowledge that the heart of the dispute regarding whether Fujifilm's products infringe claim 1 is whether those products have one or two springs. Accordingly, the parties treat the "first spring" and "second spring" limitations of claim 1 together for the purposes of briefing infringement. The same convention is adopted in the analysis herein.

## PUBLIC VERSION

Sony argues that “Fujifilm’s LTO-4, -5 and -6 products meet the ‘first spring’ and ‘second spring’ limitations because they include two distinct components that operate as independent ‘springs.’” (CIB at 25.) Sony provides the following annotated picture of a Fujifilm cartridge to demonstrate its infringement contention:



(*Id.* at 25; *see also* CDX-0003C.0124.) Sony argues that, despite being part of single metallic component, each protruding arm in the picture above functions independently as a spring and thus satisfies the first and second spring limitations of claim 1. (*See* CIB at 25-26.) Sony argues that the plate portion of the metallic component is unrelated to the spring action of the arms, and in some instances refers to the plate as a “non-spring element.” (*See* CIB at 26; CDX-0003C.0123.) Sony also argues that Fujifilm’s expert, Dr. Messner, defined a “spring” as “a flexible component for the controlled application of force” and that under that definition, each arm is a spring within the meaning of claim 1. (*See* CIB at 26.)

Sony argues that the arms “also each have ‘a first portion operatively connected to the [first/second] section,’” because “[t]he first portions are ‘arranged in a manner capable of performing a function’ (*i.e.*, operatively connected)—namely, they each make a connection to the respective first/second housing (*i.e.*, the ‘toe’ and ‘bump’) to allow the arms to exert a force on one end of the end of tape attachment member (*e.g.*, the ‘leader pin’).” (*Id.* at 26.) More specifically, Sony points to the way the arm fits in the shape-matching groove of the housing to

## PUBLIC VERSION

satisfy the “operatively connected” portion of this limitation. (*See id.* at 27.) However, Sony also argues that “[t]he operative connection further includes the connection of the ‘toe’ of the projection arm at the plate portion, with the ‘first portion’ of the arm extending from the plate portion to the portion of the arm that abuts the ‘bump’ in the housing.” (*Id.*)

Sony argues that “the end of the spring/projection arm that extends beyond the ‘bump’ in the shape-matching groove that is used to hold the end of the leader pin in place” constitutes the “a moveable second portion securing the end of tape attachment member in position” required by this claim limitation. (*Id.*)

Fujifilm contends that its accused products have only a single leader spring, and thus do not infringe claim 1 of the ’779 patent. (RIB at 14.) Fujifilm first argues that “a claim reciting ‘a first spring’ and ‘a second spring’ requires two springs.” (*See id.* at 14-16.) This argument is largely the same as the arguments made in the context of claim construction, and thus is not reiterated in depth here.

Fujifilm’s second argument is more to the point, however, inasmuch as it alleges that the accused products have only one spring. Fujifilm recites the development history of its accused products, noting that around [REDACTED] Fujifilm began designing LTO cartridges that used [REDACTED]. Fujifilm represents that it abandoned those [REDACTED] in favor of the current design, which it characterizes as a single spring design, for a variety of functional reasons. (*See id.* at 17.) Fujifilm emphasizes that the leader pin spring in its cartridges “is designed to sit loosely in the cartridge housing, allowing for some movement of the entire spring so that it can shift and adjust—as a single unit—to accommodate variations in the angle of insertion of a leader pin.” (*Id.*) Fujifilm describes the leader pin spring as a “plate

PUBLIC VERSION

spring” that “is made up of a single piece of metal that is stamped out of a piece of sheet metal during manufacturing,” and that “acts in unison to receive and engage the leader pin.” (*Id.*)

Fujifilm argues that Sony’s expert, Dr. Klopp, admitted that the arms of the leader pin spring are not completely independent, and that the component moves as a unit due to the fact that it sits loosely in the cartridge. (*See id.* at 18.) Fujifilm points to the testimony of its own expert, Dr. Messner, to further support the point that the two arms of the spring shift together as a single unit due to the loose way in which the component sits in the housing of the cartridge. (*See id.* at 19.) Fujifilm additionally relies on the testimony of Mr. Morita, one of its engineers, to establish that other portions of the leader pin spring besides the two arms also flex, and particularly that the “non-spring element” referred to by Sony is capable of flexion. (*See id.* at 19.)

Fujifilm criticizes Sony’s infringement position for failing to recognize the functional importance of the plate, or non-spring, element of the leader pin spring. Fujifilm asserts that “[w]ithout this ‘non-spring element,’ the two spring arms of the leader pin spring have no way to remain connected inside a cartridge,” and that “[t]he severed leader pin spring arms, without the rest of the leader pin spring, quite literally would be left rattling freely inside the cartridge, unable to perform any other useful function at all.” (*Id.* at 19-20.)

Separately, Fujifilm argues that the space between the two arms of its leader pin spring is [REDACTED], and is not indicative of a design choice by Fujifilm to have two separate springs. (*See id.* at 20.)

Fujifilm argues that the parties own documents and testimony also support the conclusion that the leader pin spring is a single spring. Specifically, Fujifilm points to various instances where Fujifilm and Sony documents refer to the leader pin spring as a singular object, and the testimony of a Sony witness, Mr. Yamaguchi, who referred to the leader pin spring as a singular

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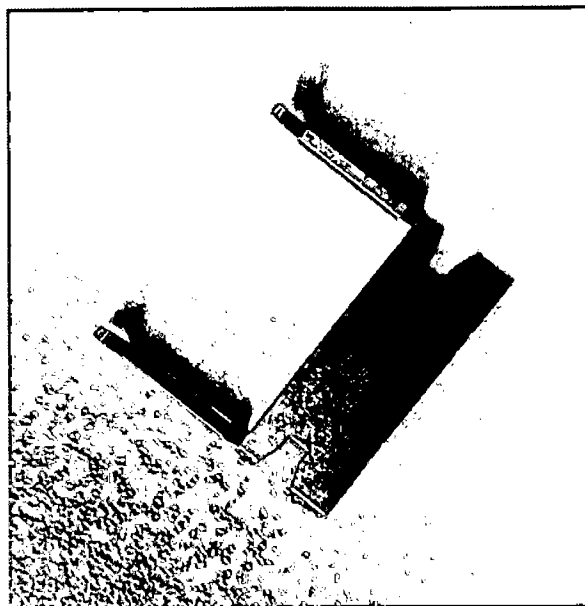
object. (*See id.* at 20-21.) Additionally, Fujifilm points to Sony's own development progression

[REDACTED]  
[REDACTED] as further evidence that its leader pin spring is only a single spring. (*See id.* at 21.)

Staff takes the position that Fujifilm's accused products do not meet the first and second spring limitations of the '779 patent because the accused products contain only a single spring. (*See SIB* at 25.) Staff rejects Sony's attempt to show infringement by dissecting the leader pin spring into three separate components: two spring arms and one "non-spring element." (*See id.*) Staff argues that "the arms do not operate independently of each other or of the metal plate," but rather both arms and the plate portion of the leader pin spring move together when contacted by the leader pin spring. (*Id.* at 26.) Like Fujifilm, Staff also notes that Sony's own internal pre-investigation documents [REDACTED] [REDACTED]. (*See id.* at 26-27.) Staff rejects Sony's suggestion that the documentary references to a single spring are the result of inherent translation ambiguities. (*See id.* at 28-29.)

The undersigned finds that Sony has failed to establish, by a preponderance of the evidence, that Fujifilm's accused products include "a first spring having a first portion operatively connected to the first section and a moveable second portion securing the end of tape attachment member in position" and "a second spring having a first portion operatively connected to the second section and a moveable second portion securing the end of tape attachment member in position." (*See JX-0001* at Cl. 1.) There is no factual dispute over what the structure of the leader pin spring in Fujifilm's LTO tape cartridges actually is, or where it resides in relation to the other components of the tape cartridge. The following is an image of the leader pin spring in isolation:

**PUBLIC VERSION**



(RX-0492 at 3.) And the following is an image of the leader pin spring as it sits in one half of the tape cartridge housing (the other half being removed such that the leader pin spring is visible):



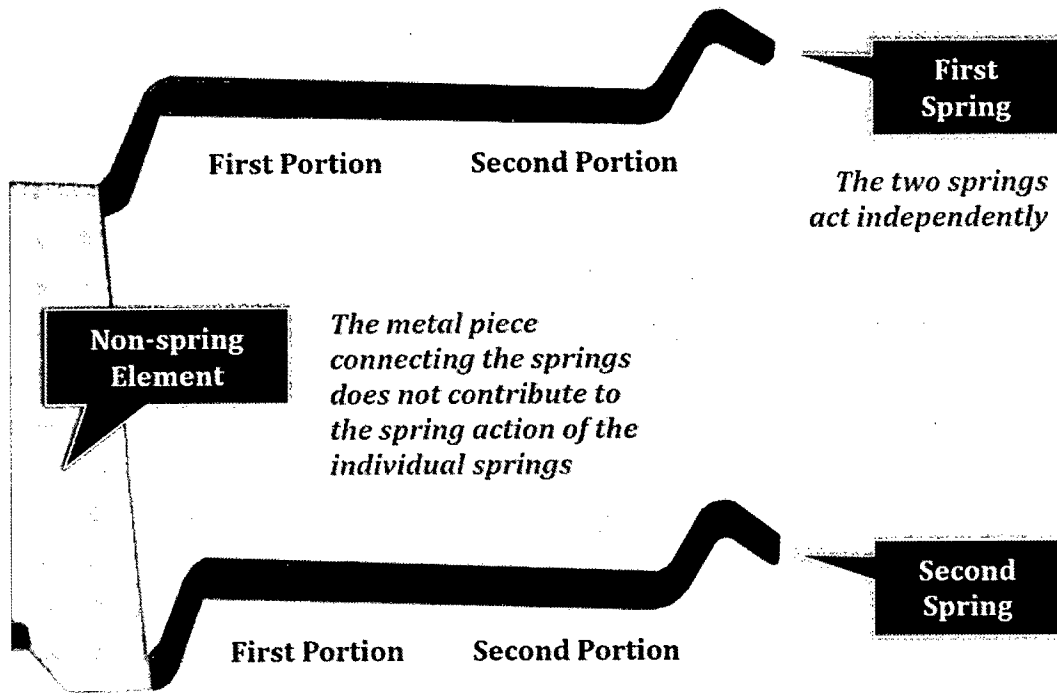
(RX-0492 at 5.) There is no dispute that the Fujifilm leader pin spring is a unitary metallic component. Likewise, there is no dispute that the Fujifilm leader pin spring has two arms that



**PUBLIC VERSION**

protrude from a common plate section. To be clear, the entire dispute regarding whether the Fujifilm leader pin spring constitutes a first spring and a second spring as required by the '779 patent is essentially an extension of the parties dispute about the construction of the first spring and second spring terms.

In order to make its case for infringement, Sony has taken position that each protruding arm is itself a spring, and that the plate connecting the arms is a “non-spring element.” The following diagram is illustrative of Sony’s infringement theory:



(CDX-003C.0123.) However, in adopting this position, Sony fails to account for the fact that the plate, which it labels a “non-spring element,” is required for the protruding arms to be able to function as a spring. As noted by Dr. Messner, “if the plate portion is removed from the spring, neither the top projection arm nor the bottom projection arm would ‘perform their intended function,’ as [Sony’s expert] suggests.” (RX-0008C at Q/A at 143.) Dr. Messner elaborates on that point by explaining that, absent the plate portion of the spring, the two protruding arms

**PUBLIC VERSION**

“would not provide the stable force needed to repeatedly receive and hold the leader pin in place.” (*Id.*) During the evidentiary hearing, Sony’s expert, Dr. Klopp, did not dispute the basic mechanics of why the plate portion was necessary to allow the protruding arms to act as a spring. (*See* Klopp, Tr. at 207:5-208:14.) Indeed, analogizing to a diving board anchored at one end, Dr. Klopp explained that absent the anchor, the other end of the protruding arm would simply “tip downward” under an applied force. (*See id.* at 208:5-14.) It would not present the reactive force associated with the function of a spring. (*See id.*)

That point is fatal to Sony’s theory of infringement. Claim 1 requires “a first spring *having a first portion operatively connected to the first section* and a moveable second portion securing the end of tape attachment member in position.” (JX-0001 at Cl. 1 (emphasis added).) As agreed by the parties, “operatively connected” means “arranged in a manner capable of performing a function.” (*See* SIB at 15; EDIS Doc ID 612223.) Under Sony’s infringement theory, the function of this operative connection is the “exert[ion of] a force on one end of the end of tape attachment member (*e.g.*, the “leader pin”).” (CIB at 26.) However, the “first portion” of each spring identified by Sony cannot provide that function absent the plate portion Sony has identified as a “non-spring element.” As Dr. Klopp explained with his diving board analogy, without the anchor, *i.e.*, the “non-spring element,” the protruding arms would not provide reactive forces and thus would not function to exert a force on the leader pin. (*See* Klopp, Tr. at 207:19-208:14; *see also* RX-0008C at Q/A at 143 (“if the plate portion is removed from the spring, neither the top projection arm nor the bottom projection arm would ‘perform their intended function.’”)).

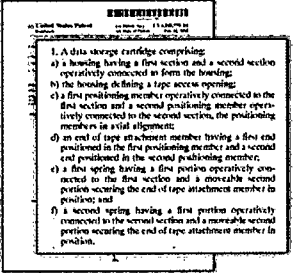
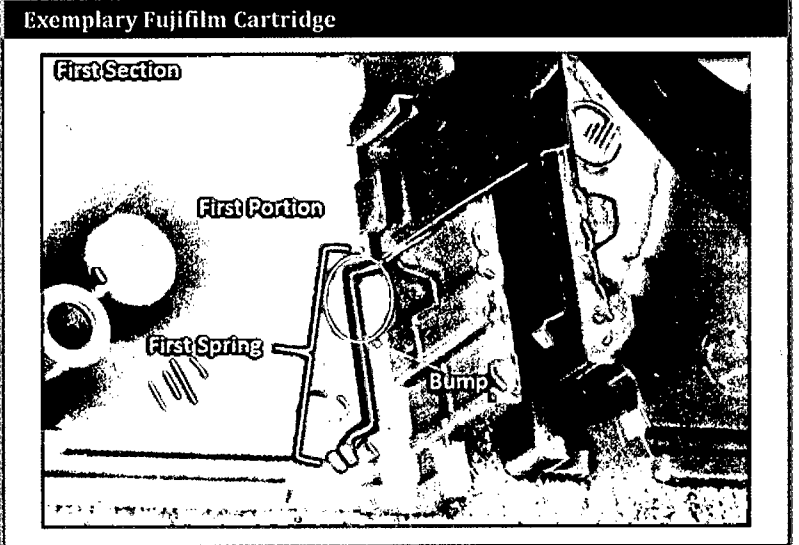
Sony’s expert’s testimony regarding how each protruding arm meets “the first portion operatively connected to the first section” portion of this claim element is not persuasive. Dr. Klopp testified that:

PUBLIC VERSION

The operative connection includes the shape-matching groove in the first housing section that the spring element sits in, as the groove assists the spring in performing its function of holding the tape attachment member by securing the spring within the section and inhibiting movement that could adversely affect the spring's function. The operative connection further includes the connection of the "toe" of the base member to the non-spring member.

The figure in CDX-0003.0124 identifies the first spring in position in the first section of the housing. The first portion is identified as extending from the non-spring base plate to the portion of the spring that abuts the "bump" or protrusion in the housing.

(CX-0970C at Q/A at 130; see also CX-0970C at Q/A at 147-48 (rebutting Dr. Messner's opinions regarding the operative connection portion of the claim element).) The figure Dr. Klopp references provides as follows:

<b>'779 Claim 1e</b>	<b>Fujifilm Products Infringe the '779 Patent</b>
	
e) a first spring having a first portion operatively connected to the first section...	CPX-0007

(CDX-0003C at 0124.) Dr. Klopp's testimony is somewhat off the mark in addressing whether the plate element is a necessary structure to allow the protruding arms to provide a reactive force associated with a spring. For instance, while acknowledging that Dr. Messner contends that the shape-matching groove and bump are not sufficient alone to allow each arm to perform a spring function, Dr. Klopp merely states that "observation of the tape cartridges clearly shows that the

**PUBLIC VERSION**


springs are connected to the sections by [the shape matching groove and bump.]” (CX-0970C at Q/A at 147.) And, when asked directly about the necessity of the metal plate to the spring function of the structure, Dr. Klopp opines that the plate is not necessary because another element could be substituted for the plate. ((*Id.* at Q/A at 149.) That line of reasoning tends to support the conclusion that the protruding arms, on their own, cannot perform a spring function because their operative connection to the housing would be incomplete.


The undersigned finds that the greater weight of the evidence in the record supports the conclusion that what Sony has identified as a first spring and a second spring are not in fact separate and distinct springs, as required by the language of the asserted claims. Rather, the evidence tends to establish that the leader pin spring in Fujifilm’s tape cartridges is a single spring made up of a metal plate and two protruding arms.<sup>2</sup> Accordingly, the undersigned finds that Sony has failed to meet its burden to show, by a preponderance of the evidence, that Fujifilm’s accused products include every limitation of claim 1 of the ’779 patent, and thus also finds that Sony has not established literal infringement of claim 1 of the ’779 patent.

***g) Doctrine of Equivalents***

Sony also argues that, “[e]ven if the leader pin spring component of the Fujifilm LTO products did not literally meet the ‘first spring’ and ‘second spring’ limitations, it would still infringe under the doctrine of equivalents.” (CIB at 29.) Complainants argue that the only

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<sup>2</sup> The undersigned notes that, to the extent this finding turns on claim construction, the evidence adduced also supports the conclusion that a person of ordinary skill in the art would not consider a leader pin spring such as the one in Fujifilm’s LTO cartridges to be two springs. Specifically, RX-0591C, 

 Though Fujifilm raised this evidence in the context of infringement, (*see* RIB at 20-21), the undersigned finds it more appropriately considered as extrinsic evidence that is applicable to claim construction.

## PUBLIC VERSION

difference between the leader pin spring of the Fujifilm accused products and two separate springs “is the presence of a plate portion that serves to attach the two projection arms to one another,” which they characterize as an insubstantial difference. (*Id.*) Addressing the function, way, result analysis that governs infringement by the doctrine of equivalents, Sony submits that both Fujifilm’s leader pin spring and the two springs of the ’779 patent “function to hold the leader pin in an appropriate position in the cartridge housing.” (*Id.* at 29-30.) Sony also submits that the function is accomplished in the same way because “the projection arms apply separate forces against each end of the leader pin in the same way as ‘distinct’ springs.” (*Id.* at 30.) And, Sony argues that “the accused leader pin spring component achieves the same result as the claimed springs” because “the leader pin is held in the appropriate place and is protected from being accidentally dislodged.” (*Id.*)

Fujifilm submits that its accused LTO cartridges do not infringe under the doctrine of equivalents, and that Sony’s doctrine of equivalents theory is flawed because it vitiates a claim element and ensnares the prior art. (*See* RIB at 22-28.) Specifically, Fujifilm argues that, under the proper function-way-result analysis, the single leader pin spring design of the accused products does not perform in the same way or achieve the same result as the first and second springs literally recited in the asserted claims. (*See id.* at 23-24.)

With respect to the “way” in which the single leader pin spring secures the leader pin in the cartridge, Fujifilm identifies three differences from the claimed first and second springs. First, Fujifilm argues that its single-spring design incorporates a loose-fit connection with the cartridge housing, which allows the single leader pin spring to “shift to receive the leader pin more uniformly and as a single unit,” which in turn provides benefits over static or fixed two-spring design claimed by the ’779 patent. (*Id.* at 23 (citing RX-0001C at Q/A at 28, 31;

PUBLIC VERSION

RX-0008C at Q/A at 56-61, 136, 144, 173, 177).) Second, Fujifilm argues that the single spring design of its products obviates the need to align and attach two separate springs to the cartridge because “the single spring is sized such that it will properly engage both ends of the leader pin.” (*Id.*) Finally, Fujifilm emphasizes that the force of the leader pin pushing against one arm of the leader pin spring is transferred through the plate portion to the other arm in the accused devices, where as in the two spring design of the asserted claims, the two springs do not transfer forces between themselves, but rather act independently. (*See id.* at 23-24.)

With respect to the result produced by the single leader pin spring design of the Fujifilm products, Fujifilm argues that the single leader pin spring design simplifies manufacturing and thus “result[s] in lower costs and reduced scrap rates.” (*Id.* at 24.)

Staff criticizes Sony’s doctrine of equivalents analysis as improperly assuming that leader pin spring in the Fujifilm accused products is actually two springs connected by a non-spring element. (*See id.* at 29.) Particularly, Staff rejects the doctrine of equivalents testimony of Sony’s expert, Dr. Klopp, because it utilizes a construction whereby the arms of the Fujifilm leader pin spring are themselves two springs. (*See id.* (citing CX-0970C at Q/A at 152, 154, 156).) Staff also argues that the evidence does not support a finding of equivalence under the function-way-result analysis. (*See id.* at 29 (citing RX-0008 at Q/A at 166-183).) Finally, Staff, like Fujifilm, argues that applying the doctrine of equivalents such that the single leader pin spring of the Fujifilm products is equivalent to the first and second springs of the asserted claims would vitiate the second spring limitation, and also ensnare the prior art. (*See id.* at 30-32.)

The undersigned finds that Fujifilm’s accused products do not infringe claim 1 of the ’779 patent under the doctrine of equivalents. As an initial matter, the undersigned notes that there is no serious dispute among the parties that the leader pin spring of Fujifilm’s tape cartridges and the

## PUBLIC VERSION

first and second springs of claim 1 of the '779 patent perform the same function, *i.e.*, securing the leader pin in the housing. (*See* CIB at 29; RIB at 22-23; SIB at 29.) With respect to the “result” aspect of the function-way-result analysis, the undersigned is not persuaded that Fujifilm’s leader pin spring and the two springs of the asserted claims produce different results. Particularly, Fujifilm’s argument in this respect is untethered from the actual requirements of the claim, and instead attempts to re-cast the “result” achieved by the leader pin spring as a simplified manufacturing process with a cost benefit. It is well-established that the doctrine of equivalents analysis should be tied to the elements of the claim being analyzed. *See Lockheed Martin Corp. v. Space Sys./Loral, Inc.*, 324 F.3d 1308, 1321 (Fed. Cir. 2003) (“Under the all elements rule, there can be no infringement under the doctrine of equivalents if even one limitation of a claim or its equivalent is not present in the accused device.”) Claim 1 of the '779 patent does not address manufacturing complexity or cost, and thus Fujifilm’s assertions that its single leader pin spring “results” in reduced manufacturing complexity and cost simply is not particularly probative of whether there is infringement under the doctrine of equivalents. To the contrary, the undersigned finds that there is no credible dispute that both Fujifilm’s single leader pin spring and the two springs of claim 1 achieve the same result: securing the leader pin spring in the tape cartridge.

There is however, a substantial difference in the “way” the Fujifilm leader pin spring and the two springs of claim achieve that result. As Fujifilm notes, its leader pin sits loosely in the tape cartridge housing such that some degree of movement is available to the spring and such that the spring moves as a unit within the housing. (*See* RX-0008C at Q/A at 58-60; RDX-0005C at 13-25.) By contrast, claim 1 indicates that the first and second springs must each have first portions that are operatively connected to a separate half of the housing. (*See* JX-0001 at Cl. 1.) This requirement that each spring be operatively connected to a different half of the tape cartridge precludes the

**PUBLIC VERSION**

manner of operation used by Fujifilm's single leader pin spring. (See RX-0008C at Q/A at 175-76.) Sony's disagreement on this point simply is not supported by credible evidence.

In order to argue that the Fujifilm leader pin spring functions in the same way as the two springs of claim, Sony argues that "[the] function is accomplished in the same way: the projection arms apply separate forces against each end of the leader pin in the same way as 'distinct' springs." (CIB at 30 (citing CX-0970C at Q/A at 157).) This conclusory statement is not sufficient to meet Sony's burden to establish infringement by the doctrine of equivalents. The cited portion of its expert's witness statement is not persuasive either. Particularly, Sony's expert testified that "[t]he function is also accomplished in the same way: by each spring independently flexing and applying force against each of two ends of a tape attachment member." (CX-0970C at Q/A at 162.) This statement fails to acknowledge the fact that the single leader pin spring sits loosely in the cartridge and that the spring moves as a unit. Dr. Klopp also fails to acknowledge the fact that the Fujifilm single leader pin design does not incorporate the two operative connections required by asserted claim 1. Dr. Klopp attempts to avoid this issue in his analysis by arguing that:

. . . the first portion of the springs in the accused products are connected to the cartridge via the shape-matching groove in the housing section. The springs sit in this groove, which includes a bump, and the groove assists the spring in performing its function of holding the end of tape attachment member in position.

(CX-0970C at Q/A at 162.) However, as described above in the discussion of literal infringement, the undersigned finds that the evidence supports the conclusion that the "operative connection" required by asserted claim 1 is not met simply because the protrusions of the Fujifilm leader pin spring sit in the shape matching groove with a bump. Thus, Dr. Klopp's doctrine of equivalents analysis is also flawed for the same reason that his literal infringement analysis was flawed, *i.e.*, the "operative connections" he identifies in the accused products are not sufficient to perform the function required of the connections.



**PUBLIC VERSION**

Finally, the undersigned disagrees with Sony's suggestion that Fujifilm's expert "agreed" that the Fujifilm single leader pin spring and the two springs of the '779 patent perform their functions in the same way. (*See* CIB at 30.) The relevant exchange from the evidentiary hearing is as follows:

Q The leader pin spring component in the accused products is designed to perform the function of securing the leader pin in the cartridge; right?

A Yes, that's right.

Q And this function is accomplished by the two projection arms applying a force to the leader pin; right?

A Yes.

Q That results in holding the leader pin in place; right?

A Yes.

Q And you would agree, sir, looking at the '779 patent, that the two springs disclosed in that patent are also designed to function to hold the leader pin in place; right?

A Yes.

Q And they do so by applying forces to the leader pin ends; right?

A Yes.

Q That also results in holding the leader pin in place; correct?

A Yes.

(Messner, Tr. at 351:12-352:7.) The fact that Dr. Messner agreed that both the single leader pin spring of the Fujifilm cartridges and the two springs of asserted claim 1 apply forces to the leader pin ends is not the same thing as agreeing that the Fujifilm leader pin spring functions in the same way as the first and second springs of claim 1. Indeed, Dr. Messner has made it abundantly clear that in his opinion, the single leader pin spring applies those forces in a very different way than the two springs of claim 1. (*See* RX-0008C at Q/A at 176.)

## PUBLIC VERSION

Accordingly, for the reasons explained herein,<sup>3</sup> the undersigned finds that Sony has failed to establish that Fujifilm's accused products infringe claim 1 of the asserted patents under the doctrine of equivalents.

### 2. Dependent Claims 2-6

"One who does not infringe an independent claim cannot infringe a claim dependent on (and thus containing all the limitations of) that claim." *Wahpeton Canvas Co. v. Frontier, Inc.*, 870 F.2d 1546, 1552 n. 9 (Fed. Cir. 1989). Given that the undersigned has found that independent claim 1 of the '779 patent is not infringed, dependent claims 2-6 are also not infringed.

The undersigned notes that Respondents do not appear to dispute that the accused products include the additionally recited features of dependent claims 2-6 of the '779 patent, and Staff affirmatively asserts that the evidence shows that the additional features of those dependent claims are practiced by the accused products. (*See* RIB at 14-28; SIB at 33-34.) Thus, the determination of whether these dependent claims are infringed rises and falls solely with the determination of infringement as to independent claim 1.

### E. Domestic Industry – Technical Prong

In addressing the technical prong of the domestic industry requirement for the '779 patent, Sony asserts that each of its LTO-4, -5, and -6 products, as well generations 1-4 of IBM's 3592 products are identical to one another for purposes of analyzing whether they practice any claim of the '779 patent. (*See* CIB at 34.) Further, Sony asserts that both the Sony and IBM domestic industry products practice claims 1-6 of the '779 patent in substantially the same manner as the Fujifilm accused products. (*See id.*) Particularly, Sony acknowledges that the Sony and IBM

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<sup>3</sup> Given that the undersigned has found that the accused products do not infringe under the doctrine of equivalents according to the function-way-result analysis, there is no need to address Fujifilm and Staff's alternative vitiation or ensnarement arguments against infringement by the doctrine of equivalents.

## PUBLIC VERSION

domestic industry products have “springs that are similar to the Fujifilm Accused Products, and thus meet these limitations in the same way.” (*Id.* at 35 (citing CDX-0003.0145-0148; CX-0970C at Q/A at 215, 217-18, 220-21).) Accordingly, Sony relies on the same arguments it made to show infringement by Fujifilm’s accused products to satisfy the technical prong of the domestic industry requirement through the Sony and IBM domestic industry products. (*See id.* at 35-36.)

Fujifilm similarly agrees “that there are no meaningful differences with respect to the disputed elements between the Accused Products, the Sony DI Products, and the IBM DI Products.” (RIB at 28 (citing CX-0970C at Q/A at 191-193, 245-249; RX-0008C at Q/A at 196-197, 200, 205, 217, 230).) Accordingly, Fujifilm relies on its noninfringement arguments to establish that Sony has not satisfied the technical prong of the domestic industry requirement for the ’779 patent. (*See id.*)

Staff similarly takes the position that the Sony and IBM domestic industry products are identical to the Fujifilm accused products for the purposes of analyzing the technical prong of the domestic industry requirement. (*See* SIB at 34.) Thus, Staff also relies on its noninfringement arguments to argue that Sony has not shown that the technical prong of the domestic industry requirement is satisfied for the ’779 patent. (*See id.*)

The undersigned agrees with the parties that the evidence of record establishes that the Sony and IBM domestic industry products are identical to the Fujifilm accused products in all respects that are relevant to determining whether those products practice claims 1-6 of the ’779 patent. (*See* CX-0970C at Q/A at 191-193, 245-249; RX-0008C at Q/A at 196-197, 205, 217.) Accordingly, and because Sony, Fujifilm, and Staff do not advance any new arguments to show why the domestic industry products practice claims 1-6 that were not advanced to show infringement of claims 1-6 by the Fujifilm accused products, the undersigned finds that Sony has not established that either the Sony or IBM domestic industry products practice any of claims 1-6

**PUBLIC VERSION**

of the '779 patent. Particularly, the undersigned finds that Sony has not established that either the Sony or IBM domestic industry products include a first spring and a second spring as required by claim 1 of the asserted patents, literally, or under the doctrine of equivalents.

Accordingly, the undersigned finds that Sony has failed to establish that the technical prong of the domestic industry requirement is satisfied for the '779 patent.

**F. Validity**

Respondents assert two grounds for invalidity with respect to the '779 patent. First, Respondents contend that each of the asserted claims of the '779 patent is invalid under 35 U.S.C. § 102 as anticipated. (RIB at 29-43.) Second Respondents assert that each of the asserted claims of the '779 patent is invalid under 35 U.S.C. §103 as obvious. (*Id.* at 43-47.)

**1. Anticipation**

**a) Reference No. 1: U.S. Patent No. 6,236,539 to Morita et al. ("Morita")**

Respondents submit that the 1<sup>st</sup>, 6<sup>th</sup> and 15<sup>th</sup> embodiments of Morita (RX-0076) anticipate all asserted claims of the '779 patent. (RIB at 29.) The undersigned addresses each embodiment in the same order Respondents addressed them in their briefing.

**(1) 6th Embodiment**

**(a) Independent Claim 1**

Fujifilm asserts that Morita's 6<sup>th</sup> embodiment discloses each element of claim 1 of the '779 patent, and relies on the testimony of its expert, Dr. Messner, to support that assertion. (RIB at 30 (citing RX-0004C at Q/A at 255-72.) Fujifilm further asserts that the only disputed issue between it and Sony is whether the 6<sup>th</sup> embodiment discloses limitation [a] of claim 1, which recites: "a housing having a first section and a second section operatively connected to form the housing." (*Id.*) However, Fujifilm explains that the dispute here is a result of Sony's reliance on an improper

## PUBLIC VERSION

claim construction for element [a]. Particularly, Fujifilm explains that Sony's expert, Dr. Klopp, distinguished the 6<sup>th</sup> embodiment of Morita by arguing that element [a] of claim 1 requires a "sufficiently secure housing such that the leader pin will not become dislodged due to a weakness in the connection between the two halves, for example if the cartridge is dropped during normal handling." (*Id.* at 31 (citing CX-1151C at Q/A at 84-88; Klopp, Tr. at 615:6-616:20).) Fujifilm argues that this additional requirement is not supported by the language of the claims, and is in effect a post-hoc creation by Dr. Klopp to avoid anticipation by Morita. (*See id.* at 31-32.)

Sony disagrees that Morita anticipates any of the asserted claims of the '779 patent, and emphasizes that "the Patent Office already considered the Morita disclosure during prosecution and found that it did not anticipate or render obvious the '779 invention." (CIB at 39 (citing CX-1151C at Q/A at 66-79).) Particularly, Sony explains that "Morita is the U.S. counterpart to Fujifilm's European patent publication no. EP0926675, which was cited during the '779 Patent prosecution and considered by the Examiner." (*Id.*) Because Morita's European counterpart was considered during prosecution, Sony also argues that Fujifilm must adduce "evidence to support a conclusion that the Examiner did not do his job." (*Id.* (citing *Shire LLC v. Amneal Pharm., LLC*, 802 F.3d 1301, 1307 (Fed. Cir. 2015)).)

With respect to claim 1 of the '779 patent, as compared to the 6<sup>th</sup> embodiment of Morita, Sony argues that Morita fails to disclose element [a], and does not dispute that Morita discloses the other elements of claim 1. (*See id.* at 40-42.) With respect to element [a] of claim 1, Sony relies on Dr. Klopp's argument that the element should be construed to require the housing to provide "a sufficiently secure housing in the area of the tape access opening such that the leader pin will not become dislodged due to a weakness in the connection between the two halves." (*Id.* at 40.) Based on the assumption that this additional structural limitation is required by element

**PUBLIC VERSION**

[a] of claim 1, Sony argues that Morita “merely describes that upper and lower casing halves 2 and 3 are generally fastened ‘by screws and the like,’ unrelated to the area near the tape access opening,” and that “Morita offers no suggestion to further secure the housing in that area.” (*Id.* (citing RX-0076 at 4:25-31).)

Staff agrees that whether Morita’s 6<sup>th</sup> embodiment anticipates claim of the ’779 patent turns on whether element [a] of claim 1 is disclosed. (*See* SIB at 35.) Relying on its claim construction arguments, Staff rejects Sony’s position that element [a] requires “a sufficiently secure housing such that the leader pin will not become dislodged due to a weakness in the connection between the two halves, for example if the cartridge is dropped during normal handling.” (*Id.* at 35-36 (citing CX-1151C at Q/A at 84-88).) Accordingly, and because “it is undisputed that Morita discloses a first and second section sections joined together to form a housing, which satisfies the limitation under the Staff’s and Fujifilm’s construction,” Staff submits that “Morita’s 6<sup>th</sup> embodiment discloses each limitation of claims 1-4 of the ’779 patent.” (*Id.* at 36.)

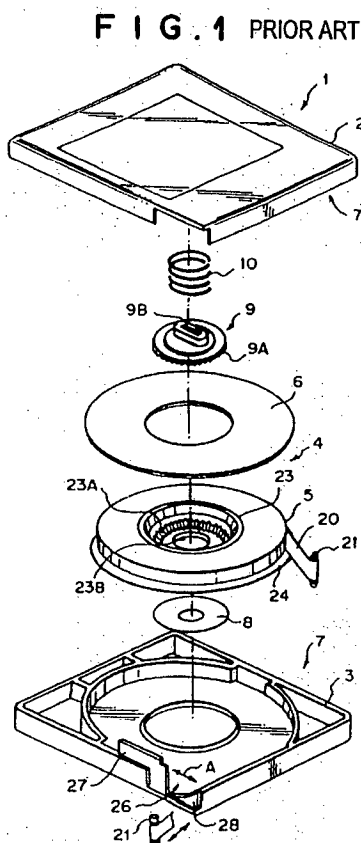
As an initial matter, the undersigned agrees that the salient dispute regarding whether Morita’s 6<sup>th</sup> embodiment anticipates claim 1 revolves around element [a] of that claim. (*See* CIB at 40-42.) Further, the undersigned has reviewed the evidence submitted by Fujifilm in support of its assertion that elements [b]-[f] of claim 1 are disclosed by the 6<sup>th</sup> embodiment of Morita, and finds that the evidence submitted does in fact show that Morita’s 6<sup>th</sup> embodiment discloses each of elements [b]-[f] of claim 1 of the ’779 patent. (*See* RX-0004C at Q/A at 260-272; Klopp, Tr. at 609:2-610:1; CDX-0005C at 1023.)

Element [a] of claim 1 of the ’779 patent requires: “a housing having a first section and a second section operatively connected to form the housing.” (JX-0001 at Cl. 1.) As explained *supra* in section IV.C.2, the undersigned found that “a first and second section operatively

PUBLIC VERSION

connected to form the housing” should be given its plain and ordinary meaning, which is “a first and second section arranged in a manner capable of performing the function of forming the housing.” (Supra at 37.) Moreover, the undersigned rejected the assertion that the phrase “operatively connected” in element [a] implicitly required the additional limitation that the housing be secure in the area of the tape access opening. (See supra at 33-37.) Sony’s argument that Morita’s 6<sup>th</sup> embodiment does not disclose element [a] of claim 1 is based on an improper construction of that element, and therefore, the undersigned does not find it persuasive.

Figure 1 of Morita “is an exploded perspective view of a magnetic tape cartridge to which the present invention [of Morita] is applied.” (RX-0076 at 2:18-19.) The figure is as follows:



(*Id.* at Fig. 1.) Unlike many of the other figures in Morita, which are described as corresponding to a specific embodiment, Figure 1 is not limited to a particular embodiment, but rather is provided as

**PUBLIC VERSION**

a reference of a magnetic tape cartridge to which the various embodiments of Morita may be applied. (*See id.* at 2:18-19.) The specification of Morita goes on to describe Figure 1, explicitly stating that “[t]he cartridge casing 7 is formed by fastening together upper and lower casing halves 2 and 3 by screws and the like.” (*Id.* at 4:29-31.) In the context of the 6<sup>th</sup> embodiment specifically, the specification also states that “the upper casing half 2 is fastened to the lower casing half 3.” (*Id.* at 7:63-64.) Accordingly, the undersigned finds that Morita’s 6<sup>th</sup> embodiment discloses “a housing having a first section and a second section operatively connected to form the housing,” as required by element [a] of claim 1 of the ’779 patent. (JX-0001 at Cl. 1.)

The undersigned notes that there is no dispute that a European counterpart to Morita, European patent publication no. EP0926675, is a cited reference in the ’779 patent. (*See* JX-0001 at Cover.) As Complainants assert, references cited on the face of a patent are presumed to have been considered by the examiner. Respondents “therefore ‘ha[ve] the added burden of overcoming the deference that is due to a qualified government agency presumed to have properly done its job, which includes one or more examiners who are assumed to have some expertise in interpreting the references and to be familiar from their work with the level of skill in the art and whose duty it is to issue only valid patents.’” *Shire LLC v. Amneal Pharm., LLC*, 802 F.3d 1301, 1307 (Fed. Cir. 2015) (quoting *PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1304 (Fed. Cir. 2008)). That added burden is not, however, insurmountable. Such is the case here, where the only dispute is whether Morita’s 6<sup>th</sup> embodiment discloses “a housing having a first section and a second section operatively connected to form the housing,” and where Morita clearly discloses, with both figures and text, first and second housing sections that are operatively connected to form the housing. (JX-0001 at Cl. 1; *see also* RX-0076 at Fig. 1, 4:29-31; 7:63-64.) Even under the added burden attached to invalidity arguments based on cited references, this evidence is sufficient to



**PUBLIC VERSION**

establish that element [a] of claim 1 is disclosed by Morita. Similarly, given the absence of any dispute from Complainants that the other elements of claim 1 are disclosed by Morita's 6<sup>th</sup> embodiment, the undersigned finds that the evidence adduced by Respondents as to those elements is also sufficient to meet its burden of proof. (*See* RX-0004C at Q/A at 260-272; Klopp, Tr. at 609:2-610:1; CDX-0005C at 1023.)

Because Fujifilm has established by clear and convincing evidence that each element of claim 1 of the '779 patent is disclosed by Morita's 6<sup>th</sup> embodiment, the undersigned finds that claim 1 of the '779 patent is invalid as anticipated.

**(b) Claims 2-4**

Fujifilm asserts that the additional limitations of dependent claims 2 through 4 of the '779 patent are also anticipated by Morita's 6<sup>th</sup> embodiment. (*See* RIB at 32 (citing RX-0004C at Q/A at 273-275; Klopp, Tr. at 623:10-14.) Sony does not provide any argument addressing the additional limitations of claims 2 through 4 specifically. (*See* CIB at 40-42; CRB at 16-18.) Staff joins Fujifilm and asserts that "[t]he evidence therefore shows that Morita's 6<sup>th</sup> embodiment anticipates claims 2-4 of the '779 patent if the proper claim construction is adopted." (SIB at 37.)

Based on the evidence relied on by Fujifilm, the undersigned finds that Fujifilm has established by clear and convincing evidence that each of the additional limitations of claims 2 through 4 of the '779 patent is disclosed by Morita's 6<sup>th</sup> embodiment, and that claims 2 through 4 of the '779 patent are therefore invalid as anticipated. (*See* RX-0004C at Q/A at 273-275; Klopp, Tr. at 609:2-610:4, 623:10-14.)

**(c) Claim 5**

Relying again on the testimony of its expert, Fujifilm argues that Morita's 6<sup>th</sup> embodiment also discloses each limitation of claim 5. (*See* RIB at 32 (citing RX-0004C at Q/A at 276-78).)

**PUBLIC VERSION**

However, Fujifilm acknowledges that Sony disputes “whether Morita’s 6<sup>th</sup> embodiment discloses the ‘generally L-shaped springs’ in claim 5.” (*Id.* (citing CX-1151C at Q/A at 206; CDX-0005.1023).) Elaborating on its own position, Fujifilm appears to argue that, if the infringement analysis offered by Sony to show that the Fujifilm accused products include generally L-shaped springs is correct, then the springs of Morita’s sixth embodiment must also be generally L-shaped for the purposes of anticipation. (*See id.* at 32-33.) Put another way, Fujifilm submits that “Morita’s 6<sup>th</sup> embodiment discloses springs 130 each having a pair of arms 130b and 130c connected by a bight portion 130a which have an L-shape to the same extent the Accused Products have an L-shape.” (*Id.* at 33 (citing RX-0076 at 7:30–32; FIGs. 13, 15; RX-0004C at Q/A at 276-278; CX-1151C at Q/A at 215).) Fujifilm also argues at length that there is nothing patentable about an L-shaped spring, that the L-shaped spring is a mere design choice, and that generally L-shaped springs provide no advantage or particular purpose over the prior art. (*See* RIB at 3-34.)

Sony argues that “Morita’s 6th embodiment lacks any disclosure of a pin holding member that is ‘generally L-shaped,’” and that to the contrary, “Morita’s 6th embodiment expressly teaches away from an ‘L-shaped’ spring, in describing that ‘the spring member 130 is *substantially U-shaped* and comprises a bight portion 130a, a pair of arms 130b and 130c extending substantially in parallel to each other from opposite ends of the bight portion 130a and a pin holding portion 130d formed on the free end of the arm 130c.” (CIB at 41 (quoting RX-0076 at 7:30-34).)

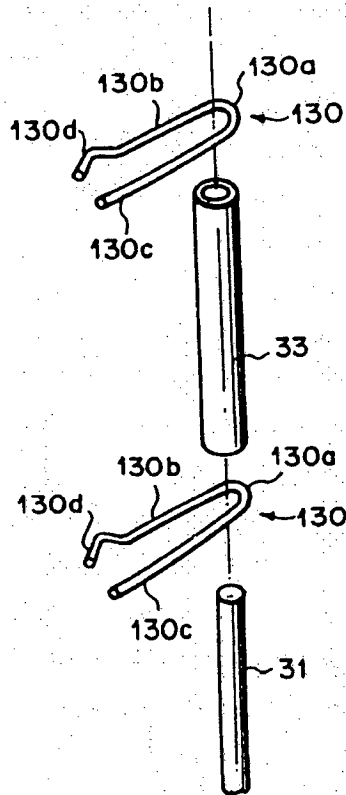
Staff adopts a position that is largely in line with Sony’s, *i.e.*, that “[t]he evidence . . . does not show that Morita’s 6th embodiment anticipates claim 5 of the ’779 patent.” (SIB at 38.)

Claim 5 of the ’779 patent provides:

The data storage cartridge of claim 2, wherein the springs are generally L-shaped having a base member and an elongate member, the elongate member having a first end operatively connected to the base member and a second end forming the second portion.

PUBLIC VERSION

(JX-0001 at Cl. 5.) The springs of Morita's 6<sup>th</sup> embodiment are "substantially U-shaped," not L-shaped. (See RX-0076 at 7:30.) Figure 15 of Morita, which shows the springs of the 6<sup>th</sup> embodiment makes this clear:



(*Id.* at Fig. 15.) Fujifilm's reliance on Sony's infringement contentions is not clear and convincing evidence of anticipation, which is what is required to show that claim 5 is invalid. Moreover, as Staff explains, the springs disclosed in Morita's 6<sup>th</sup> embodiment are readily distinguishable from the springs of the Fujifilm accused products, such that it does not follow that Morita must anticipate claim 5 if Fujifilm infringes claim 5.<sup>4</sup> (See SIB at 37-38.)

Additionally, Fujifilm's arguments regarding the patentability of L-shaped springs, including that the use of an L-shaped spring is a merely a design choice with no particular

<sup>4</sup> Fujifilm's reliance on Sony's infringement contentions also fails to account for the fact that the standard of proof for establishing invalidity—clear and convincing evidence—is higher than that required for establishing infringement—a preponderance of the evidence.

**PUBLIC VERSION**

advantage, miss the mark with respect to anticipation. Indeed, the precedent Fujifilm cites to support these arguments all deal with invalidity due to obviousness, not anticipation. (See RIB at 33-34 (citing *In re Magna Elecs., Inc.*, 611 F. App'x 969, 974 (Fed. Cir. 2015) (affirming obviousness determination); *In re Kuhle*, 526 F.2d 553, 555 (CCPA 1975) (affirming obviousness determination); *Alberts v. Kappos*, 917 F. Supp. 2d 94, 111-12 (D.D.C. 2013), *aff'd sub nom. Alberts v. Lee*, 552 F. App'x 986 (Fed. Cir. 2014) (granting summary judgment of invalidity due to obviousness); see also *Vicor Corp. v. SynQor, Inc.*, 869 F.3d 1309, 1326 (Fed. Cir. 2017) (affirming obviousness determination).) Given that obviousness and anticipation are separate and distinct grounds for invalidity, Fujifilm's patentability and design-choice arguments do not show anticipation by Morita's 6<sup>th</sup> embodiment.

Accordingly, for the reasons detailed above, the undersigned finds that Fujifilm has not established by clear and convincing evidence that claim 5 of the '779 patent is invalid as anticipated by Morita's 6<sup>th</sup> embodiment.

**(d) Claim 6**

Claim 6 of the '779 patent depends from claim 5, and thus incorporates each limitation of claim 5. Thus, claim 6 incorporates the requirement that the springs of the data storage cartridge be generally L-shaped. Because Morita's 6<sup>th</sup> embodiment does not disclose generally L-shaped springs, claim 6, like claim 5, cannot be invalid as anticipated by that embodiment.

Accordingly, the undersigned finds that Fujifilm has not established by clear and convincing evidence that claim 6 of the '779 patent is invalid as anticipated by Morita's 6<sup>th</sup> embodiment.

PUBLIC VERSION

(2) 15<sup>th</sup> Embodiment

(a) Independent Claim 1

Respondents assert that Morita's 15<sup>th</sup> embodiment anticipates claim 1 of the '779 patent. (*See* RIB at 35 (citing RX-0004C at Q/A at 229-42).) Respondents acknowledge a dispute regarding whether the housing limitation (element [a]) of claim 1 is disclosed by Morita's 15<sup>th</sup> embodiment, and submit that element [a] is disclosed for the same reasons it argued that element [a] was disclosed by Morita's 6<sup>th</sup> embodiment. (*See id.* (citing RX-0004C at Q/A at 230-33).) Respondents acknowledge two other disputes germane to the anticipation of claim 1 by Morita's 15<sup>th</sup> embodiment. (*See id.*)

The first dispute Respondents address involves element [c] of claim 1, which requires "a first positioning member operatively connected to the first section and a second positioning member operatively connected to the second section, the positioning members in axial alignment . . . ." (JX-0001 at Cl. 1.) Respondents submit that "Morita explicitly discloses leader pin 21 is held in 'recesses 28 formed in the upper and lower casing halves 2 and 3.'" (RIB at 35 (emphasis Respondents') (quoting RX-0076 at 12:12-13).) Respondents further argue that "[t]hese arc-shaped cut-out recesses receive and hold the ends of the leader pin in the parked position; satisfying the claimed 'positioning member,'" and that "each recess 28 in Morita's 15<sup>th</sup> embodiment is formed in the cartridge casing, and thus, is operatively connected to its respective cartridge casing." (*Id.*) With respect to the axial alignment requirement of element [c], Respondents assert that "recesses 28 are exclusively described as being in axial alignment, and are never shown otherwise," and that "the recesses must inherently be in axial alignment, as they are described as positioned to receive the barbell-shaped leader pin." (*Id.* at 35-36.)

## PUBLIC VERSION

The second dispute Respondents address involves whether Morita's 15<sup>th</sup> embodiment is enabled with respect to elements [e] and [f] (the first and second spring limitations). Relying on the testimony of its expert, Dr. Messner, Fujifilm argues that Morita's 15<sup>th</sup> embodiment "discloses *two pin holding members 540* which are held in the inner surface of cartridge casing 7 through a press-fit is enabled." (*Id.* at 36 (citing RX-0004C at Q/A at 240-242; RDX-0001C at 48, 49; RX-0076 at 4:24-5:16, 12:10-32; FIGs. 40, 41A, 41B, 42A, and 42B).) Respondents also criticize Sony's position that the elements are not enabled as improperly requiring exact measurements as a condition of enablement. (*See id.* at 36.) To the extent this is an issue of competing expert testimony, Respondents also submit that Dr. Messner is significantly more qualified to testify regarding data storage cartridges than Dr. Klopp, and therefore his testimony should be afforded greater weight than Dr. Klopp's. (*See id.* at 36-37 n. 18.)

Sony argues that "Morita does not provide a sufficient disclosure of Morita's recess 28 in connection with the 15th embodiment, and thus fails to disclose limitation 1c." (CIB at 42.) Elaborating, Sony explains that "Morita says nothing about how the recess 28 is formed, where it is located (apart from "near the tape outlet opening"), or whether a second recess in the upper half of the tape cartridge is axially aligned with recess 28 in the lower half of the cartridge as required by claim 1." (*Id.*) Sony emphasizes that Figure 1 of Morita only addresses the lower half of the cartridge, and offers no information about the upper half of the cartridge inasmuch as recess 28 is concerned. (*See id.* at 43.) Sony also argues that, given the way recess 28 is described in other embodiments of Morita, it is not clear that recess 28 can be called a positioning member at all. (*See id.*)

With respect to whether Morita's 15<sup>th</sup> embodiment is enabled, Sony argues it is not because "Morita simply describes that the base end portion is 'press-fitted' in the lower end

**PUBLIC VERSION**

portion 531a.” (*Id.* (citing RX-0076 at 12:22-32; CX-1151C at Q131-34; CDX-0005C.1013).) Particularly, Sony argues that while Morita shows that “the end of pin holding member 540 is press-fit into a ‘cut-away’ portion of the side-wall of the housing,” it “provides no un-sectioned views to enable one to understand the disclosed structure.” (*Id.*) Sony goes on to argue that there are several structural deficiencies in Morita’s 15<sup>th</sup> embodiment. (*See id.* at 43-44.)

Staff submits that Morita’s 15<sup>th</sup> embodiment does not anticipate claim 1 of the ’779 patent because it fails to clearly disclose that there are two recesses in axial alignment, and also because “other embodiments discuss recess 28 in ways that add some ambiguity about whether 28 in the 15th embodiment is a positioning member.” (SIB at 39.) Accordingly, Staff concludes that the evidence “does not clearly and convincingly show that Morita’s 15th embodiment anticipates claim 1.” (*Id.*) Staff does not address whether Morita’s 15<sup>th</sup> embodiment is enabled with respect to elements [e] and [f] of claim 1.

The undersigned agrees with Sony and Staff that Fujifilm has not shown by clear and convincing evidence that Morita’s 15<sup>th</sup> embodiment anticipates claim 1 of the ’779 patent because it is not clear that Morita discloses two positioning members in axial alignment. The text in Morita addressing the 15<sup>th</sup> embodiment is sparse. Regarding recesses 28, which Fujifilm contends are the positioning members of element [c] of claim 1 of the ’779 patent, Morita states:

In the fifteenth embodiment shown in FIGS. 40, 41A, 41B, 42A, and 42B, the leader pin 21 is removably held in the recesses 28 formed in the upper and lower casing halves 2 and 3 by a pin holding member 540 disposed in each recess 28.

(RX-0076 at 12:10-14.) None of the figures cited in this excerpt depict recesses 28 in relation to the leader pin 21. Further, as Sony and Staff point out, the figures in Morita that do depict recess 28 do not always treat the element consistently, which tends to foreclose the conclusion that recess 28 is the exact same structure in each embodiment of Morita. (*See* CX-1151C at Q/A at 123-25.) And finally, Fujifilm’s argument that recesses 28 must be in axial alignment falls short

## PUBLIC VERSION

of establishing that Morita's 15<sup>th</sup> embodiment actually discloses positioning members in axial alignment, although it may support the conclusion that a person of ordinary skill in the art would have found it obvious to place the recesses in axial alignment. (*See* RX-0004C at Q/A at 238.)

Accordingly, the undersigned finds that Fujifilm has failed to establish by clear and convincing evidence that Morita's 15<sup>th</sup> embodiment anticipates claim 1 of the '779 patent.<sup>5</sup>

### **(b) Claims 2-6**

Claims 2-6 of the '779 patent depend from independent claim 1, and thus incorporate each limitation of claim 1. Thus, claims 2-6 incorporate the requirement that the positioning members be in axial alignment. Because Morita's 15<sup>th</sup> embodiment does not disclose positioning members in axial alignment, claims 2-6, like claim 1, cannot be invalid as anticipated by that embodiment.

Accordingly, the undersigned finds that Fujifilm has not established by clear and convincing evidence that claims 2-6 of the '779 patent are invalid as anticipated by Morita's 15<sup>th</sup> embodiment.

### **(3) 1<sup>st</sup> Embodiment**

#### **(a) Independent Claim 1**

Respondents submit that Morita's 1<sup>st</sup> embodiment anticipates claim 1 of the '779 patent. However, Respondents' initial brief makes clear that it views the spring of Morita's first embodiment as substantially identical to the spring of the Fujifilm accused products for the purposes of a comparison with claim 1. (*See* RIB at 39-40 ("When compared to the '779 Patent claims, the similarities between the leader pin spring in the Accused Products and the leader pin spring of Morita's 1<sup>st</sup> embodiment are striking—so much so that, if Sony is correct in its infringement allegations, then the claims likewise read on Morita, and must be invalid."))

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<sup>5</sup> Because the undersigned has found that Morita's 15<sup>th</sup> embodiment does not disclose positioning members in axial alignment, it is unnecessary to address whether Morita's 15<sup>th</sup> embodiment is enabled with respect to its disclosure of a first and second spring.



## PUBLIC VERSION

Consistent with that view, Respondents offer what is effectively a contingent argument for invalidity: “to the extent ‘a first spring’ and ‘a second spring’ can be read on a single leader pin spring having two projection arms, such as in the Accused Products, Morita’s 1<sup>st</sup> embodiment anticipates claim 1.” (*Id.* at 39.) Staff adopts a similar contingent argument. (*See* SIB at 43 (“The evidence shows that Morita’s 1st embodiment discloses one spring. . . . But, to the extent Sony’s claim construction position is adopted, then Morita discloses two springs.”).)

Sony disputes Fujifilm’s assertion that the spring of Morita’s 1<sup>st</sup> embodiment is similar to the spring of the accused products for the purposes of a comparison to claim 1 of the ’779 patent. (*See* CIB at 45.) More particularly, Sony argues that “Morita’s 1st embodiment does not include a ‘first spring’ and a ‘second spring’ as required by claim 1; instead, it only discloses a single spring member 30, as shown in Figure 4.” (*Id.* (citing CX-1151C at Q/A at 232-38, Q/A at 241-54; CDX-0005C.1026-27).) Sony also argues that here, “[e]ven if Morita’s 1st embodiment is found to disclose two springs, it fails to disclose two springs each having first and second portions as required by [claim 1 of the ’779 patent].” (*Id.*) Elaborating, Sony explains that both arms 30b in Morita’s 1<sup>st</sup> embodiment share a common “first portion,” and thus are not two distinct springs as claimed by claim 1. (*See id.* (citing CX-1151C at Q/A at 245-46).)

The undersigned finds that Fujifilm has failed to establish by clear and convincing evidence that claim 1 is anticipated by Morita’s 1<sup>st</sup> embodiment. Particularly, Fujifilm has not established that Morita’s 1<sup>st</sup> embodiment discloses a first and a second spring, each with a first portion operatively connected to one half of the tape cartridge housing. (*Cf.* JX-0001 at Cl. 1.)

Morita provides a diagrammatic representation of the spring in its first embodiment in the following figures:

FIG. 2

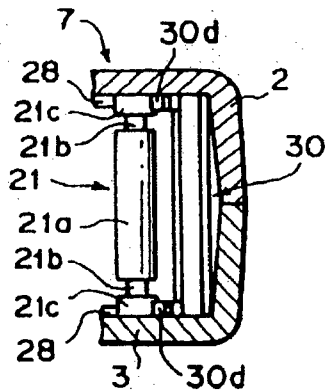


FIG. 3

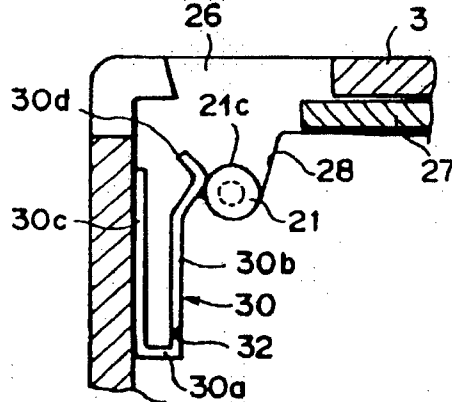


FIG. 4

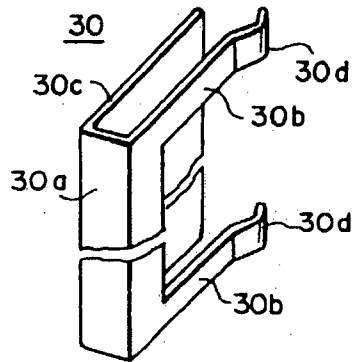
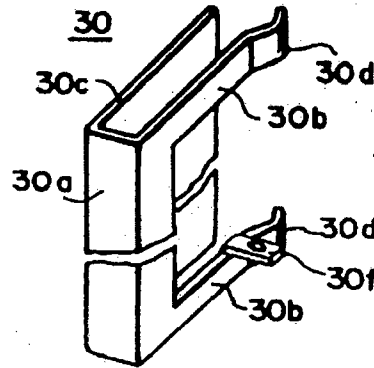


FIG. 5



(RX-0076 at Figs. 2-5.) Describing element 30 in these figures, Morita explains:

In this embodiment, the spring member 30 is formed of a plate spring and is symmetrical about the horizontal axis thereof as shown in FIG. 4. The spring member 30 is substantially U-shaped in plan and comprises a vertical base portion 30 a, a back plate portion 30 c which extends substantially perpendicular to the surface of the base portion 30 a from one side of the base portion 30 a, and upper and lower arms 30 b which extend substantially in parallel to the back plate portion 30 c from the other side of the base portion 20a spaced from each other in the vertical direction. A pin holding portion 30 d is formed on the free end portion of each of the upper and lower arms 30 b. The pin holding portion 30 d has a rear inclined surface which extends from the free end of the arm 30 b away from the back plate portion 30 c and a front inclined surface which extends from the end of the rear inclined surface remote from the arm 30 b and inclined toward the back plate portion 30 c.

Each of the upper and lower portions of the spring member 30 is inserted into a recess 32 formed in each of the upper and lower casing halves 2 and 3 contiguously to the recess 28 with the pin holding portion 30 d slightly projecting into the

## PUBLIC VERSION

recess 28 as shown in FIG. 3. The spring member 30 is held in the recesses 32 by fastening together the upper and lower casing halves 2 and 3, whereby incorporation of the spring member 30 in the cartridge casing 7 is facilitated.

(*Id.* at 5:29-55.) In order to make its anticipation argument based on this embodiment, Fujifilm, via its expert, Dr. Messner, arbitrarily carved up Figure 4 into different regions to create two springs with “first portions” and “second portions” as required by elements [e] and [f] of claim 1. (See RX-0004C at Q/A at 294 (“Under Sony’s interpretation of this claim, the ‘first spring’ and the ‘second spring’ each have a ‘first portion,’ examples of which are shown in blue in RDX-0001C (Messner Demonstratives) at 19 . . . .”); RDX-0001C at 19 (showing six different ways to carve up Figure 4 into first and second portions).) Dr. Messner’s testimony is effectively a contingent position based on Sony’s interpretation of claim 1 in the context of infringement. Indeed, Dr. Messner does not appear to actually believe Morita’s 1<sup>st</sup> embodiment anticipates claim 1 under the proper claim construction. (See RX-0004C at Q/A at 281.)

Moreover, even when purportedly applying Sony’s claim construction, Dr. Messner does not clearly or convincingly indicate how the limitations of claim 1 read onto Morita’s 1<sup>st</sup> embodiment. For instance, with respect to elements [e] and [f] of claim 1, Dr. Messner offers six “possible invalidity interpretations based on Sony’s application of this claim term.” (*Id.* at Q/A at 293.) Dr. Messner’s failure to take a conclusive position on how Morita’s 1<sup>st</sup> embodiment discloses elements [e] and [f] of claim 1 tends to underscore Fujifilm’s lack of clear and convincing evidence of anticipation by that embodiment. To carry its burden on anticipation, Fujifilm must show that Morita’s 1<sup>st</sup> embodiment discloses each element of claim 1. See *Advanced Display Sys., Inc. v. Kent State Univ.*, 212 F.3d 1272, 1282 (Fed. Cir. 2000). Merely offering a set of possible anticipation theories, as Fujifilm has done here, is not sufficient. (*Cf.* RX-0004C at Q/A at 293.)

**PUBLIC VERSION**

Further, at least four of the six interpretations posited by Dr. Messner appear to identify the same structure as the first portion of the first spring and the first portion of the second spring, which tends to undercut a finding that the two springs are distinct, as required by claim 1. (*Cf.* CX-1151C at Q/A at 245-46 (Sony's expert testifying that "[e]ven if the portions 30b in Morita Figure 4 are viewed as two springs, and while one might be able to identify moveable second portions, there are no identifiable first portions.")) In sum, the undersigned is not persuaded that Morita's 1<sup>st</sup> embodiment discloses elements [e] and [f] of claim 1 of the '779 patent.

Accordingly, the undersigned finds that Fujifilm has failed to establish by clear and convincing evidence that claim 1 of the '779 patent is anticipated by Morita's 1<sup>st</sup> embodiment.

**(b) Claims 2-6**

Claims 2-6 of the '779 patent depend from independent claim 1, and thus incorporate each limitation of claim 1. Thus, claims 2-6 incorporate the first and second spring limitations recited in elements [e] and [f] of claim 1. Because Morita's 1<sup>st</sup> embodiment does not disclose first and second springs as recited in elements [e] and [f] of claim 1, claims 2-6, like claim 1, cannot be invalid as anticipated by that embodiment.

Accordingly, the undersigned finds that Fujifilm has not established by clear and convincing evidence that claims 2-6 of the '779 patent are invalid as anticipated by Morita's 1<sup>st</sup> embodiment.

**b) Reference No. 2: JP H11-185436 to Morita ("Morita V")**

Fujifilm submits that Morita V (RX-0250) anticipates claims 1 through 6 of the '779 patent for the same reasons Morita's 6<sup>th</sup> embodiment anticipates claims 1 through 6. (*See* RIB at 41.) Fujifilm relies on the testimony of its expert, Dr. Messner, to support its argument that Morita V is anticipatory prior art. (*See id.* (citing RX-0004C at Q/A at 367-404).)

## PUBLIC VERSION

Sony argues that Morita V does not anticipate any of claim 1 through 6. (*See* CIB at 46.) With respect to all of claims 1 through 6, Sony argues that limitation [a] of claim 1 of the '779 patent—the housing limitation—is not disclosed. (*See id.* (citing CX-1151C at Q/A at 483-95).) Like its argument regarding element [a] in the context of Morita's 6<sup>th</sup> embodiment, Sony's argument regarding element [a] in the context of Morita V relies on a claim construction that requires security in the area of the tape access opening of the tape cartridge. (*See* CIB at 46 (“The Morita V design shown in Figure 1 would not provide sufficient room for placement of a screw in the highlighted area proximate the tape access opening, and offers no additional information regarding [sic] how security in the area of the tape access opening would be provided.”).) Sony raises no other arguments addressing whether claims 1 through 4 of the '779 patent are anticipated by Morita V.

With respect to claim 5 of the '779 patent, Sony submits that “Morita V describes a spring that is generally U-shaped, not generally L-shaped, as required by claim 5.” (CIB at 46 (citing CX-1151C at Q503-08).) With respect to claim 6 of the '779 patent, Sony submits that “Morita V fails to disclose the operative connection between the first portion of its spring and the housing sections required by claim 6.” (CIB at 46 (citing CX-1151C at Q516-20).)

Staff submits that whether Morita V anticipates claims 1 through 4 of the '779 patent rises or falls with the construction of element [a]—the housing limitation—of claim 1. (SIB at 44.) With respect to claims 5 and 6, Staff submits that Morita V, like Morita's 6<sup>th</sup> embodiment, does not disclose a generally L-shaped spring, but rather discloses a U-shaped spring. (*See* SIB at 44.) Thus, Staff asserts that Morita V anticipates claims 1 through 4 of the '779 patent, but not claims 5 and 6. (*See* SIB at 44.)

## PUBLIC VERSION

The disclosure of Morita V is similar to the disclosure of Morita's 6<sup>th</sup> embodiment. (*Compare* RX-0076 *with* RX-0250.) Particularly, Morita V discloses two halves of a tape cartridge housing that are operatively connected to form the housing, as required by element [a] of claim 1 of the '779 patent pursuant to the claim construction adopted by the undersigned. (*See* RX-0004C at 372-74; RX-0250 at [0011], FIG. 1.) Sony's argument against this point depends on a claim construction for element [a] that has not been adopted, and is therefore unpersuasive. Sony does not dispute that every other element of claim 1 is disclosed in Morita V, and in fact, its expert conceded that, under the claim construction adopted by the undersigned, Morita V discloses all of the elements of claims 1 through 4 of Morita V. (*See* Klopp, Tr. at 623:3-20.)

Accordingly, based on the evidence presented, the undersigned finds that Fujifilm has established by clear and convincing evidence that Morita V anticipates claims 1 through 4 of the '779 patent. (*See* RX-0004C at Q/A at 370-82; *see also* RX-0250.)

With respect to claims 5 and 6, however, the undersigned finds that Morita V fails to disclose the use of generally L-shaped springs, which is the additional limitation of claim 5, and which is incorporated into claim 6 by its dependence from claim 5. Specifically, the springs of Morita V are described as U-shaped, not L-shaped. (*See* RX-0250 at [0019] ("The spring members 30 are the same in the vertical direction, and two arm parts 30b, 30c are formed in a substantially U shape . . ."), Figs. 3, 4.)

Accordingly, the undersigned finds that Fujifilm has failed to establish by clear and convincing evidence that Morita V anticipates claims 5 and 6 of the '779 patent.

### ***c) Reference No. 3: JP H11-213610 to Morita ("Morita VII")***

Fujifilm submits that Morita VII (RX-0253) anticipates claims 1 through 6 of the '779 patent for the same reasons Morita's 6<sup>th</sup> embodiment anticipates claims 1 through 6. (*See* RIB at

## PUBLIC VERSION

41.) Fujifilm relies on the testimony of its expert, Dr. Messner, to support its argument that Morita VII is anticipatory prior art. (*See* RIB at 41 (citing RX-0004C at Q/A at 367-404).)

Sony argues that Morita VII does not anticipate any of claims 1 through 6. (*See* CIB at 46-47.) With respect to all of claims 1 through 6, Sony argues that limitation [a] of claim 1 of the '779 patent—the housing limitation—is not disclosed. (*See id.* at 47 (citing CX-1151C at Q/A at 527-40).) Like its argument regarding element [a] in the context of Morita's 6<sup>th</sup> embodiment, Sony's argument regarding element [a] in the context of Morita VII relies on a claim construction that requires security in the area of the tape access opening of the tape cartridge. (*See id.* ("Morita VII does not teach or disclose the 'housing' limitation because, like Morita's 6th embodiment, it lacks an operative connection between sections to secure housing in the area of the tape access opening").) Sony raises no other arguments addressing whether claims 1 through 4 of the '779 patent are anticipated by Morita VII.

With respect to claims 5 and 6 of the '779 patent, Sony submits that "Morita VII discloses a substantially U-shaped, rather than generally L-shaped, spring," and thus does not anticipate claims 5 and 6, both of which include the limitation that the springs be generally L-shaped. (*Id.* at 47 (citing CX-1151C at Q/A at 547).)

Staff submits that whether Morita VII anticipates claims 1 through 4 of the '779 patent rises or falls with the construction of element [a]—the housing limitation—of claim 1. (SIB at 45.) With respect to claims 5 and 6, Staff submits that Morita VII, like Morita's 6<sup>th</sup> embodiment, does not disclose a generally L-shaped spring, but rather discloses a U-shaped spring. (*See id.*) Thus, Staff asserts that Morita VII anticipates claims 1 through 4 of the '779 patent, but not claims 5 and 6. (*See id.*)

**PUBLIC VERSION**

The disclosure of Morita VII is similar to the disclosure of Morita's 6<sup>th</sup> embodiment. (*Compare* RX-0076 *with* RX-0253.) Particularly, Morita VII discloses two halves of a tape cartridge housing that are operatively connected to form the housing, as required by element [a] of claim 1 of the '779 patent pursuant to the claim construction adopted by the undersigned. (*See* RX-0004C at 390-92; RX-0253 at [0014], FIG. 1.) Sony's argument against this point depends on a claim construction for element [a] that has not been adopted, and is therefore unpersuasive. Sony does not dispute that every other element of claim 1 is disclosed in Morita VII, and in fact, its expert conceded that, under the claim construction adopted by the undersigned, Morita VII discloses all of the elements of claims 1 through 4 of Morita VII. (*See* Klopp, Tr. at 623:3-20.)

Accordingly, based on the evidence presented, the undersigned finds that Fujifilm has established by clear and convincing evidence that Morita VII anticipates claims 1 through 4 of the '779 patent. (*See* RX-0004C at Q/A at 385-402; *see also* RX-0253.)

With respect to claims 5 and 6, however, the undersigned finds that Morita VII fails to disclose the use of generally L-shaped springs, which is the additional limitation of claim 5, and which is incorporated into claim 6 by its dependence from claim 5. Specifically, the springs of Morita VII are described as U-shaped, not L-shaped. (*See* RX-0253 at [0023] ("The spring member 30 is identical up and down, 2 arm portions 30b, 30c have been formed in a substantially U shape . . ."), Figs. 3, 4.)

Accordingly, the undersigned finds that Fujifilm has failed to establish by clear and convincing evidence that Morita VII anticipates claims 5 and 6 of the '779 patent.

**d) Reference No. 4: JP H11-339432 to Ishihara et al.  
("Ishihara I")**

Respondents submit that Ishihara I (RX-0249) anticipates claims 1 through 6 of the '779 patent. (*See* RIB at 41-43 (citing RX-0004C at Q/A at 304-330).)



**PUBLIC VERSION**

**(1) Independent Claim 1**

Respondents identify two disputes with respect to whether Ishihara I anticipates claim 1 of the '779 patent. The first dispute involves element [a] of claim 1—the housing limitation—and is substantively identical to the dispute regarding that element in the context of every other prior art reference. (*See* RIB at 41.) Particularly, the dispute is based on the parties' disagreement over whether the housing limitation includes a requirement that the housing demonstrate a certain level of security around the tape access opening in the cartridge. Fujifilm relies on the same arguments it has made regarding this limitation in the context of claim construction and the other prior art references. (*See id.* (citing RX-0004C at Q/A at 309-311).)

The second dispute Respondents identify deals with elements [e] and [f] of claim—the first and second spring limitations. (*See id.* at 41-42.) More specifically, Respondents assert that “[t]he only dispute regarding the springs with respect to claim 1, is whether the portion of the spring arm between abutment section 80d and retainer section 80a is movable.” (*Id.* at 42.) Respondents rely on the witness statement of their expert, Dr. Messner, as well as a portion of the hearing testimony of Sony's expert, Dr. Klopp, to establish that Ishihara discloses a spring with a moveable second portion, as required by claim 1. (*See id.* (citing RX-0004C at Q/A at 319; Klopp, Tr. at 639:1-5).)

Complainants identify the same two disputes with respect to whether Ishihara I anticipates claim 1 of the '779 patent. Concerning element [a] of claim 1—the housing limitation—Complainants rely on the same arguments they made with respect to the construction of that element and the disclosure of that element by the other prior art references discussed *supra*. (*See* CIB at 48 (citing CX-1151C at Q/A at 329-40; CDX-0005.1036).) Regarding elements [e] and [f], Complainants argue that “Ishihara I does not disclose the claimed ‘first spring’ and ‘second spring’ because it does not disclose that the ‘portion of the spring arm

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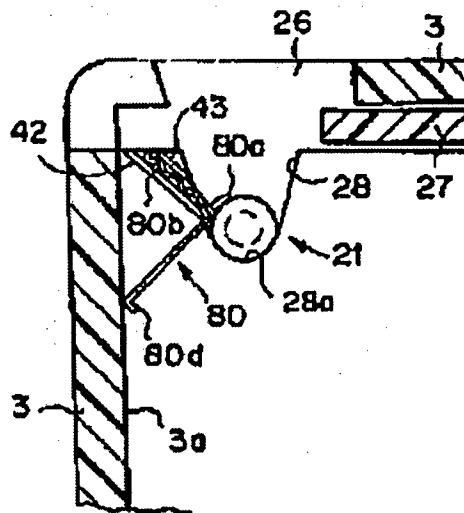
between abutment section 80d and retainer section 80a' is movable.” (*Id.* (citing CX-1151C at Q/A 355-361; CDX-0005.1034).)

Staff also identifies the same two disputes, and with respect to the dispute over the housing limitation, relies on its prior arguments addressing claim construction and the presence of that limitation in the prior art references discussed *supra*. (*See* SIB at 46.) Regarding the second dispute, Staff submits that “[t]he evidence does not clearly and convincingly show, however, that Ishihara I discloses a ‘moveable second portion’ of the spring as required by claim 1.” Elaborating, Staff explains that “Dr. Klopp testified there could be movement of the spring, but the section he said could move is not the portion that secures the end of the tape attachment member as required by claim 1.” (*Id.* (citing RX-0544 at 224:2-7).)

The disclosure of Ishihara I is similar to the disclosure of Morita’s 6<sup>th</sup> embodiment. (*Compare* RX-0076 with RX-0249.) Particularly, Ishihara I discloses two halves of a tape cartridge housing that are operatively connected to form the housing, as required by element [a] of claim 1 of the ’779 patent pursuant to the claim construction adopted by the undersigned. (*See* RX-0004C at 309-11; RX-0249 at [0012], FIG. 1.) Sony’s argument against this point depends on a claim construction for element [a] that has not been adopted, and is therefore unpersuasive. With respect to the second dispute, *i.e.*, whether Ishihara I discloses a first and a second spring each with a moveable second portion, the undersigned agrees with Staff that there is not clear and convincing evidence that Ishihara I provides that disclosure. Particularly, the testimony of both experts is ambiguous about whether the moveable part of the spring disclosed in Ishihara I is the same as the “second portion” of the spring, which must “secur[e] the end of tape attachment member in position.” (JX-0001 at Cl. 1.)

Figure 15 of Ishihara I provides:

【圖 15】



(RX-0249 at Fig. 15.) Both experts, Dr. Messner and Dr. Klopp, appear to agree that element 80d, which Ishihara I describes as an abutment section, moves along surface 3a, which is the inner surface of the case. (See RX-0249 at [43]; RX-0004C at Q/A at 319; Tr., Klopp, 637:25-639:8.) However, the abutment section 80d does not secure the end of the tape attachment member—leader pin 21 in Figure 15—in position, as required of the second moveable portion recited in elements [e] and [f] of claim 1. Rather, according to Ishihara I, element 80a is the “retainer section.” (RX-0249 at [0043].) Adding to the ambiguity, Respondents identified “the portion of the spring arm between abutment section 80d and retainer section 80a” as the moveable second portion. (RIB at 42; see also RX-0004C at Q/A at 319.) In light of these ambiguities, the undersigned cannot find that Ishihara I discloses elements [e] and [f] of claim 1 of the '779 patent by clear and convincing evidence.

Accordingly, the undersigned finds that Respondents have failed to establish by clear and convincing evidence that Ishihara I anticipates claim 1 of the '779 patent.

## PUBLIC VERSION

### (2) Claims 2-6

Claims 2-6 of the '779 patent depend from independent claim 1, and thus incorporate each limitation of claim 1. Thus, claims 2-6 incorporate the requirement that the first and second springs include a moveable second portion that secures the end of the tape attachment member. Because Respondents have not clearly established that Ishihara I discloses first and second springs with these moveable second portions, claims 2-6, like claim 1, cannot be invalid as anticipated by Ishihara I.

Accordingly, the undersigned finds that Fujifilm has not established by clear and convincing evidence that claims 2-6 of the '779 patent are invalid as anticipated by Ishihara I.

### 2. Obviousness

#### a) *Combinations of Morita's Embodiments*

Respondents submit that the 1<sup>st</sup>, 6<sup>th</sup> and 15<sup>th</sup> embodiments of Morita (RX-0076) render obvious claims 1 through 6 of the '779 patent. (RIB at 44.) Respondents note that “[e]lements disclosed in different embodiments of a single prior art reference can be combined to find the claims obvious,” and to the extent that any specific limitation is missing from one of Morita’s embodiments, “the limitation is most certainly described in another embodiment of Morita, and combining the embodiments would be a predictable variation.” (*Id.* (citing *Boston Sci. Scimed, Inc. v. Cordis Corp.*, 554 F.3d 982, 991 (Fed. Cir. 2009); RX-0004C at Q/A at 169, 431).) Specifically, Respondents argue that, “to the extent that the 15<sup>th</sup> embodiment does not disclose the ‘first positioning member’ and ‘second positioning member,’ of claims 1, 3, and 4,” the 1<sup>st</sup> and 6<sup>th</sup> embodiments, which do disclose those features, can be combined with the 15<sup>th</sup> embodiment to form “an obvious, predictable variation, and one would be motivated to make such a combination to further secure (and more stably hold) the leader pin in the housing by parking it in recesses 28.” (RIB at 44 (citing RX-0004C at Q/A at 437-439, 446-451; *see also id.*

**PUBLIC VERSION**

at Q/A at 433-66).) Additionally, Respondents argue that “if the springs of the 6<sup>th</sup> or 15<sup>th</sup> embodiment are not considered to be ‘generally L-shaped,’ as Sony has argued, they would have been an obvious design choice in view of the remaining disclosure of Morita and the knowledge of person having ordinary skill in the art.” (RIB at 44 (citing RX-0004C at Q/A at 277-78, 452-464, 501-503, 506, 509).) Respondents point to Morita’s 13th embodiment specifically as an example where generally L-shaped springs are disclosed. (*See id.* at 44 n.19.)

Complainants dispute that any combination of Morita’s embodiments renders claims 1 through 6 obvious. (*See* CIB at 49.) First, Complainants argue that none of the embodiments of Morita disclose the housing limitation of element (element [a]) of claim 1, “and therefore no combination of embodiments in Morita discloses this limitation.” (*Id.*) Second, Complainants argue that the various springs of the different embodiments are not interchangeable, and also that Fujifilm has failed to establish a motivation to combine these various embodiments. (*See id.* at 50 (citing CX-1151C at Q/A at 65).) Instead, Complainants assert that Fujifilm’s obviousness allegations are based on impermissible hindsight. (*See id.*)

With respect to Morita’s 15<sup>th</sup> embodiment and the positioning member of claim 1, 3, and 4, Complainants dispute that “combining the disclosures of [other] embodiments [with the 15<sup>th</sup> embodiment] would be an ‘obvious predictable variation.’” (*Id.*) Complainants submit instead that “[t]he Morita reference provides varying descriptions of recess 28, none of which are described as applicable to the 15th embodiment, and one of ordinary skill would understand that recess 28 in the 15th embodiment may be entirely different from recess 28 in other Morita embodiments.” (*Id.* (citing CX-1151C at Q/A at 126-29, 152-60, 162-63).) Similarly, Complainants argue that Fujifilm has not established a motivation to alter the springs of Morita’s 15<sup>th</sup> embodiment to be generally L-shaped. (*See id.*) “To the contrary,” Complainants argue that

**PUBLIC VERSION**

“persons of ordinary skill in the art would have been aware that the spring for a tape cartridge cannot necessarily be changed to a different design with a reasonable expectation of success.” (*Id.* (citing CX-1151C at Q/A at 189-93; RX-0264; CDX-0005.1016).)

Finally, with respect to Morita’s 13<sup>th</sup> embodiment, Complainants argue that an L-shaped “lever,” not a spring, is disclosed in that embodiment, and “a POSITA would not confuse the two nor have a basis for changing the shape of a spring to match a lever.” (*Id.* at 50-51 (citing CX-1151C at Q/A at 285-87; CDX-0005.1031; RX-0076 at 10:65-11:2).) Similarly, “one of ordinary skill would not look to replace the L-shaped levers of Morita’s 13th embodiment with the pin holding members of Morita’s 15th embodiment.” (*Id.* at 50 (citing CX-1151C at Q/A at 286-87).) Rather, Complainants argue that “[o]ne of ordinary skill in the art would recognize that L-shaped lever 515 of Morita’s 13th embodiment operates based on entirely different mechanical principles than a spring and could not be replaced by a spring (even one that is “generally L-shaped”) without completely changing the 13th embodiment’s design.” (*Id.* (citing CX-1151C at Q/A at 288-95, 302-05; CDX-0005.1032).)

Staff suggests that this obviousness dispute is essentially a question of dueling experts, and argues that between Sony’s expert, Dr. Klopp, and Fujifilm’s expert, Dr. Messner, the latter is more qualified and his testimony should be afforded more weight. (*See* SIB at 47-48.) Additionally, Staff asserts that Morita’s 6<sup>th</sup> embodiment, which anticipates claims 1 through 4, and Morita’s 15<sup>th</sup> embodiment, which discloses the additional limitations of claims 5 and 6, can be combined along with the knowledge of one skilled in the art at the time of the invention to render all of claims 1 through 6 obvious. (*See id.* at 48.)

As explained *supra*, the undersigned has found that claims 1 through 4 of the ’779 patent are anticipated by Morita’s 6<sup>th</sup> embodiment. In making that finding, the undersigned rejected Sony’s

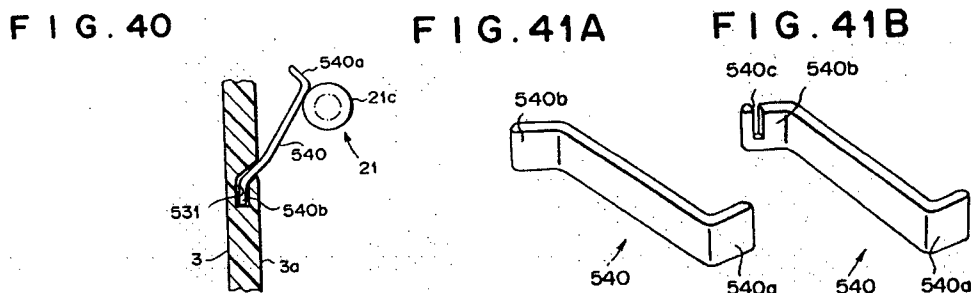
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arguments regarding the absence of the housing limitation of claim 1 in Morita as based on an incorrect construction of that limitation. Accordingly, the salient dispute here is whether a combination of Morita's embodiments renders claims 5 and 6—the only claims not anticipated by Morita—obvious. Still more particularly, the issues are whether one of Morita's embodiments discloses the “generally L-shaped” springs of claim 5, and if so, whether that embodiment can be combined with another that discloses the each element of the other asserted claims. Accordingly, the undersigned must first determine if an embodiment of Morita discloses a “generally L-shaped” spring.

The undersigned finds that Morita's 15<sup>th</sup> embodiment discloses “springs [that] are generally L-shaped having a base member and an elongate member, the elongate member having a first end operatively connected to the base member and a second end forming the second portion.” (JX-0001 at Cl. 5.) Particularly, regarding the 15<sup>th</sup> embodiment, Morita discloses:

In the fifteenth embodiment shown in FIGS. 40, 41A, 41B, 42A, and 42B, the leader pin 21 is removably held in the recesses 28 formed in the upper and lower casing halves 2 and 3 by a pin holding member 540 disposed in each recess 28. The pin holding member 540 is in the form of a plate spring formed of metal or hard plastic. The pin holding member 540 has a holding portion 540 a similar to that 30 b of the first embodiment at its free end and is held in the cartridge casing 7 by press-fitting its base end portion 540 b in a cutaway portion 531 formed on the inner surface of the cartridge casing 7 (the inner surface 3 a of the lower casing half 3 or the inner surface 2 a of the upper casing half 2).

(RX-0076 at 12:10-21.) Figures 40, 41A, and 41B show the structure of the pin holding plate spring:



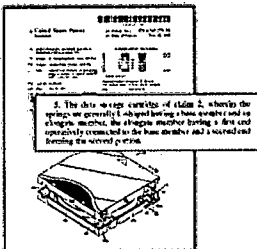
(*Id.* at Figs. 40, 41A, 41B.) As Dr. Messner asserts, these are generally L-shaped springs. (See RX-0004C at Q/A at 246-50.) Dr. Klopp's counter-arguments are not persuasive. First, Dr. Klopp

**PUBLIC VERSION**

makes the unsupported assumption that any angle greater than 135° is not generally L-shaped. (See CX-1151C at Q/A at 171.) Then, by use of imaging software and based on the assumption that the figures are drawn to scale, Dr. Klopp concludes that Figure 40 shows a spring with an angle of either 139° or 150°, and is therefore not generally L-shaped. (See CX-1151C at Q/A at 171.) The undersigned finds this analysis to be largely unreliable, as the '779 patent does not suggest a 135° threshold for determining what is generally L-shaped, as well as the fact that the various figures describing the spring in Morita's 15<sup>th</sup> embodiment appear to disclose different angles, and Dr. Klopp measured only Figure 40, which appears to give the largest angle. This entire line of analysis also assumes, without support, that the figures in the patent are drawn to scale.

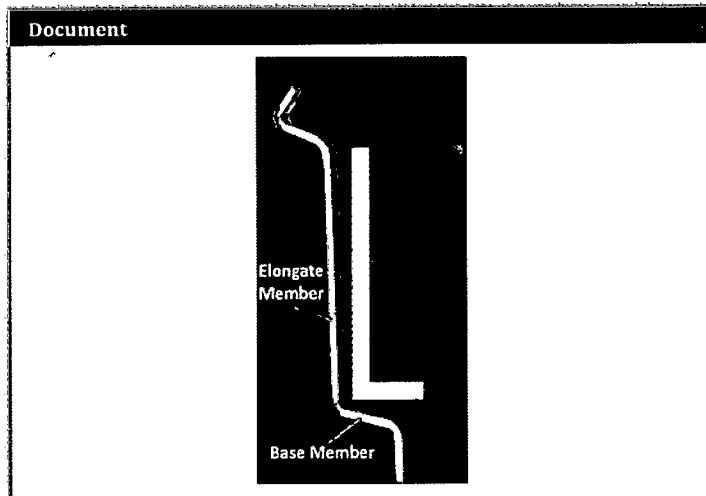
Also undercutting Dr. Klopp's arguments is the fact that, in the context of infringement, he appears to have applied a much more forgiving standard for what is generally L-shaped. Specifically, Dr. Klopp provided the following demonstrative exhibit:

**'779 Claim 5**



The data storage cartridge of claim 2, wherein the springs are generally L-shaped having a base member and an elongate member, the elongate member having a first end operatively connected to the base member and a second end forming the second portion.

**Fujifilm Products Infringe the '779 Patent**



(CDX-0003C at 0134; see also CX-0970C at Q/A at 176.) The image of the spring in Dr. Klopp's demonstrative is substantially the same shape as that disclosed in Morita's 15<sup>th</sup> embodiment, and thus the undersigned finds it difficult to credit Dr. Klopp's assertion that the spring of Morita's 15<sup>th</sup>



**PUBLIC VERSION**

embodiment is not generally L-shaped for purposes of invalidity, when he reached the opposite conclusion for purposes of infringement. For similar reasons, Dr. Klopp's argument that "the spring in Morita's 15<sup>th</sup> embodiment is generally S- or Z-shaped depending on whether the spring is viewed from above or below, or I-shaped," is also unpersuasive. (CX-1151C at 172.)

Accordingly, the undersigned finds that Morita's 15<sup>th</sup> embodiment discloses the additional limitations of claim 5.<sup>6</sup> Further, there is no dispute that Morita's 15<sup>th</sup> embodiment satisfies the additional limitations of claim 6. (See RX-0004C at Q/A at 251.) Thus, the undersigned finds that Morita's 15<sup>th</sup> embodiment discloses the additional limitations of claims 5 through 6 of the '779 patent.

The undersigned also finds that a person of ordinary skill in the art would have been motivated to combine Morita's 15<sup>th</sup> and 6<sup>th</sup> embodiments. As the Federal Circuit has explained, "[c]ombining two embodiments disclosed adjacent to each other in a prior art patent does not require a leap of inventiveness." *Boston Sci. Scimed, Inc. v. Cordis Corp.*, 554 F.3d 982, 991 (Fed. Cir. 2009). While Morita's 15<sup>th</sup> and 6<sup>th</sup> embodiments are not adjacent to each other in the '779 patent, the general principle that a person of ordinary skill in the art need not display extraordinary inventiveness to combine two embodiments from the same patent remains instructive. Moreover, Fujifilm's expert, Dr. Messner, identifies several reasons a person of ordinary skill in the art at the time of the invention would have been motivated to combine the generally L-shaped spring of Morita's 15<sup>th</sup> embodiment with the design of Morita's 6<sup>th</sup> embodiment. (See RX-0004C at Q/A at 503.) These motivations include "account[ing] for a different spring material having a different resiliency," and "provid[ing] a better lever arm to resist out of plane rotation of the spring." (See

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<sup>6</sup> Of the elements of the additional limitation of claim 5, only the generally L-shaped spring element was disputed, and the evidence of record shows that the other elements of the additional limitation of claim 5 are disclosed by Morita's 15<sup>th</sup> embodiment. (RX-0004C at Q/A at 246.)

**PUBLIC VERSION**

*id.*) Finally, to the extent Dr. Klopp disagrees that a person of ordinary skill in the art would have been motivated to combine Morita's 6<sup>th</sup> and 15<sup>th</sup> embodiments, (*see* CX-1151C at Q/A at 65), the undersigned finds Dr. Klopp's argument to be largely conclusory, and thus agrees with Staff that Dr. Messner's testimony is more persuasive. (*See* SIB at 47-48.)

Accordingly, the undersigned finds that Fujifilm has established by clear and convincing evidence that claims 1 through 6 of the '779 patent are obvious in light of a combination of Morita's 6<sup>th</sup> and 15<sup>th</sup> embodiments.

***b) Fujifilm's Additional Obviousness Arguments***

Respondents raise two additional obviousness arguments: 1) that claims 1 through 6 are obvious based on Morita's 6<sup>th</sup> embodiment in view of U.S. Patent No. 4,494,530 ("Sandell") (RX-0211); and 2) that claims 1 through 6 are obvious based on U.S. Patent No. 6,003,802 ("Eaton") (RX-0223) in view of Japanese Publication No. JP H11-232826 ("Miyazaki II") (RX-0251). (*See* RIB at 45-46.) Complainants, however, object that these are "new arguments that were not provided in its pre-hearing brief." (CRB at 18, n.8.) Particularly, Complainants submit that "Fujifilm's entire analysis of the combinations of Morita's 6th embodiment with Sandell, and Eaton with Miyazaki II, consisted of a single bullet-pointed sentence in its pre-hearing brief." (*Id.* (citing RPB at 64).) Citing Ground Rule 8.2, Complainants argue that these arguments have been waived. (*See id.*)

Ground Rule 8.2 provides:

On or before the date set forth in the procedural schedule, each party shall file a pre-trial brief. . . . The pre-trial brief shall set forth a party's contentions on each of the proposed issues, including citations to legal authorities in support thereof, and shall conform to the general outline set forth in Appendix B hereto. All issues, including issues not specifically named in the general outline that any party seeks to address, shall be inserted into the general outline where appropriate.

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## PUBLIC VERSION

*Any contentions not set forth in detail as required herein shall be deemed abandoned or withdrawn*, except for contentions of which a party is not aware and could not be aware in the exercise of reasonable diligence at the time of filing the pre-trial brief.

(See Notice of Amended Ground Rules (Aug. 18, 2017) (emphasis added.) Here, the sum total of detail provided in Respondents' pre-trial brief is as follows:

- The Asserted Claims are obvious in view of U.S. Patent No. 6,003,802 to Eaton ("Eaton") and Miyazaki II. See RX-0004C (Messner DWS) at Q/A at 487-495;
- The Asserted Claims are obvious based on Morita's 6th Embodiment in view of U.S. Patent No. 4,945,530 to Sandell ("Sandell") and/or U.S. Patent No. 4,646,191 to Goto ("Goto"). See RX-0004C (Messner DWS) at Q/A at 499-517;

(RPB at 64.) These conclusory statements are insufficient to satisfy the requirement that contentions be set forth in detail. While arguments in post-trial briefing need not match their counterparts in the pre-trial brief verbatim, a single conclusory assertion of obviousness, without an explanation of how the prior art is to be combined, or why a person of ordinary skill in the art would be motivated to make those combinations does not constitute any "detail."

Accordingly, pursuant to Ground Rule 8.2, the undersigned finds that Fujifilm's obviousness arguments based on the combination of Eaton with Miyazaki II and the combination of Morita's 6<sup>th</sup> embodiment with Sandell have been waived.

### *c) Secondary Considerations*

Respondents argue that "Sony has offered no credible evidence of secondary considerations of non-obviousness with respect to the '779 Patent." (RIB at 46-47.) Sony does not disagree, but instead argues that "[t]he lack of [objective evidence of nonobviousness] does not weigh in favor of obviousness." (CIB at 50-51 (alteration by Complainants') (quoting *Miles Labs. Inc. v. Shandon Inc.*, 997 F.2d 870, 878 (Fed. Cir. 1993)).) Staff asserts that "the evidence does not show that secondary considerations support non-obviousness." (SIB at 51.)

**PUBLIC VERSION**

In the absence of any assertion or evidence to the contrary, the undersigned finds that no secondary consideration support the non-obviousness of the '779 patent.

**V. U.S. PATENT NO. 7,115,331**

**A. Overview**

**1. Asserted Claims**

Complainants allege infringement of claims 1-3, 9-11, 13, 14, 16 and 17 of the '331 patent.

Claims 1 and 16 are independent. Claims 2, 3, 9-11, 13 and 14 depend from independent claim 1.

Claim 17 depends from independent claim 17. The asserted claims provide as follows:

**1. A dual-layer magnetic recording medium comprising**

a non-magnetic substrate having a front side and a back side,

a lower support layer formed over the front side and a magnetic upper recording layer formed over said lower support layer,

the magnetic upper recording layer comprising a volume concentration of at least about 35% of a primary magnetic metallic particulate pigment having a coercivity of at least about 2300 Oe, the magnetic pigment particles having an average particle length of no more than about 80 nm and a binder for the pigment,

wherein said medium has a remanence-thickness product  $M_r \cdot t$ , of less than or equal to about 2.84 memu/cm<sup>2</sup>, an orientation ratio greater than about 2.0, and a PW50 of less than or equal to about 384 nm.

\* \* \* \* \*

**2. The medium of claim 1, wherein the coercivity is at least about 2500 Oe.**

\* \* \* \* \*

**3. The medium of claim 1, having an orienta[tion]<sup>7</sup> ratio greater than about 2.2.**

\* \* \* \* \*

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<sup>7</sup> The word "orientation" is misspelled as "orientadon" in dependent claim 3.

PUBLIC VERSION

9. The medium of claim 1, wherein said binder comprises a hard resin component and a soft resin component.

\* \* \* \* \*

10. The medium of claim 9, wherein said soft resin component is a polyurethane resin.

\* \* \* \* \*

11. The medium of claim 9, wherein said hard resin component is a vinyl chloride resin.

\* \* \* \* \*

13. The medium of claim 1, further comprising a back coat coated on said back side of said substrate.

\* \* \* \* \*

14. The medium of claim 13, wherein the back coat includes a carbon black pigment a urethane binder, and at least one compound selected from phenoxy resin and nitrocellulose.

\* \* \* \* \*

16. A dual-layer magnetic recording medium comprising

a non-magnetic substrate having a front side and a back side,

a lower support layer formed over the front side and a magnetic upper recording layer formed over said lower support layer,

the magnetic upper recording layer comprising a volume concentration of at least about 35% of a primary magnetic metallic particulate pigment having a coercivity of at least about 2500 Oe, the magnetic pigment particles having an average particle length of no more than about 80 nm, and a binder for the pigment

wherein said medium has a remanence-thickness product  $Mr \cdot t$ , of less than or equal to about  $2.12 \text{ memu/cm}^2$ , an orientation ratio greater than about 2.0, and a PW50 of less than or equal to about 366 nm.

\* \* \* \* \*

PUBLIC VERSION

17. The medium of claim 16, wherein the remanence-thickness product  $Mr^*t$ , is less than or equal to about  $1.59 \text{ memu/cm}^2$ , and the  $PW50$  is less than or equal to about 361 nm.

(JX-0004 at Cls. 1-3, 9-11, 13, 14, 16 and 17.)

**B. Level of Ordinary Skill in the Art**

Complainants' post-hearing briefing does not set forth an express definition for a person of ordinary skill in the art with respect to the '331 patent, but does indicate that "[t]he parties respective definitions of the level of ordinary skill in the art with respect to the '331 Patent are substantively identical" and that the opinions of their respective experts "do not depend on which definition is used." (CIB at 51.) Complainants' expert, however, provided that a person of ordinary skill in the art

would have had (1) a bachelor's degree in materials science, physics, electrical engineering, mechanical engineering, chemistry, or a closely related field, and at least five years of experience in the field of magnetic recording; or (2) a Master's degree or higher in materials science, physics, electrical engineering, mechanical engineering, chemistry, or a closely related field, and at least three years of experience in the field of magnetic recording. A person with less education but more relevant practical experience, or with experience testing magnetic tape, including for  $PW50$ , coercivity, remanence thickness ( $Mr^*t$ ), orientation ratio, and other characteristics, may also meet this standard

(CX-0969C at Q/A at 945.)

Respondents' post-hearing briefing also does not set forth an express definition for a person of ordinary skill in the art with respect to the '331 patent. However, Respondents' expert indicated with respect to the '331 patent and the other asserted patents that a person of ordinary skill in the art

would have had: (1) a bachelor's degree in materials science, physics, electrical engineering, mechanical engineering, chemistry, or a closely related field, and at least five years of experience in the field of magnetic recording, or (2) a Master's degree or higher in materials science, physics, electrical engineering, mechanical engineering, chemistry, or a closely related field, with an emphasis in magnetic

## PUBLIC VERSION

recording, and at least three years of experience in the field of magnetic recording. A person with less education but more relevant practical experience may also meet this standard.

(RX-0006C at Q/A at 51.)

Staff cites the testimony of the above experts and notes that Complainants' proposed definition "includes more specific areas of relevant experience" but that it is also confusing because it (i) generally recites additional relevant experience and (ii) also particularly points out areas of relevant experience. (SRB at 51-52.) As such, Staff urges adoption of Respondents' proffered definition. (*Id.* at 52.)

Given (i) the evidence of record cited above by the private parties and Staff, (ii) that the parties' positions would not be changed or materially altered under either of the proposed definitions and (iii) Staff's observation regarding Complainants' proposed definition the undersigned finds that the level of ordinary skill in the art for the '331 patent is consistent with the definition proposed by Respondents and Staff which is a person having "(1) a bachelor's degree in materials science, physics, electrical engineering, mechanical engineering, chemistry, or a closely related field, and at least five years of experience in the field of magnetic recording, or (2) a Master's degree or higher in materials science, physics, electrical engineering, mechanical engineering, chemistry, or a closely related field, with an emphasis in magnetic recording, and at least three years of experience in the field of magnetic recording."

### C. Claim Construction

There is only one disputed claim term relevant to the asserted claims of the '331 patent: "magnetic metallic particulate pigment." (CIB at 53, CRB at 18, RIB at 49-50, RRB at 23-24, SIB at 53-55 and SRB at 11-13.) The term "magnetic metallic particulate pigment" appears in independent

**PUBLIC VERSION**

claim 1 from which claims 2, 3, 9-11, 13 and 14 depend and independent claim 16 from which claim 17 depends. The parties propose the following respective constructions for this term:

<i>“magnetic metallic particulate pigment”</i>		
Complainants’ Proposed Construction	Respondents’ Proposed Construction	Staff’s Proposed Construction
<p>The magnetic metal particle pigments have a composition including, but not limited to, metallic iron and/or alloys of iron with cobalt and/or nickel, and magnetic or nonmagnetic oxides of iron, other elements, or mixtures thereof. Alternatively, the magnetic particles can be composed of hexagonal ferrites such as barium ferrites.</p>	<p>The magnetic metal particle pigments have a composition including, but not limited to, metallic iron and/or alloys of iron with cobalt and/or nickel, and magnetic or nonmagnetic oxides of iron, other elements, or mixtures thereof.</p>	<p>The magnetic metal particle pigments have a composition including, but not limited to, metallic iron and/or alloys of iron with cobalt and/or nickel, and magnetic or nonmagnetic oxides of iron, other elements, or mixtures thereof.</p>

(SIB at 53; *see also* CIB at 53; RIB at 49.)

As shown in the above chart, the private parties and Staff all agree that the term “magnetic metallic particulate pigment” should be construed to include that it is “a composition including, but not limited to, metallic iron and/or alloys of iron with cobalt and/or nickel, and magnetic or nonmagnetic oxides of iron, other elements, or mixtures thereof.” Complainants further contend that the term “magnetic metallic particulate pigment” should be further construed as specifying that the magnetic particles can “alternatively... be composed of hexagonal ferrites such as barium ferrites.” (CIB at 53; CRB at 18.) Respondents and Staff set forth several arguments why Complainants’ additionally proposed language should not be included. (RIB at 49-50; RRB at 23-24; SIB at 53-55; SRB at 12-13.)



## PUBLIC VERSION

Respondents argue that “[t]he specification describes hexagonal ferrites as an alternative species of the broader category of magnetic particles, and *not* as a type of magnetic *metal* particle pigments.” (RIB at 50 (emphasis in original).) According to Respondents, “hexagonal ferrites” are not metallic. (RRB at 24 (citing RX-0006C at Q/A at 86).) Respondents further contend that the term “magnetic metallic particulate pigment” excludes hexagonal ferrites because the ’331 patent specification and claims indicate that the “magnetic metallic particulate pigment” has a “length” which “is not informative when applied to a hexagon shaped particle, which is plate-like and has no ‘length.’” (RIB at 50 (citing RX-0010C at Q/A at 42 and RX-0563C at 44).)

Staff relies on generally the same arguments as Respondents. For example, Staff asserts that “the specification and claims show that barium ferrite is not considered a magnetic metallic particulate pigment” because Respondents’ expert testified that “[a] length measurement would not be used for a hexagonal shaped particle, which a POSITA would understand does not have a ‘length.’” (SIB at 54 (citing RX-0010C at Q/A at 42).) Staff also argues that although a patentee may act as its own lexicographer, the patentee did not do so here so as to define the term “magnetic metallic particulate pigment” to include hexagonal ferrites. (SIB at 54-55 (citing *Hill-Rom Services, Inc. v. Stryker Corp.*, 755 F.3d 1367, 1371 (Fed. Cir. 2014)).)

The relevant portion of the ’331 patent provides the following:

The magnetic metal particle pigments have a composition including, but not limited to, metallic iron and/or alloys of iron with cobalt and/or nickel, and magnetic or non-magnetic oxides of iron, other elements, or mixtures thereof. Alternatively, the magnetic particles can be composed of hexagonal ferrites such as barium ferrites. . . . Preferred pigments have an average particle length no greater than about 100 nanometers (nm), preferably no more than about 80 nm.

## PUBLIC VERSION

(JX-0001 at 4:36-41.)<sup>8</sup> Therefore, the '331 patent expressly states that (i) “[t]he magnetic metal particle pigments have a composition including, but not limited to, metallic iron and/or alloys of iron with cobalt and/or nickel, and magnetic or non-magnetic oxides of iron, other elements, or mixtures thereof” and (ii) that “[a]lternatively, the magnetic particles can be composed of hexagonal ferrites such as barium ferrites.” (*Id.* at 4:36-41.) There is nothing ambiguous about these statements; rather, they are quite clear. In relevant part, the '331 patent expressly indicates discloses an “alternative” where “the magnetic particles can be composed of hexagonal ferrites such as barium ferrites.” In other words, the patentee set forth that the magnetic metal particle pigments can further include or be made up entirely of “hexagonal ferrites such as barium ferrites.” This conclusion derives not only from the express statement in part (ii) of the above disclosure, but also from the fact that part (i) of the disclosure unambiguously indicates that “[t]he magnetic metal particle pigments have a composition including, but not limited to” a variety of different metals including “other elements” beyond those explicitly set forth as well as “mixtures thereof.”

Notwithstanding the above, Staff argues that the patentee did not, acting as its own lexicographer, sufficiently describe the term “magnetic metallic particulate pigment” so as to include hexagonal ferrites. (SIB at 54-55; SRB at 13.) Respondents adopted this position in their Post-Hearing Reply Brief. (RRB at 24.) In particular, Staff relies on *Hill-Rom Services* for the proposition that the standard for determining whether a patentee has acted as its own lexicographer is “exacting” because “the patentee must clearly express an intent to redefine the term.” (SIB at 55; SRB at 13.) Staff’s citation to *Hill-Rom Services*, however, is incomplete.

In *Hill-Rom Services* the Federal Circuit quoted *Thorner v. Sony Computer Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012), as follows: “To act as its own lexicographer, a patentee

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<sup>8</sup> Independent claims 1 and 16 of the '331 patent each recite that “the magnetic pigment particles having an average particle length of no more than about 80 nm.” (JX-0001 at Cls. 1, 16.)

## PUBLIC VERSION

must clearly set forth a definition of the disputed claim term other than its plain and ordinary meaning” and must “clearly express an intent to redefine the term.” As discussed above, that is what the patentee appears to have done notwithstanding the fact that Staff overlooks the first part of the quote in favor of only the second. Short of making an express statement that it is “redefining the term,” it is unclear what further steps Staff and Respondents expected the patentee to take in order to describe the meaning it intended and was ascribing to the term “magnetic metallic particulate pigment.” Indeed, any other conclusion would render meaningless the disclosure that “[a]lternatively, the magnetic particles can be composed of hexagonal ferrites such as barium ferrites.”

Within the above context, the undersigned is not persuaded by Respondents’ and Staff’s further contentions that Complainants’ expert agreed that hexagonal ferrites would not normally be included as part of the “plain and ordinary meaning” of the term “magnetic metallic particulate pigment” and/or that hexagonal ferrites are not metallic. First, whether Complainants’ expert agreed that the “plain and ordinary meaning” of the term “magnetic metallic particulate pigment” includes hexagonal ferrites is irrelevant given that Complainants are not urging a “plain and ordinary” meaning. Rather, they are urging that which is expressly set forth in the ’331 patent. This point is significant given that neither Respondents nor Staff has argued that the term “magnetic metallic particulate pigment” should be limited to its plain and ordinary meaning; they too are urging a construction based upon the express disclosure of the ’331 patent. That Complainants’ expert is purportedly also advocating a construction outside the “plain and ordinary meaning” (*i.e.*, as including hexagonal ferrites) can therefore hardly be considered fatal to Complainants’ position.

Second, the undersigned disagrees with the contention that Complainants’ expert agreed that hexagonal ferrites were not metallic within the context of the ’331 patent. Respondents and Staff both rely on the witness statement of Respondents’ expert (Wang) which in turn cites

## PUBLIC VERSION

Complainants' expert (Bain) to support their argument. In this regard, the cited witness statement ascribes the following quotes to Complainants' expert:

- “Strictly speaking, metals are use – it’s usually a term that’s reserved for the members of the -- you know, the elements on the periodic table that are metallic in their elemental form. Metallic usually means -- in -- in the traditional understanding of metals, usually means that there are conduction electrons, and those conduction electrons are free to move.” (RX-0006C at Q/A at 86 (citing Bain Dep. at 110:5-12).)
- “Barium ferrite is a compound. It’s got metals in it. It does not display what is called metallic behavior when metallic behavior is construed to be – it’s a conductor with free electrons, but it’s construed as fitting into a bin labeled metallic magnetic particulate pigment with regard to this proceeding is my -- so that's my understanding.” (RX-0006C at Q/A at 86 (citing Bain Dep. at 111:14-22).)

Unless Complainants' expert is being misquoted, neither of these statements excludes hexagonal ferrites from being included—consistent with the express disclosure of the '331 patent—as a “magnetic metallic particulate pigment.” The first statement merely describes the traditional meaning and understanding of “metallic.” It does not describe what the patentee disclosed and/or defined in the '331 patent. The second statement is explicit: (i) Complainants' expert indicates that barium ferrite has metal in it and is conductive and (ii) the expert has also construed barium ferrite “as fitting into a bin labeled metallic magnetic particulate pigment with regard to this proceeding” (*i.e.*, within the context of that which is disclosed in the '331 patent). Read in conjunction, the above statements by Complainants' expert confirm that the patentee intended “magnetic metallic particulate pigment” to include hexagonal ferrites (such as barium ferrite) even if they would not ordinarily be so considered because they include metals and function (*i.e.*, as conductors) similar to traditional “magnetic metallic particulate pigment” (such as metallic iron and/or alloys of iron with cobalt and/or nickel). Again, any other conclusion would render null the assertion that “[a]lternatively, the magnetic particles can be composed of hexagonal ferrites such as barium ferrites.”

**PUBLIC VERSION**

Lastly, Respondents and Staff argue that hexagonal ferrites cannot fall within the scope of the term “magnetic metallic particulate pigment” because hexagonal ferrites do not have a length. For example, Respondents assert that the concept of length “is not informative when applied to a hexagon shaped particle, which is plate-like and has no ‘length.’” (RIB at 50 (citing RX-0010C at Q/A at 42 and RX-0563C at 44).) Staff, citing the same expert, states that “[a] length measurement would not be used for a hexagonal shaped particle, which a POSITA would understand does not have a ‘length.’” (SIB at 54 (citing RX-0010C at Q/A at 42).) The undersigned cannot agree.

As an initial point, the undersigned disagrees with Respondents’ and Staff’s overgeneralization that a “hexagon” or “plate-shaped” particle does not have a length. All multidimensional objects can be described in terms of a “length” (*e.g.*, the distance between two points), including plates and hexagons. Respondents and Staff cite to no authority to the contrary. As such, the undersigned assumes that Respondents and Staff meant to assert that those having ordinary skill in the art would not describe hexagonal ferrites in terms of “length.” However, the witness statement cited by Respondents and Staff does not support that argument.

In particular, Respondents and Staff cite the witness statement of Respondents’ expert at Question/Answer pair 42 (*i.e.*, RX-0010C at Q/A at 42) to support their argument that hexagonal ferrites do not have a length. Question/Answer pair 42 of that witness statement provides the following:

**42.Q. Are you aware of any other evidence that supports your opinion?**

42.A. Yes. A different Sony’s expert, Dr. Frank Talke, also admitted that metal particles and barium ferrites are two distinct species in a prior ITC investigation involving Sony and Fujifilm. *See* Expert Report of Dr. Frank E. Talke on the Invalidity of the ‘101 and ‘434 Patents, Investigation No. 337-TA-1012, exhibit RX-0563C (Talke Report). For example, in paragraph 81, Dr. Talke stated “[m]etal particles, which are also commonly used in magnetic recording media are ferromagnetic, whereas ferrites, such as barium ferrite, are ferrimagnetic.” He also stated in

PUBLIC VERSION

paragraph 88 that “two types of magnetic particles are commonly used in magnetic recording media: acicular (i.e., needle-like) metal particles and plate-like hexagonal ferrite particles.” Dr. Bain did not and cannot find any documentary support that barium ferrite was ever considered a metal particle. To the contrary, even Dr. Edwards admitted that BaFe is a type of ceramic, a type of material distinct from metal. *See* JX-0025C (Designated Edwards Dep.) at 44:17-24.

(RX-0010C at Q/A at 42.) There is no mention or discussion as to whether a hexagonal ferrite has a length. In fact, the word “length” does not appear at all in the expert’s answer. At most, Complainants’ expert provides that metal particles are acicular (i.e., needle-like) and that hexagonal ferrites are “plate-like.”<sup>9</sup> That assertion, however, is not the same as saying that “plate-like” shapes do not have a length.

Nonetheless, and even if the undersigned were to assume *arguendo* that persons having ordinary skill in the art would not describe hexagonal ferrites in terms of “length,” the fact remains that the ’331 patent describes the “magnetic metallic particulate pigment”—including the hexagonal ferrites in terms of length. Moreover, despite arguing that only “metal particles, which are typically acicular in shape and thus have a ‘length’ ascribed to their long axis,” Respondents appear to have used the same descriptors for hexagonal barium ferrite particles in their own documents. (*See* RIB at 50; CX-0511C.003 (comparing the long axis and short axes of barium ferrite (i.e., BaFe) particles with the long and short axes of “metallic particles”).) As such, the undersigned does not agree with Respondents or Staff that describing a “magnetic metallic particulate pigment” in terms of length necessarily excludes hexagonal ferrites.

In view of the forgoing, therefore, the undersigned finds that the term “magnetic metallic particulate pigment” should be construed as “[t]he magnetic metal particle pigments have a composition including, but not limited to, metallic iron and/or alloys of iron with cobalt and/or

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<sup>9</sup> RX-0563C at 44, which is also cited by Respondents, is similarly deficient.

PUBLIC VERSION

*nickel, and magnetic or nonmagnetic oxides of iron, other elements, or mixtures thereof. Alternatively, the magnetic particles can be composed of hexagonal ferrites such as barium ferrites.”*

**D. Infringement**

**1. Independent Claim 1**

*a) “A dual-layer magnetic recording medium”*

Complainants contend that the accused LTO-4 and LTO-5 products (WORM and non-WORM versions) (“accused products”) include this feature. (See CIB at 54 (citing, among other things, CX-0969C at Q/A at 1879-83, 1957-61, 2033-37, 2110-14).) Respondents do not contest that the accused products include this feature, as evidenced by the trial testimony of Respondents’ expert. (See Wang, Tr. at 494:20-24.)

Staff does not set forth in its post-trial briefing any disagreement as to whether the accused products include this feature. (SIB at 56.)

Thus, based on the evidence provided, (CX-0969C at Q/A at 1879-83, 1957-61, 2033-37, 2110-14; and Wang, Tr. at 494:20-24), the undersigned finds that the accused products include this feature of independent claim 1.

*b) “a non-magnetic substrate having a front side and a back side a lower support layer formed over the front side and a magnetic upper recording layer formed over said lower support layer”*

Complainants contend that the accused products include this feature. (See CIB at 54 (citing CX-0969C at Q/A at 1884-89, 1962-67, 2038-43, 2115-20).) Respondents do not contest that the accused products include this feature as evidenced by the trial testimony of Respondents’ expert. (See Wang, Tr. at 494:25-495:12.)

Staff does not set forth in its post-trial briefing any disagreement as to whether the accused products include this feature. (SIB at 56.)

**PUBLIC VERSION**

Thus, based on the evidence provided, (CX-0969C at Q/A at 1884-89, 1962-67, 2038-43, 2115-20; and Wang, Tr. at 494:25-495:12.), the undersigned finds that the accused products include this feature of independent claim 1.

- c) *“the magnetic upper recording layer comprising a volume concentration of at least about 35% of a primary magnetic metallic particulate pigment having a coercivity of at least about 2300 Oe”*

**(1) Summary of the Arguments**

Complainants contend, citing the testing and testimony of their expert, that “Fujifilm’s LTO-4 and -5 products have a magnetic upper recording layer comprising a volume concentration of at least about 35% of a primary magnetic metallic particulate pigment having a coercivity of at least about 2300 Oe” and, in particular, that “the coercivity of Fujifilm’s LTO-4 product [is] 2830 Oe; LTO-4 WORM product [is] 2800 Oe; LTO-5 product [is] 2670 Oe; and LTO-5 WORM product [is] 2730 Oe.” (CIB at 54 (citing CX-0969C at Q/A at 1890-1914, 1968-90, 2044-66, 2121-42; CX-0502C); CRB at 25-26.)

With respect to the recitation “a volume concentration of at least about 35%,” the private parties agree that it should be calculated according to the following formula

$$X_{vol} (\%) = ((M_s * t) / t) / (\rho * \sigma_s) * 100\%$$

where “ $X_{vol}$  stands for volume concentration.  $M_s * t$  is the saturation magnetization of the magnetic tape for a layer of a given thickness.  $t$  is the thickness of the magnetic layer.  $\rho$  is the specific gravity of the magnetic particle powder.  $\sigma_s$  is the specific magnetic moment of the particles.” (CIB at 56 (citing RX-0010C at Q/A at 102; CX-0969C at Q/A at 1898, 1904, 1907, 1913, 1976, 1982, 1985, 1990, 2052, 2057, 2060, 2066, 2129, 2134, 2137, 2142).) Complainants’ expert “calculated the volume concentration of Fujifilm’s LTO-4 product to be 41%; LTO-4 WORM product to be 49%; LTO-5 product to be 45%; and LTO-5 WORM product



**PUBLIC VERSION**

to be 47%” using the following values:

	$M_s*t$	$t$	$\rho$	$\sigma_s$
LTO-4	■ memu/cm <sup>2</sup>	■ nm	■ g/cm <sup>3</sup>	■ emu/g
LTO-4 WORM	■ memu/cm <sup>2</sup>	■ nm	■ g/cm <sup>3</sup>	■ emu/g
LTO-5	■ memu/cm <sup>2</sup>	■ nm	■ g/cm <sup>3</sup>	■ emu/g
LTO-5 WORM	■ memu/cm <sup>2</sup>	■ nm	■ g/cm <sup>3</sup>	■ emu/g

(*Id.* at 56-57 (citing CX-0969C at Q1904, 1982, 2057, 2134).) Complainants’ expert obtained the values in the above table from different sources. Complainants’ expert directly measured the saturation magnetization ( $M_s*t$ ) using a magnetometer and relied on measurements from an outside testing lab (MST) to determine the thickness of the magnetic layer ( $t$ ) using a transmission electron microscope (TEM). (*Id.* at 57 (citing CX-0969C at Q/A at 953, 959; 969-71).) Complainants’ expert then utilized the average value derived from “five thickness measurements each on three samples taken from different points along the tape.” (*Id.*) With respect to the specific gravity of the magnetic particle powder ( $\rho$ ) and the specific magnetic moment of the particles ( $\sigma_s$ ) values, Complainants’ expert relied on data (i) from Respondents’ documents purported as describing the accused products and (ii) from documents of the supplier ■ of the particles purportedly used in the accused products. (*Id.* at 58-59 (citing CX-0969C at Q980, 1901, 1902, 1979, 2055, 2132; CX-0511C; CX-0524C).)

With respect to the recitation “a coercivity value of at least 2300 Oe,” Complainants argue that it refers to “the magnetic upper recording layer” as opposed to the “primary magnetic metallic particulate pigment” because “there is a clear delineation in the claims between the characteristics of the magnetic upper recording layer (volume concentration and coercivity), the characteristics of the particle (average particle length), and the characteristics of the medium ( $M_r*t$ , orientation ratio, and PW50).” (*Id.* at 55-56 (citing JX-0004 at 11:14-27); CRB at 26-27.) Based on that

PUBLIC VERSION

conclusion, and as noted above, Complainants' expert determined that "the coercivity of Fujifilm's LTO-4 product [is] 2830 Oe; LTO-4 WORM product [is] 2800 Oe; LTO-5 product [is] 2670 Oe; and LTO-5 WORM product [is] 2730 Oe." (CIB at 54 (citing CX-0969C at Q/A at 1890, 1968, 2044, 2121; CX-0502C); CRB at 25-26.) In the event that their above-interpretation of the coercivity is not adopted, Complainants alternatively argue that "Fujifilm's documents show that its [REDACTED]

[REDACTED] (*Id.* at 56 (citing CX-0511C.3; JX-0056).)

Respondents agree that the "volume concentration" should be calculated according to the formula  $X_{vol} (\%) = ((M_s * t) / t) / (\rho * \sigma_s) * 100\%$ . (RIB at 55-56 (citing RX-0010C at Q/A at 102, 103, 272, 291; CX-0969C at Q/A at 926-29; Bain, Tr. at 230:12-231:20).) Respondents dispute, however, that the Accused Products have "a volume concentration of at least about 35%." (*Id.* at 56; RRB at 26-27.) In particular, Respondents argue that the conclusions of Complainants' expert are not reliable because the documents relied upon by Complainants' expert regarding the specific gravity of the magnetic particle powder ( $\rho$ ) and the specific magnetic moment of the particles ( $\sigma_s$ ) values (i) do not address the magnetic particles (*i.e.*, DF-489 and DF-532) actually used in the Accused Products, (ii) are outdated and/or (iii) describe properties of the metal particles utilized during the design and development process as opposed to those of the finalized products. (*Id.* at 56 (citing RX-0010C at Q/A at 147, 189); RRB at 27-29.)

Respondents also criticize the methodology employed by Complainants' expert for obtaining and determining the thickness of the magnetic layer ( $t$ ). (RIB at 56-59; RRB at 27.) First, Respondents argue that Complainants' expert unreasonably relied on the outside testing lab (MST) for measuring the thickness of the magnetic layer ( $t$ ) given that "it was brokered by counsel for Sony" and Complainants' expert "had neither existing knowledge of or (*sic.*) any

## PUBLIC VERSION

communication with [the lab] to perform TEM testing.” (RIB at 57 (citing Bain, Tr. at 231:21-232:16).) Second, Respondents acknowledge that the experts “agreed that the calculation of the volume concentration requires determining the ‘average layer thickness’ of a given sample.” (RIB at 57-58 (citing CX-0969C at Q/A at 1903; RX-0010C at Q/A at 102, 103).) However, Respondents contend that the average thickness measurement of Complainants’ expert is unreliable because he (i) based it on only five measurements<sup>10</sup> from three different samples and (ii) then “picked one set of measurement data that had the smallest value, and disregarded two other sets of measurement data for the same sample.” (RIB at 58 (citing RX-0010C at Q/A at 157, 197).) According to Respondents, choosing the “smallest magnetic layer thickness translates to the highest volume concentration among his three data sets” improperly and unreliably skews the results especially given that Complainants’ expert “admitted that had he chosen a different set of layer thickness measurement data, or the average of three sets of measurement data, his own volume concentration calculation results could fall outside of the claimed range.” (RIB at 58 (citing RX-0010C at Q/A at 157, 197; Bain, Tr. at 237:10-238:7, 239:10-19).)

With respect to the recitation of “a coercivity value of at least 2300 Oe,” Respondents assert that it refers to the “primary magnetic metallic particulate pigment” as opposed to “the magnetic upper recording layer.” (RIB at 60-61 (citing RX-0010C at Q/A at 68); RRB at 27-28.) According to Respondents, the ’331 patent “specification further supports such an interpretation as it consistently and unambiguously refers to the coercivity as that of metal particles.” (RIB at 61 (citing JX-0004 (’331 Patent) at 2:50-51; 4:5-9; and 10:28-30); RRB at 28.) Respondents submit that this point is significant because (i) “the coercivity of metal particles can be substantially different from that of the tape medium that includes those metal particles” and (ii)

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<sup>10</sup> In comparison, Respondents expert utilized more than 200 measurements. (See RIB at 58; SIB at 61.)

PUBLIC VERSION

Complainants' expert "did not measure the coercivity of the primary magnetic metallic particulate pigments used in the Accused Products." (RIB at 60-61 (citing RX-0010C at Q/A at 67, 72, 176, 216, 271, 290; CX-0969C at Q/A at 1892, 1893, 1895).) Instead, as noted previously, Complainants' expert determined the coercivity of "the magnetic upper recording layer," but did alternatively rely upon certain Fujifilm documents purporting to show that the

[REDACTED]

[REDACTED] (CIB at 56 (citing CX-0511C.3; JX-0056).) Respondents contend that the documents relied upon by Complainants' expert are inapposite to the Accused Products because it is "an old Fujifilm document" that "refers to parameters of metal particles used during the development or research phase, not in Fujifilm's final products." (RIB at 61-62 (citing RX-0010C at Q/A at 281; Wang, Tr. 526:1-8); RRB at 28-29.)

Staff agrees with Respondents that Complainants have failed to establish that the Accused Products have a "magnetic upper recording layer comprising a volume concentration of at least about 35% of a primary magnetic metallic particulate pigment having a coercivity of at least about 2300 Oe." (SIB at 57-65.) In particular, Staff agrees with Respondents that the conclusions of Complainants' expert with respect to the specific gravity ( $\rho$ ) and the specific magnetic moment ( $\sigma_s$ ) of the magnetic particles are unreliable because the documents relied upon by Complainants' expert did not expressly address or otherwise describe the magnetic particles (*i.e.*, DF-489 and DF-532) actually used in the Accused Products. (*Id.* at 58-60; SRB at 16.) For example, regarding the specific gravity ( $\rho$ ), Staff notes that Complainants' expert relied upon "a [REDACTED] spreadsheet from [REDACTED] which lists the specific gravity of [REDACTED]—the particle size in the accused products" but that this data sheet "does not actually show values for [REDACTED]" (SIB at 58-59 (citing CX-0969C at Q/A at 978; CX-0524C).) In other words,

PUBLIC VERSION

Complainants' expert "use[d] the spreadsheet because there are values for particle sizes that are the same particle size as [REDACTED]" and therefore assumed the specific gravity ( $\rho$ ) values for [REDACTED]. (*Id.* at 59.) In this regard, Staff notes that Complainants' expert neither reviewed nor requested a more recent document with data specific to [REDACTED].<sup>11</sup> (*Id.* (citing Bain, Tr. 251:2-22).) Thus, Staff concludes that "the evidence does not show that Dr. Bain's specific gravity calculations are sufficiently reliable to prove infringement." (*Id.*)

Staff reaches the same conclusion regarding the documents Complainants' expert relied for deriving the specific magnetic moment ( $\sigma_s$ ) of the magnetic particles. (*Id.* at 59-60.) Staff notes that there was testimonial evidence "that the data for the specific saturation moment in the document relied upon by Dr. Bain discloses parameters for the development and research phase, not for the finished product." (*Id.* at 59 (citing RX-0010C at Q/A at 147).) Staff also dismisses Complainants' contention that "because the Fujifilm document was from the three years after the LTO-4 tapes were commercialized and the year the LTO-5 tapes were commercialized, the document shows the pigments used in the commercial products." (*Id.*) Staff contends that any such inference does not withstand scrutiny given that Respondents' expert "actually measured Fujifilm's products and found that the values were different than those in the document Dr. Bain relied on." (SIB at 59-60 (citing Wang, Tr. at 5352:13).)

Although Staff disagrees with Respondents regarding the propriety of relying on the outside testing lab (MST) to perform the TEM measurements, (*Id.* at 60-61), Staff does agree that the methodology and selection of the data points by Complainants' expert for determining the average thickness of the magnetic layer ( $t$ ) provides less reliable results than that of

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<sup>11</sup> To be fair, it does not appear that Respondents' expert relied on any documents or product specification sheets for [REDACTED]. According to Respondents, "[i]nstead of relying on irrelevant documents, Dr. Wang determined both specific gravity and specific saturation magnetization of the magnetic particles." (RIB at 59 (citing RX-0010C at Q/A at 167-68, 207-08); *see also* SIB at 59-60.)

## PUBLIC VERSION

Respondents' expert. (*Id.* at 63.) Staff particularly cites the fact that "Dr. Bain tested five samples and relied on three, and Dr. Wang tested over 200." (*Id.* at 61.) According to Staff, the small sample size relied upon by Complainants' expert is problematic, and therefore not as reliable, "because the small sample size results in a relatively high margin of error" compared to that of Respondents expert. (*Id.* at 62-63 (citing and comparing CX-0969 at Q/A at 976 with RX-0010C at Q/A at 159, 168, 199).) Although Staff does not necessarily conclude that the results of Complainants' expert are unreliable, Staff determines "that Dr. Wang's higher sample rate and lower error rate provides more reliable data for calculating volume concentration and so Sony has not proven that the accused products practice this limitation." (*Id.* at 63.)

With respect to the recitation of "a coercivity value of at least 2300 Oe," Staff takes the position that "[t]he intrinsic evidence shows that the coercivity refers to the powder." (*Id.* at 64 (citing JX-0004 at Cl. 1, 4:5-9, 4:28-30).) Thus, Staff presumably does not believe that the testing performed by Complainants' expert determining the coercivity of "the magnetic upper recording layer" is sufficient to establish infringement. Staff also dismisses Complainants' alternative contention that the documentation discussed above also establishes the coercivity of the metallic particles because the document cited by Complainants' expert "discloses parameters for the development and research phase, not for the finished product." (*Id.*) As such, Staff does not believe that Complainants' have established that the Accused Products have "a coercivity value of at least 2300 Oe." (*Id.*)

### (2) Analysis

The undersigned finds that the evidence proffered by Complainants is insufficiently reliable to establish that the accused products include "a volume concentration of at least about 35%." As discussed at length above, the equation for calculating the "volume concentration"

PUBLIC VERSION

(*i.e.*,  $X_{vol} (\%) = ((M_s * t) / t) / (\rho * \sigma_s) * 100\%$ ) requires determining certain parameters: “ $X_{vol}$  stands for volume concentration.  $M_s * t$  is the saturation magnetization of the magnetic tape for a layer of a given thickness.  $t$  is the thickness of the magnetic layer.  $\rho$  is the specific gravity of the magnetic particle powder.  $\sigma_s$  is the specific magnetic moment of the particles.” (CX-0969C at Q/A at 1898; RX-0010C at Q/A at 102.) Although Complainants’ expert “calculated the volume concentration of Fujifilm’s LTO-4 product to be [REDACTED]; LTO-4 WORM product to be [REDACTED]; LTO-5 product to be [REDACTED]; and LTO-5 WORM product to be [REDACTED],” (CX-0969C at Q/A at 1904, 1982, 2057, 2134), he did so using values for the specific gravity ( $\rho$ ) and the specific magnetic moment ( $\sigma_s$ ) of the magnetic particles that are not necessarily reflective of the properties of the magnetic particles (*i.e.*, [REDACTED]) actually used in the Accused Products. For example, the document (*i.e.*, CX-0524C) cited by Complainants and their expert regarding specific gravity ( $\rho$ ) values for [REDACTED] does not describe those specific particles but instead only discusses particles having the same size as [REDACTED]. (CX-0969C at Q/A at 978; CX-0524C.) Similarly, the evidence shows that the document Complainants’ expert relied upon for deriving the specific magnetic moment ( $\sigma_s$ ) of the magnetic particles was a design and development document and thus does not necessarily show the properties of the particles used in the finished (and accused) products. (See RX-0010C at Q/A at 147, 189 (citing Noguchi Dep. Tr. at 66:18-23).)

While it is certainly possible that particles sharing one physical property (*i.e.*, size) in common may also have other physical properties in common (*e.g.*, specific gravity ( $\rho$ ) and specific magnetic moment ( $\sigma_s$ )), the evidence here shows otherwise. In particular, Respondents’ expert obtained samples of [REDACTED] and experimentally determined the specific gravity ( $\rho$ ) and the specific magnetic moment ( $\sigma_s$ ) for each. (See RX-0010C at Q/A at 167, 168, 207, 208.) Complainants cite no reason their expert could not have done the same, and provide

**PUBLIC VERSION**

no clear argument or compelling evidence as to why the results obtained by Respondents' expert are incorrect. Under those circumstances, the undersigned finds that the conclusions of Complainants' expert are unreliable when based on little more than speculation, and especially in comparison to the experimentally determined results obtained by Respondents' expert.

Turning to the thickness of the magnetic layer ( $t$ ), the undersigned first finds that evidence has failed to show there was anything inherently incorrect or unreliable about Complainants' expert having obtained the TEM measurement from an outside testing lab (MST). Notwithstanding that conclusion, the undersigned finds that Respondents' expert provides a more reliable determination and assessment of the average thickness of the magnetic layer ( $t$ ).

Complainants carry the burden of proving infringement of the asserted patent claims by a preponderance of the evidence. *See Spansion, Inc. v. Int'l Trade Comm'n*, 629 F.3d 1331, 1349 (Fed. Cir. 2010). Therefore, the question here is whether the testing and analysis of Complainants' expert or that of Respondents' expert more accurately reflects the average thickness of the magnetic layer ( $t$ ) of the Accused Products. As Staff noted, the smaller sample size (five samples versus over two hundred samples) utilized by Complainants' expert results in a larger margin of error compared to that results of Respondents' expert. (*See* CX-0969 at Q/A at 976; RX-0010C at Q/A at 159, 199.) Additionally, although Complainants' expert identified one particular data set that supports a finding of infringement, Complainants' expert acknowledged that had he selected another data set from the few he had obtained or had utilized the average of all three data sets obtained that the "volume concentration would come below 35 percent...." (Bain, Tr. at 237:10-238:7, 239:10-19; *see also* RX-0010C at Q/A at 157, 197.) Within that context, and weighing one against the other, the undersigned finds that Respondents' expert has more reliably and accurately determined the average thickness of the magnetic layer ( $t$ ) of the Accused Products.



## PUBLIC VERSION

With respect to the recitation of “a coercivity value of at least 2300 Oe,” it is first necessary to determine whether it refers to “the magnetic upper recording layer” as argued by Complainants or to the “primary magnetic metallic particulate pigment” as asserted by Respondents and Staff. Complainants’ argument that the recited coercivity refers to “the magnetic upper recording layer” is premised entirely on the contention that “[i]mmediately following the language the parties dispute, the claim includes a comma and describes ‘the magnetic pigment particles having an average particle length of no more than about 80 nm’” and, because of that comma, “there is a clear delineation in the claims between the characteristics of the magnetic upper recording layer (volume concentration and coercivity), the characteristics of the particle (average particle length), and the characteristics of the medium ( $M_r$ , orientation ratio, and PW50).” (CIB at 55-56.) This reasoning, however, ignores that the actual claim feature at issue recites “the magnetic upper recording layer comprising a volume concentration of at least about 35% of a primary magnetic metallic particulate pigment having a coercivity of at least about 2300 Oe” irrespective of later following claim features which can add further limitations or clarifications to the claim or any of the preceding claim features. Put differently, merely because a later appearing claim feature limits the magnetic pigment particles (*e.g.*, with respect to particle length) does not mean an earlier claim feature does not do so as well.

Even giving credence to Complainants’ position, it at most suggests that there may be some ambiguity in the actual phraseology utilized in the claim feature. In order to resolve that ambiguity, assuming it even exists, one of ordinary skill in the art would be obligated to then look at the ’331 patent specification for guidance. *See Phillips*, 415 F.3d at 1313 (“Importantly, the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.”); *see*

## PUBLIC VERSION

also *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996) (explaining that “it is always necessary to review the specification to determine whether the inventor has used any terms in a manner inconsistent with their ordinary meaning.”). Here, the ’331 patent specification makes it abundantly clear that the claim feature recites the coercivity of the metal particles:

- “It has now been discovered that using magnetic recording media having multiple layers wherein the upper magnetic layer contains certain metallic pigments in the magnetic layer of a magnetic recording medium, e.g., *particle pigments having a coercivity of greater than about 2000 Oersteds (Oe), with particles having lengths of less than about 100 nanometers (nm), preferably less than 80 nm at a volume concentration of greater than about 35%*, significantly narrows the PW50 characteristics of the resulting medium.” (JX-0004 at 2:47-56 (emphasis added).)
- “One aspect of the invention provides a dual-layer magnetic recording medium including a non-magnetic substrate, a lower support layer, and a magnetic upper layer, and optionally, a back coat. The substrate defines a front side and back side, with the back coat, if desired, being formed on the back side. The magnetic upper layer is disposed over the lower support layer on the front side of the substrate and *includes a volume concentration of at least about 35% of a primary magnetic metallic particulate pigment material having a coercivity of at least about 2000 Oe, and an average particle size of less than about 100 nm, and a binder system therefor.*” (JX-0004 at 2:60-3:4 (emphasis added).)
- “Another aspect of the invention provides a dual-layer magnetic recording medium comprising a non-magnetic substrate having a front side and a back side, a lower support layer and an upper magnetic recording layer formed on the front side, said upper magnetic layer *including a volume concentration of at least about 40% of a primary magnetic metallic particulate pigment material having a coercivity of at least about 2000 Oe, and an average particle size of less than about 100 nm....*” (JX-0004 at 3:9-17 (emphasis added).)
- “In general terms, however, *the magnetic upper layer includes a primary metallic pigment powder having a coercivity of greater than about 2000 Oe, and a binder system for the pigment.*” (JX-0004 at 4:5-9 (emphasis added).)
- “The magnetic metal particle pigment comprises *a primary magnetic metal particle pigment having a coercivity of at least about 2000 Oe, preferably at least about 2300 Oe. Such pigment preferably has an average particle length of less than about 100 nm, preferably less than about 80 nm.* The pigment is present in the upper magnetic layer in a volume concentration of at least about 35%, preferably about 40%.” (JX-0004 at 4:29-35 (emphasis added).)

PUBLIC VERSION

In each instance, the '331 patent describes the coercivity (and other properties such as particle length and volume concentration) of the magnetic metal particle pigment. Further clarifying this point, the '331 patent sets

TABLE 1

forth working examples and expressly explains that “[t]he magnetic particles used in these examples are acicular metal particles with a long axis length and coercivity as indicated in

Example	MP Length (nm)	Coercivity (Oe)	Orientation Ratio	Mr * t (memu/cm <sup>2</sup> )	PW50 (nm)
1	75	2640	2.3	1.14	343
2	75	2500	2.1	1.59	361
3	75	2500	2.1	2.12	366
4	75	2336	2.3	2.84	384
5	75	2548	2.1	4.42	464
6	75	2500	2.1	3.26	425
7	75	2539	2.2	4.73	484
8	75	2532	2.2	3.02	452
C1	110	1880	2.3	4.28	544

Table 1.” (JX-0004 at 10:28-30 (emphasis added).) As can be seen from Table 1, the coercivity for the particles ranges from 2336 Oe to 2640 Oe. (*Id.* at Table 1.)<sup>12</sup> Indeed, the '331 patent does not appear to make any reference to the coercivity of the “magnetic upper recording layer.” In view of the intrinsic evidence, the undersigned finds that the recitation of “a coercivity value of at least 2300 Oe” refers to the “primary magnetic metallic particulate pigment.”

As discussed previously, Complainants’ expert determined that “the coercivity of Fujifilm’s LTO-4 product [is] ██████████; LTO-4 WORM product [is] ██████████; LTO-5 product [is] ██████████; and LTO-5 WORM product [is] ██████████” by measuring the coercivity of the “magnetic upper recording layer”—not the “primary magnetic metallic particulate pigment.” (CIB at 54 (citing CX-0969C at Q/A at 1890, 1968, 2044, 2121; CX-0502C); CRB at 25-26.) As such, this evidence fails to establish that the accused products include this feature of independent claim 1.

Complainants have alternatively argued that “Fujifilm’s documents show that its ██████████

<sup>12</sup> Table 1 is merged from the '331 patent; Example C1 is a comparative example.



**PUBLIC VERSION**

Staff does not set forth in its post-trial briefing any disagreement as to whether the accused products include this feature. (SIB at 56.)

Thus, based on the evidence provided, (CX-0969C at Q/A at 978, 1915-22, 1991-98, 2067-74, 2143-50; CX-0503C; CX-0511C.3; Wang, Tr. at 496:6-25), the undersigned finds that the accused products include this feature of independent claim 1.

*e) "a binder for the pigment"*

Complainants contend that the accused products include this feature. (See CIB at 59 (citing CX-0969C at Q/A at 1923-27, 1999-2003, 2075-79, 2151-55; CX-0504C).) Respondents do not contest that the accused products include this feature as evidenced by the trial testimony of Respondents' expert. (See Wang, Tr. at 497:1-4.)

Staff does not set forth in its post-trial briefing any disagreement as to whether the accused products include this feature. (SIB at 56.)

Thus, based on the evidence provided, (CX-0969C at Q/A at 1923-27, 1999-2003, 2075-79, 2151-55; CX-0504C; Wang, Tr. at 497:1-4.), the undersigned finds that the accused products include this feature of independent claim 1.

*f) "wherein said medium has a remanence-thickness product  $Mr^*t$ , of less than or equal to about  $2.84 \text{ memu/cm}^2$ "*

Complainants contend that the accused products include this feature. (See CIB at 59 (citing CX-0969C at Q/A at 1928-29, 2004-05, 2080-81, 2156-57).) In particular, Complainants cite CX-0969C at Q/A at 1928, 2004, 2080, 2156 as demonstrating that the accused products each have a remanence-thickness product  $Mr^*t$  of between [REDACTED] and [REDACTED]. (Id.) Respondents do not contest that the accused products include this feature as evidenced by the trial testimony of Respondents' expert. (See Wang, Tr. at 497:5-9.)

## PUBLIC VERSION

Staff does not set forth in its post-trial briefing any disagreement as to whether the accused products include this feature. (SIB at 56.)

Thus, based on the evidence provided, (CX-0969C at Q/A at 1928-29, 2004-05, 2080-81, 2156-57; and Wang, Tr. at 497:5-9.), the undersigned finds that the accused products include this feature of independent claim 1.

### *g) "an orientation ratio greater than about 2.0"*

Complainants contend that the accused products include this feature. (See CIB at 60 (citing CX-0969C at Q/A at 1930-31, 2006-07, 2082-83, 2158-59).) In particular, Complainants cite CX-0969C at Q/A at 1930, 2006, 2082, 2158 as demonstrating that the accused products each have an orientation ratio of between [REDACTED]. (CIB at 60.) Respondents do not contest that the accused products include this feature as evidenced by the trial testimony of Respondents' expert. (See Wang, Tr. at 497:10-14.)

Staff does not set forth in its post-trial briefing any disagreement as to whether the accused products include this feature. (SIB at 56.)

Thus, based on the evidence provided, (CX-0969C at Q/A at 1930-31, 2006-07, 2082-83, 2158-59; and Wang, Tr. at 497:10-14), the undersigned finds that the accused products include this feature of independent claim 1.

### *h) "a PW50 of less than or equal to about 384 nm"*

Complainants contend that the accused products include this feature. (See CIB at 60 (citing CX-0969C at Q/A at 1932-36, 2008-12, 2084-88, 2160-64).) In particular, Complainants cite CX-0969C at Q/A at 1932, 2008, 2084, 2160 as demonstrating that the accused products each have a PW50 between [REDACTED]. (CIB at 60.) Respondents do not contest that the accused products include this feature as evidenced by the trial testimony of Respondents' expert. (See Wang, Tr. at 498:14-18.)

## PUBLIC VERSION

Staff does not set forth in its post-trial briefing any disagreement as to whether the accused products include this feature. (SIB at 56.)

Thus, based on the evidence provided, (CX-0969C at Q/A at 1932-36, 2008-12, 2084-88, 2160-64; Wang, Tr. at 498:14-18), the undersigned finds that the accused products include this feature of independent claim 1.

### *i) Conclusion*

For the reasons set forth above, the undersigned finds that the accused products do not infringe independent claim 1 of the '331 patent.

### **2. Dependent Claims 2, 3, 9-11, 13 and 14**

“One who does not infringe an independent claim cannot infringe a claim dependent on (and thus containing all the limitations of) that claim.” *Wahpeton*, 870 F.2d at 1552, n. 9. Given that the undersigned has found that independent claim 1 of the '331 patent is not infringed, dependent claims 2, 3, 9-11, 13 and 14 are also not infringed.

### **3. Independent Claim 16**

#### *a) “A dual-layer magnetic recording medium”*

Complainants incorporate their analysis of this feature from independent claim 1 and contend that the accused LTO-4 and LTO-5 products (WORM and non-WORM versions) include this feature. (See CIB at 62 (citing, among other things, CX-0969C at Q/A at 1948, 2024, 2100 and 2176).) Respondents do not contest that the accused products include this feature as evidenced by the trial testimony of Respondents' expert. (See Wang, Tr. at 494:20-24.)

Staff does not set forth in its post-trial briefing any disagreement as to whether the accused products include this feature. (SIB at 56.)

**PUBLIC VERSION**

Thus, based on the evidence provided, (CX-0969C at Q/A at 1948, 2024, 2100, 2176; Wang, Tr. at 494:20-24), the undersigned finds that the accused products include this feature of independent claim 16.

- b) “a non-magnetic substrate having a front side and a back side, a lower support layer formed over the front side and a magnetic upper recording layer formed over said lower support layer”**

Complainants incorporate their analysis of this feature from independent claim 1 and contend that the accused products include this feature. (See CIB at 62 (citing CX-0969C at Q/A at 1949, 2025, 2101, 2177).) Respondents do not contest that the accused products include this feature as evidenced by the trial testimony of Respondents’ expert. (See Wang, Tr. at 494:25-495:12.)

Staff does not set forth in its post-trial briefing any disagreement as to whether the accused products include this feature. (SIB at 56.)

Thus, based on the evidence provided, (CX-0969C at Q/A at 1949, 2025, 2101 and 2177; and Wang, Tr. at 494:25-495:12.), the undersigned finds that the accused products include this feature of independent claim 16.

- c) “the magnetic upper recording layer comprising a volume concentration of at least about 35% of a primary magnetic metallic particulate pigment having a coercivity of at least about 2500 Oe”**

This feature of independent claim 16 is the same as in independent claim 1 but for reciting a minimum coercivity of “at least about 2500 Oe” instead of “at least about 2300 OE.” The private parties and Staff do not raise any new arguments or present any new evidence with respect to whether the accused products include this feature of independent claim 16. (See CIB at 62; RIB at 59-62; SIB at 64.) In the absence of any new arguments or evidence, and for the reasons set forth above in conjunction with independent claim 1, the undersigned finds that



**PUBLIC VERSION**

Complainants have failed to establish by a preponderance of the evidence that the accused products include this feature of independent claim 16.

**d) “the magnetic pigment particles having an average particle length of no more than about 80 nm”**

Complainants incorporate their analysis of this feature from independent claim 1 and contend that the accused products include this feature. (See CIB at 62-63 (citing CX-0969C at Q/A at 1922, 1998, 2074, 2150; CX-0503C).) Complainants contend that this evidence demonstrates that the particles in the accused products each have an average particle length of no more than about 80 nm. (*Id.* at 63.) Respondents do not contest that the accused products include this feature as evidenced by the trial testimony of Respondents’ expert. (See Wang, Tr. at 496:20-25.)

Staff does not set forth in its post-trial briefing any disagreement as to whether the accused products include this feature. (SIB at 56.)

Thus, based on the evidence provided, (CX-0969C at Q/A at 1922, 1998, 2074, 2150; CX-0503C; Wang, Tr. at 496:20-25), the undersigned finds that the accused products include this feature of independent claim 16.

**e) “a binder for the pigment”**

Complainants incorporate their analysis of this feature from independent claim 1 and contend that the accused products include this feature. (See CIB at 63 (citing CX-0969C at Q/A at 1952, 2028, 2104, 2180; CX-0504C).) Respondents do not contest that the accused products include this feature as evidenced by the trial testimony of Respondents’ expert. (See Wang, Tr. at 497:1-4.)

Staff does not set forth in its post-trial briefing any disagreement as to whether the accused products include this feature. (SIB at 56.)

**PUBLIC VERSION**

Thus, based on the evidence provided, (CX-0969C at Q/A at 1952, 2028, 2104, 2180; CX-0504C; and Wang, Tr. at 497:1-4.), the undersigned finds that the accused products include this feature of independent claim 16.

*f) “wherein said medium has a remanence-thickness product  $Mr^*t$ , of less than or equal to about 2.12 memu/cm<sup>2</sup>”*

Complainants incorporate their analysis of this feature from independent claim 1 and contend that the accused products include this feature. (See CIB at 63 (citing CX-0969C at Q/A at 1953, 2029, 2105, 2181; CX-0502C).) Complainants contend that this evidence demonstrates that the accused products each have a remanence-thickness product  $Mr^*t$  of less than 2.12 memu/cm<sup>2</sup>. (*Id.*) Respondents do not contest that the accused products include this feature as evidenced by the trial testimony of Respondents’ expert. (See Wang, Tr. at 497:5-9.)

Staff does not set forth in its post-trial briefing any disagreement as to whether the accused products include this feature. (SIB at 56.)

Thus, based on the evidence provided, (CX-0969C at Q/A at 1953, 2029, 2105, 2181; CX-0502C; Wang, Tr. at 497:5-9), the undersigned finds that the accused products include this feature of independent claim 16.

*g) “an orientation ratio greater than about 2.0”*

Complainants incorporate their analysis of this feature from independent claim 1 and contend that the accused products include this feature. (See CIB at 63 (citing CX-0969C at Q/A at 1954, 2030, 2106, 2182; CX-0502C).) Complainants contend that this evidence demonstrates that the accused products each have an orientation ratio of greater than about 2.0. (*Id.*) Respondents do not contest that the accused products include this feature as evidenced by the trial testimony of Respondents’ expert. (See Wang, Tr. at 497:10-14.)

## PUBLIC VERSION

Staff does not set forth in its post-trial briefing any disagreement as to whether the accused products include this feature. (SIB at 56.)

Thus, based on the evidence provided, (CX-0969C at Q/A at 1954, 2030, 2106, 2182; CX-0502C; Wang, Tr. at 497:10-14), the undersigned finds that the accused products include this feature of independent claim 16.

### *h) "a PW50 of less than or equal to about 366 nm"*

Complainants incorporate their analysis of this feature from independent claim 1 and contend that the accused products include this feature. (See CIB at 63 (citing CX-0969C at Q/A at 1955, 2031, 2107, 2183; CX-0506C).) Complainants contend that this evidence demonstrates that the accused products each have a PW50 of less than about 366 nm. (*Id.*) Respondents do not contest that the accused products include this feature as evidenced by the trial testimony of Respondents' expert. (See Wang, Tr. at 498:14-18.)

Staff does not set forth in its post-trial briefing any disagreement as to whether the accused products include this feature. (SIB at 56.)

Thus, based on the evidence provided, (CX-0969C at Q/A at 1955, 2031, 2107, 2183; CX-0506C; Wang, Tr. at 498:14-18), the undersigned finds that the accused products include this feature of independent claim 16.

### *i) Conclusion*

For the reasons set forth above, the undersigned finds that the accused products do not infringe independent claim 16 of the '331 patent.

## **4. Dependent Claim 17**

"One who does not infringe an independent claim cannot infringe a claim dependent on (and thus containing all the limitations of) that claim." *Wahpeton*, 870 F.2d at 1552 n. 9. Given

**PUBLIC VERSION**

that the undersigned has found that independent claim 16 of the '331 patent is not infringed, dependent claim 17 is also not infringed.

**E. Domestic Industry – Technical Prong**

Complainants rely on both Sony tapes (“Sony Domestic Industry Products”) and IBM tapes (“IBM Domestic Industry Products”) to satisfy the technical prong of the domestic industry requirement. (CIB at 64.) There does not appear to be a dispute among the private parties or Staff that the Sony Domestic Industry Products (*i.e.*, Sony’s LTO-4, LTO-5, LTO-6 products) and the IBM Domestic Industry Products (*i.e.*, IBM’s 3592 JA, JB and JX products) include all of the features of independent claims 1 and 16 except those features pertaining to the volume concentration and coercivity (*i.e.*, “the magnetic upper recording layer comprising a volume concentration of at least about 35% of a primary magnetic metallic particulate pigment having a coercivity of at least about 2300 Oe” (independent claim 1) and “the magnetic upper recording layer comprising a volume concentration of at least about 35% of a primary magnetic metallic particulate pigment having a coercivity of at least about 2500 Oe” (independent claim 16)). (See CIB at 64-74; RIB at 62-63; and SIB at 65.) The undersigned addresses below whether Complainants have shown that Sony Domestic Industry Products and/or the IBM Domestic Industry Products include the concentration and coercivity features of independent claims 1 and 16.

**1. Sony Domestic Industry Products**

With respect to the recited “volume concentration of at least 35%,” Complainants argue that their expert “calculated the volume concentration of Sony’s LTO-4 product to be [REDACTED]; LTO-4 WORM product to be [REDACTED]; LTO-5 product to be [REDACTED]; LTO-5 WORM product to be [REDACTED]; LTO-6 product to be [REDACTED]; LTO-6 WORM product to be [REDACTED]” (CIB at 65-66 (citing CX-0969C at Q/A at 2206, 2259, 2311, 2372, 2433, 2495, 2565, 2635, 2716).) Complainants

PUBLIC VERSION

expert did so utilizing his own measurements for thickness ( $t$ ) and saturation magnetization ( $M_s*t$ ) and values for specific gravity ( $\rho$ ) and specific magnetic moment ( $\sigma_s$ ) obtained from manufacturer [REDACTED] documents describing the particles used in the Sony Domestic Industry Products. (CIB at 66-67 (citing CX-0969C at Q/A at 953, 959, 969-71, 989 Q2203, 2255, 2308, 2369, 2430, 2492; CX-0385C.3, CX-0522C.3, CX-0522C.5).)

Respondents counter that the “Domestic Industry Products suffer[ ] from the same flaws present in its infringement allegations” because Complainants’ expert “failed to measure the coercivity of the pigment particles, relied on outdated and/or inapplicable documents, and cherry-picked measurements to unreliably calculate layer thickness to determine volume concentration.” (RIB at 62.)<sup>13</sup> For example, Respondents cite to the testimony of its own expert criticizing the methodology and results of the thickness measurements obtained and used by Complainants’ expert. (*Id.*) Respondents further argue that Complainants’ expert relied on “old [REDACTED] documents for Sony LTO-4, LTO-5 and LTO-6 products” and “did not measure metal particles used in Sony’s current products, or seek a more recent document.” (*Id.* at 62-63 (citing CX-0969C at Q/A at 2203-04, 2308-09, 2430-31, 2562-63, 2632-2633, 2713-14; Bain, Tr. at 251:2-13).) Respondents do not, however, offer any countervailing evidence with respect to the physical properties of the Sony Domestic Industry Products or the particles contained therein.

Staff does not entirely agree with Respondents’ arguments because Complainants’ expert “provides sufficient details about his techniques” and because “[f]or domestic industry ... Dr. Bain relies on a [REDACTED] document relating to the metal particle actually used in the Sony domestic

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<sup>13</sup> Complainants argue in their Reply Brief that Respondents have waived these arguments because Respondents raised them argument for the first time in their initial briefing, and that “[t]his argument was raised neither in Fujifilm’s per-hearing brief (*see* RPre 98-99) nor in the witness statement of Fujifilm’s expert (*see* RX-0010C at Q301-303).” (CRB at 28.) The undersigned disagrees. Respondents Pre-Hearing Brief, citing the witness statement of Respondents’ expert, clearly indicates that Domestic Industry Products, including the Sony Products, do not meet the volume concentration and/or coercivity requirements of the ’331 patent. (RPB at 98-99, sections (a) and (c).) As such, the undersigned finds that Respondents have not waived these arguments.

## PUBLIC VERSION

industry products.” (SIB at 66 (citing CX-0696C at Q/A at 2201-04, 2368; CX-0522C).) As discussed below, however, Staff concludes that Complainants have failed to establish the technical prong with respect to the Sony Domestic Industry Products because they misevaluated coercivity as pertaining to the “magnetic upper recording layer” instead of the “magnetic metallic particulate pigment.” (*Id.*)

As an initial matter, Complainants’ evidence regarding the volume concentration relies, in part, on documents describing the physical properties of the particles actually used in the Sony Domestic Industry Products. (*See, e.g.*, CX-0696C at Q/A at 991 (citing CX-0520C); CX-0522C; CX-0385C and CX-0386C.) Complainants’ expert also estimated other values from the documentary evidence of record. (*See* Bain, Tr. at 251:2-13; CX-0969C at Q/A at 2309, 2370, 2431, 2493, 2563, 2714; CX-0524C). As to these properties, the undersigned finds that utilizing specific gravity ( $\rho$ ) and specific magnetic moment ( $\sigma_s$ ) data from such sources regarding the physical properties of the components (*i.e.*, the particles) making up one’s own products is not improper and does not standing alone lead to an unreliable result.

The volume concentration determination, however, also requires measuring thickness ( $t$ ). As discussed at length above, the undersigned found that Complainants had failed to establish by a preponderance of the evidence that the accused products infringe the ’331 patent in part because Respondents’ expert provided a more reliable determination and assessment of the average thickness of the magnetic layer ( $t$ ). Put differently, with respect to establishing infringement by the accused products, the undersigned found Complainants’ evidence regarding the thickness of the magnetic layer ( $t$ ) to be *comparatively* less reliable and accurate than that offered by Respondents.

A different outcome is warranted, however, in the context of determining whether the Sony Domestic Industry Products satisfy the technical prong. Although Respondents have repeated the

## PUBLIC VERSION

same general criticisms as to how Complainants' expert determined the average thickness of the magnetic layer (*t*), they have done so without the benefit and support of countervailing documentary evidence or experimental evidence from their own expert. As such, the question here is not which expert's analysis more accurately reflects the average thickness of the magnetic layer (*t*) of the Sony Domestic Industry Products. Rather, the question is whether Complainants have provided a sufficient quantum of reliable evidence regarding the average thickness of the magnetic layer (*t*) of the Sony Domestic Industry Products in order to determine whether they have a "volume concentration of at least about 35%" as is recited in each of independent claims 1 and 16. The undersigned finds the approach adopted by Complainants' expert to be reliable, especially given the lack of countervailing documentary evidence or experimental evidence from Respondents.

With respect to coercivity, Complainants first argue that the Sony Domestic Industry Products have coercivity values of between [REDACTED]. (See CIB at 65 (citing CX-0969C at Q/A at Q2197, 2250, 2302, 2363, 2424, 2486, 2552, 2620, 2700; CX-0502C).) These values, however, are based on the incorrect interpretation that the recited coercivity values refer to that of the "magnetic upper recording layer" instead of the "magnetic metallic particulate pigment" as was discussed above. (*Id.*) Recognizing that such an interpretation may not be adopted, Complainants also contend that documentary evidence establishes that "Sony's LTO-4 tapes use a powder with a coercivity of [REDACTED] (CX-0385C.3) [ ] and LTO-5 and -6 tapes use a powder with a coercivity of [REDACTED] (CX-0386C.3)." (*Id.* (citing CX-0385C.3 and CX-0386C.3).)

Respondents critique the methodology employed by Complainants' expert for establishing the coercivity values of the Sony Domestic Industry Products because he "failed to test the pigment particles used in the alleged Domestic Industry Products, (see CX-0969 at Q/A at 2198, 2303, 2425), or even assert that the metal particles used in any of Sony's domestic industry products or

**PUBLIC VERSION**

IBM 3592 JA products have a coercivity within the claimed range.” (RIB at 62-63 (citing CX-0969 at Q/A at 2198, 2303, 2425.)) Aside from critiquing as “outdated” the documents relied upon regarding the Sony (and IBM) Domestic Industry Products, Respondents do not appear to have otherwise substantively addressed the documentary evidence cited by Complainants regarding the coercivity of the particles used in the Sony Domestic Industry Products. (*Id.* at 63.)

Staff indicates that “[f]or domestic industry, however, Dr. Bain relies on a Dowa document relating to the metal particle actually used in the Sony domestic industry products.” (SIB at 66 (citing CX-0696C at Q/A at 2201-04, 2368; CX-0522C).) However, Staff then argues that “Dr. Bain’s decision to measure the tape medium rather than the powder to determine coercivity is, for the reasons discussed above, the wrong way to measure coercivity. This decision means that Sony has not shown by a preponderance of the evidence that the Sony domestic industry products practice a claim of the ’331 patent.” (*Id.*; *see also* SRB at 18.) Thus, Staff appears to have initially acknowledged, but then overlooked, Complainants’ reliance on documents describing the coercivity used in the Sony Domestic Industry Products.

Complainants’ expert testified that “Sony uses a particle referred to as ██████ in its LTO-4 tapes and a particle referred to as ██████ in its LTO-5 and LTO-6 tapes.” (CX-0696C at Q/A at 991 (citing CX-0520C).) Indeed, CX-0520C confirms this assertion, and Respondents do not appear to contest the accuracy of this assertion or the credibility of CX-0520C. CX-0385C is the product specification sheet from the particle manufacturer ██████ for particle ██████. CX-0386C is the product specification sheet for particle ██████. Again, there does not appear to have been any challenge to the credibility of these documents and, in particular, whether they reflect the physical properties of the particles used in the Sony Domestic Industry Products. CX-0385C and CX-0386C indicate that particle ██████ and particle ██████ each have a coercivity



**PUBLIC VERSION**

of [REDACTED]. Thus, the unchallenged evidence of record establishes that the particles used in the Sony Domestic Industry Products have a coercivity of “at least about 2300 Oe” and “at least about 2500” as recited in independent claims 1 and 16, respectively.

In view of the forgoing, the undersigned finds that the Sony Domestic Industry Products practice at least one claim of the '331 patent (*i.e.*, independent claims 1 and 16) and thus satisfy the technical prong of the domestic industry requirement.

**2. IBM Domestic Industry Products<sup>14</sup>**

With respect to the recited “volume concentration of at least 35%,” Complainants argue that their expert “calculated the volume concentration of ... IBM’s 3592 JA product to be [REDACTED]; 3592 JB product to be [REDACTED]; and 3592 JX product to be [REDACTED].” (CIB at 65-66 (citing CX-0969C at Q/A at 2206, 2259, 2311, 2372, 2433, 2495, 2565, 2635, 2716).) As was the case with the Sony Domestic Industry Products, Complainants’ expert determined the volume concentration based upon a combination of his own measurements for thickness ( $t$ ) and saturation magnetization ( $M_s*t$ ), (*see* CX-0969C at Q/A at 987-989.), and utilized certain documentary evidence to determine values for specific gravity ( $\rho$ ) and specific magnetic moment ( $\sigma_s$ ). (CIB at 66-67 (citing CX-0969C at Q/A at 980, 2309, 2370, 2431, 2493, 2563, 2632, 2633, 2712-2714; CX-0524C; JX-0063; JX-0064; CX-0511C).) These documents purport to show the physical properties of the particles actually used in the IBM Domestic Industry Products. (*Id.* at 66-67.)

With respect to the coercivity, Complainants’ expert measured the coercivity for both the “magnetic upper recording layer” and the “magnetic metallic particulate pigment.” (*Id.* at 65.) Complainants’ expert also relied on documentary materials showing that the particle currently used

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<sup>14</sup> The undersigned notes that [REDACTED] to establish that the IBM Domestic Industry Products satisfy the technical prong of the domestic industry requirement.

**PUBLIC VERSION**

in the IBM Domestic Industry Products (*i.e.*, ██████████) has a coercivity of ██████████. (*Id.* (citing JX-0056C; CX-0151C.3).)<sup>15</sup>

Respondents counter that their expert's testing shows that "the volume concentration of metal particles is about ██████████ in IBM 3592 JA cartridges," ██████████ in IBM 3592 JB cartridges" and "██████████ in IBM 3592 JX cartridges." (RIB at 63 (citing RX-0010C at Q/A at 223-36, 238-51; 253-66).) Respondents also contend that the documents relied upon by Complainants' expert are "outdated and inapplicable documents that do not disclose the relevant metal particles for IBM products." (*Id.* at 62-63 (citing CX-0969C at Q/A at 2562-63, 2632-2633, 2713-14).) As to coercivity, Respondents contend that "Dr. Bain does not dispute Dr. Wang's measurements showing that metal particles used in IBM 3592 JA products have a coercivity of ██████████ and metal particles used in IBM 3592 JB and JX products have a coercivity of ██████████." (*Id.* at 63 (citing RX-0010C at Q/A at 303).)

Staff summarizes the respective positions of the private parties regarding volume concentration in the following table:

Tape	Dr. Bain's result	Dr. Wang's result
IBM 3592 JA	██████████	██████████
IBM 3592 JB	██████████	██████████
IBM 3592 JX	██████████	██████████

(SIB at 67 (citing CX-0969C at Q/A at 2552, 2620, 2700; RX-0010C at Q/A at 235, 250, 265).) Staff also notes the dispute between the private parties regarding the coercivity of the IBM Domestic

<sup>15</sup> JX-0056C indicates that ██████████ particles have a coercivity of between ██████████. (*See* JX-0056C at Sheet 1, Table IV entitled "Correlation of magnet characteristics and price (record) including MP other than for LTO" versus the unlabeled table at the lower right corner of Sheet 1). This latter table also shows that particle ██████████, which was previously used in the IBM Domestic Industry Products has a coercivity of between ██████████. (*See* RX-0010C at Q/A at 232 (discussing the prior use of ██████████).)

**PUBLIC VERSION**

Industry Products. Although acknowledging that it is a “close call” given that the private parties arrive at divergent conclusions, Staff concludes that “there are no significant methodological problems with the way Dr. Bain measured for volume concentration” and, as such, Complainants have “shown by a preponderance of the evidence that the IBM domestic industry products practice at least one claim of the ’331 patent.” (*Id.* at 67-68 (citing CX-0969C at Q/A at 2537-2762).)

The undersigned finds that criticisms can be levelled at the conclusion of Complainants’ expert. The evidence regarding volume concentration offered by Complainants’ expert seems subject to many of the same criticisms that were levelled previously with respect to his analysis of the accused products, namely regarding to his measurements of for thickness ( $t$ ) and with respect to having relied on documents to establish values for specific gravity ( $\rho$ ) and specific magnetic moment ( $\sigma_s$ ) where those documents do not expressly describe the properties of the particles (*i.e.*, ██████████) actually used in the IBM Domestic Industry Products. For example, Complainants’ expert cites CX-0524C as describing the specific gravity ( $\rho$ ) values for ██████████ despite the fact that CX-0524C does not describe that specific particle but instead only discusses particles having the same size as ██████████. (*See* CX-0524C.) A similar criticism can be levelled at the document (*i.e.*, CX-0511C) Complainants’ expert relied upon for the specific magnetic moment ( $\sigma_s$ ) of ██████████. (*See* RX-0010C at Q/A at 146-47.)

As discussed above, it is Complainants’ obligation to establish by a preponderance of the evidence that the offered domestic industry products practice one or more claims of the asserted patent. Also as discussed above, Complainants have not presented sufficient evidence to demonstrate that the IBM Domestic Industry Products practice any claims of the ’331 patent. The undersigned finds Complainants’ evidence similarly deficient in establishing that they do. As such, the undersigned cannot find that Complainants’ have carried their burden to establish by

**PUBLIC VERSION**

a preponderance of the evidence that the IBM Domestic Industry Products practice one or more claims of the '331 patent.

Based on the foregoing, the undersigned finds that Complainants have satisfied the technical prong of the domestic industry requirement for the '331 patent based on the Sony Domestic Industry Products but not for the IBM Domestic Industry Products.

**F. Validity**

**1. Anticipation**

**a) Reference No. 1: JP 2002-074641 to Mori et al. ("Mori")**

Respondents contend that Mori (RX-0276) "expressly or inherently" teaches all of the features of claims 1-3, 9-11, 13, 16, and 17 of the '331 patent. (RIB at 66-70; RRB at 31-33.) According to Respondents, Complainants "do[ ] not dispute that Mori discloses all features of claim 1 of the '331 Patent except volume concentration, orientation ratio, and PW50. (RIB at 67 (citing CX-1150C at Q/A at 1357-1379).)

**(1) Volume Concentration**

With respect to the volume concentration, Respondents contend that one of ordinary skill in the art would understand the "filling rate by volume of magnetic particles" of Mori to be describing the recited "volume concentration." (*Id.* (citing RX-0276 at [0011]; RX-0006C at Q/A at 130).) Respondents further assert that neither Complainants nor their expert dispute this assertion. (*Id.* (citing Hg. Tr. 30:20-21; Bain, Tr. at 653:4-15; CX-0969C at Q/A at 925-926; CX-1150C at Q/A at 1359-1361).) Finally, Respondents argue that the examples of Mori illustrate a volume filling rate of between 35% and 39.5%.

Notwithstanding Respondents' contentions, Complainants and their expert do in fact contest whether Mori discloses a "volume concentration of at least about 35%" as is recited in

PUBLIC VERSION

each of independent claims 1 and 16. (CIB at 76-77 (citing CX-1150C at Q/A at 1358-1366); CRB at 30-31 (citing Bain, Tr. 648:8-16; CX-1150C at Q/A at 1358-1366).) Complainants cite two main deficiencies with Respondents' contention regarding the "volume filling rate." First, the "volume filling rate cited by Respondents' expert "is the volume concentration of the 'slurry'—the ingredients that make up the magnetic layer, not the volume concentration of the magnetic layer itself." (*Id.* at 77 (citing Bain, Tr. 648:8-16).) Second, Respondents' expert "calculate[d] the volume concentration of the 'slurry' that is used to make the tape described in Mori based the features of the tape described in Mori." (*Id.* (citing CX-1150C at Q/A at 1360 which in turn cites RX-0006C at Q/A at 132-34).)

Complainants further argue that even if the "volume filling rate" is the same as the recited "volume concentration," that Respondents' expert did not reliably calculate the volume concentration. Complainants assert that the calculations made by Respondents' expert "are based on an equation utilizing a value for the specific gravity of a particle pigment that is not tied in any way to the metallic particle pigments described in Mori." (*Id.* at 75 (citing CX-1150C at Q/A at 1362-66).) Rather, according to Complainants "[h]e takes these numbers from an unrelated reference and applies them to Mori, which uses an *entirely different* particle pigment which would have a different specific gravity value. (*Id.* (citing CX-1150C at Q/A at 1362-66) (emphasis in original).)

Staff agrees with Complainants that "[t]he evidence does not show that Mori discloses volume concentration of at least about 35%." (SIB at 69.) According to Staff, the calculations by Respondents' expert are deficient because they "rel[y] on data from another reference (Ejiri '846 (RX-0290))" and "Mori and Ejiri '846 have different magnetic particle pigments, which would affect the specific gravity." (*Id.* at 70 (citing CX-1150C at Q/A at 1363).) Staff does not

**PUBLIC VERSION**

address whether the “volume filling rate” of Mori is the same as the “volume concentration” of independent claims 1 and 16 of the ’331 patent.

As to whether the “volume filling rate” of Mori is the same as the “volume concentration” of independent claims 1 and 16 of the ’331 patent, the undersigned finds that it is not. When asked how Respondents’ expert determined the volume concentration of Mori, Complainants’ expert testified that “Dr. Wang calculated the volume concentration of Mori based on a recipe describing the nonvolatile constituents in the coating slurry. (RX-0006C at Q132-Q134.) While this is a type of volume concentration, it is not the type of volume concentration claimed in the ’959 and ’331 patents, *which relates to the volume concentration that actually occurs in the magnetic layer of the tape.*” (CX-1150C at Q/A at 1360 (emphasis added).) In describing the “volume filling rate,” Mori provides that “[t]he *filling rate by volume of the strongly magnetic alloy powder in the magnetic layer* can be equal to or higher than 30%, preferably equal to or higher than 35 percent, and still more preferably equal to or higher than 38 percent.” (RX-0276 at ¶ [0011] (emphasis added).) Mori also plainly states that the “filling rate by volume” describes powder “in the magnetic layer.” However, Respondents’ expert also opines that Mori discloses another volume filling rate. (See RX-0006C at Q/A at 130-132.) As such, there appears to be some ambiguity as to what Mori is exactly disclosing given that even Respondents’ expert has acknowledged that Mori discloses different things in different places. On such a record, the undersigned cannot categorically find that the “volume filling rate” of Mori is the same as the “volume concentration” of independent claims 1 and 16 of the ’331 patent.

Even putting the above ambiguity to the side, the undersigned also agrees with Complainants that the “recipes” of Mori does not teach the “volume concentration” of independent claims 1 and 16. In addition to asserting that Table 1 of Mori expressly teaches examples having

## PUBLIC VERSION

the recited volume concentration, Respondents' expert calculated the volume concentration based on the "recipes" of the examples. (See RX-0006C at Q/A at 131 and 133-134.) In doing so, Respondents' expert relied on a specific gravity value ( $\rho$ ) from an unrelated document (*i.e.*, Ejiri '846) describing the physical properties of particles not present in Mori. In doing so, and as noted by Staff, Respondents' expert did exactly the same thing it previously criticized Complainants' expert for doing when assessing the volume concentration of the accused products and the Domestic Industry Products. (SIB at 70 n. 21.) The undersigned agrees. Respondents' expert is relying on a speculative equivalency between the particles in Mori and Ejiri '846 in order to establish anticipation of the '331 patent by clear and convincing evidence. If, as Respondents and their expert argued, such an approach did not pass muster under a preponderance of the evidence standard it most certainly cannot do so under the clear and convincing standard.

### (2) Orientation Ratio

Respondents assert that "Mori inherently discloses orientation ratio ("OR") based on squareness" because there is mathematical a relationship between the two. (RIB at 68 (citing RX-0006C at Q/A at 143-144).) In this regard, Respondents contend that Mori discloses a number "squareness" measurements (*e.g.*, squareness in the tape running direction and longitudinal squareness) and that "[f]or metal particle tapes, the relationship between OR and squareness is known and disclosed by RX-0285 (Tokuoka)." (*Id.* at 69.)

Complainants do not appear to disagree that there is a relationship between orientation ratio and squareness. Complainants disagree, however, that the squareness values disclosed in Mori inherently teach "an orientation ratio greater than about 2.0" as is recited in independent claims 1 and 16. For example, Complainants point out that in Mori the description of squareness in the tape running direction of "preferably equal to or higher than 0.85" and/or the squareness in the

## PUBLIC VERSION

perpendicular direction of “preferably equal to or less than 80 percent of the squareness in the running direction” would mean that “Mori discloses only that (sic.) orientation ratio is greater than 1.25—far less than the recited orientation ratio of 2.0.” (CIB at 75 (citing CX-1150C at Q/A at 1368).) In addition, Complainants criticize Respondents’ citation and reliance on Tokuoka (RX-0285) because “[t]he empirical analysis in Tokuoka is not applicable to Mori’s magnetic medium” and “[m]any aspects of the media in Tokuoka, the ’331 Patent, and Mori differ in ways that could materially affect the relationship between orientation ratio and squareness ratio. (*Id.* at 76 (citing CX-1150C at Q/A at 1370 and RX-0006C at Q/A at 145, 147).)

Staff argues that the evidence presented by the experts is conflicting. (SIB at 70.) Thus, the Staff concludes that “the evidence does not clearly and convincingly show that Mori inherently discloses this limitation.” (*Id.*)

The undersigned agrees that Respondents have not shown by clear and convincing evidence that Mori inherently teaches an “orientation ratio greater than about 2.0.” The undersigned agrees that Mori does inherently provide some teachings regarding the orientation ratio based upon the discussion of squareness values. Indeed, even Complainants acknowledge that the squareness values expressly taught in Mori “disclose[ ] only that orientation ratio is greater than 1.25.” (CIB at 75.) However, simply because Mori discloses an orientation ratio of greater than 1.25 does not necessarily mean that it also discloses an orientation ratio greater than 2.0. In this regard, the undersigned notes that Respondents’ contention that “Mori discloses an OR of 1.25 or greater, *which overlaps with the claimed range*” is not supported by a citation to any evidence of record. (RIB at 68 (emphasis added).) That assertion is simply not accurate. For example, an orientation ratio of 1.75 would be greater than 1.25 but clearly not greater than 2.0. Thus, at most, the inherent disclosure of an orientation ratio of greater than 1.25 may



**PUBLIC VERSION**

*suggest* an orientation ratio of greater than 2.0, but it does not necessarily disclose it.

Moreover, the undersigned finds the reliance on Tokuoka by Respondents' expert to be misplaced. While it is certainly true that a gap in allegedly anticipatory references may be "filled with recourse to extrinsic evidence," the use of such materials cannot be based on speculation. Indeed, the case cited by Respondents makes this point clear: "Inherency, however, 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." *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1268-69 (Fed. Cir. 1991) (citing *In re Oelrich*, 666 F.2d 578, 581, 212 U.S.P.Q. 323, 326 (CCPA 1981) (emphasis in original). Here, Respondents are relying on one document—Tokuoka—describing the behavior of one type of particle utilized under a particular set of conditions and projecting that behavior onto a second document—Mori—where both the particle being used and the operative conditions are different. Therefore, it is not clear that it is possible to predict the behavior of the particles in Mori from that which is described in Tokuoka. As such, the undersigned cannot agree that Mori can be credibly interpreted based on the teachings of Tokuoka so as to establish that Mori inherently teaches the orientation ratio recited in independent claims 1 and 16 of the '331 patent.

**(3) PW50**

Respondents assert that the examples of Mori inherently teach "a PW50 of less than or equal to about 384 nm" as recited in independent claim 1 because of the "known relationships between PW50, remanence-thickness product, and coercivity." (RIB at 69.) Respondents' expert calculated the PW50 value two different ways by "using a generalized analytical formula and using a linear approximation." (*Id.* (citing RX-0006C at Q/A at 153-160, 296, 309).)

**PUBLIC VERSION**

Complainants contend (i) that Respondents' expert used at least one incorrect formula for calculating PW50 for magnetic tape media and (ii) that Respondents' expert "also fails to account for the impact of using different particles, even though the use of different magnetic powders and particle sizes has an effect on the magnetic properties and performance characteristics of the resulting tape, including PW50." (CIB at 76 (citing CX-1150C at Q/A at 1373-78).

Staff acknowledges the above arguments made by the private parties. (SIB at 71.) With respect to the critique levelled at Respondents' expert, Staff observes that he "addressed these criticisms by providing an alternative calculation that also showed that Mori inherently discloses a PW50 of less than 384 nm." (*Id.* (citing RX-0006C at Q/A at 156-57).) Thus, Staff concludes that Mori inherently teaches "a PW50 of less than or equal to about 384 nm." (*Id.*)

The undersigned finds that Mori inherently teaches "a PW50 of less than or equal to about 384 nm." Respondents' expert provided two alternative methods for deriving PW50 from the teachings of Mori. (*See* RX-0006C at Q/A at 153-160, 296, 309.) Complainants dispute this approach because it does not provide that "actual" PW50 value of Mori. (*See* CIB at 76 ("While standard recording formulas represent reasonably good approximations of PW50, they do not inform a POSITA how to compute the *actual value* of PW50 that will be observed." (emphasis in original)).) Indeed, Complainants' expert essentially argues that the only way to determine PW50 sufficient to anticipate is to measure it directly. (*See* CX-1150C at Q/A at 1030 ("In order to know the actual value of PW50, it is necessary to measure it.")) In order to anticipate, however, it is not necessary to know the absolute PW50 value in Mori. Rather, all that needs to be reliably shown is that Mori's PW50—regardless of the actual number—is that it is less than or equal to 384 nm. Here, the undersigned finds that Respondents' expert has demonstrated, using different formulas, that several of the examples from Mori have "a PW50 less than or equal to 384 nm" and "a PW50

**PUBLIC VERSION**

less than or equal to 366 nm” as recited in independent claims 1 and 16, respectively. (See RX-0006C at Q/A at 153-160, 296 and 309; RDX-0002 at 12-13.)

**(4) Summary**

The undersigned finds that Mori fails to expressly or inherently teach “a volume concentration of at least 35%” and “an orientation ratio greater than about 2.0” as recited in each of independent claims 1 and 16. As such, the undersigned finds that Mori does not anticipate independent claim 1 or independent claim 16 or the claims depending respectively therefrom, including asserted dependent claims 2, 3, 9-11, 13 and 17, of the '331 patent under 35 U.S.C. §102.<sup>16</sup>

**b) Reference No. 2: JP 2003-123226 to Naoe et al. (“Naoe”)**

Respondents contend that Naoe (RX-0281) teaches all of the features of claims 1-3, 9-11, 13, 16 and 17 of the '331 patent. (RIB at 70-72 and RRB at 33-34.) Respondents assert that Complainants “do[ ] not dispute that Naoe discloses all limitations of claim 1 of the '331 Patent excepting orientation ratio.” (RIB at 71 (citing CX-1150C at Q/A at 1416-1420; Bain, Tr. at 655:12-656:18).)

According to Respondents, an “OR greater than 2.0 is necessarily disclosed by Naoe” because it “discloses a preferred squareness ratio range “it is suitable to be 0.7 to 0.95, preferably 0.8 to 0.95.” (*Id.* (citing RX-0281 at ¶ [0038]).) Respondents contend that Complainants’ expert acceded to this point because agreed that “if [the] squareness in the tape running direction were .9 and squareness in the perpendicular direction were 50 percent of the squareness in the tape running

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<sup>16</sup> Complainants also argue, at least with respect to dependent claim 2 that “Mori discloses no example with a coercivity above 2425 Oe, which is not ‘at least about 2500 Oe.’” (CIB at 77 (citing CX-1150C at Q/A at 1381).) It is unclear why Complainants have not made this argument with respect to independent claim 17 which also recite a coercivity of at least about 2500 Oe. Nevertheless, there is no requirement, as Complainants contend, that Mori include an “example” with the claimed coercivity. Rather, Mori merely needs to disclose it. In that regard, Mori expressly states that “[t]he coercivity He is equal to or higher than 2,100 Oe, with a high level being desirable from the principle for recording, but with a level ranging from 2,200 to 3,500 Oe being suitable from a practical standpoint with regard to recording head power.” (RX-0276 at ¶ [0011] (emphasis added).)

**PUBLIC VERSION**

direction, the orientation ratio would be .9 over .45, or 2.” (*Id.* (citing Bain, Tr. at 651:11-16).) Respondents also argue that “based on the known relationship between squareness and orientation ratio, Naoe discloses a preferred orientation ratio of 1.36 to 2.34, even more preferably 1.85 to 2.59” and that examples 1-6 of Naoe have “an orientation ratio greater than about 2.” (*Id.* (citing RX-0006C at Q/A at 227 and RDX-0002C at 24).) Respondents also argue that “[e]ven if the orientation ratio of Naoe does not exactly fall above the values as calculated by the known relationship between longitudinal squareness and orientation ratio, a squareness range of 0.8 to 0.95 nevertheless overlaps and anticipates “an orientation ratio greater than about 2.0” due to the lack of criticality of the claimed orientation range.” (RRB at 34.)

Complainants assert that Respondents’ expert, as he had with the Mori reference, improperly interpreted the teachings of Naoe based upon the teachings of an unrelated reference (*i.e.*, Tokuoka) in order “to argue Naoe inherently discloses orientation ratio merely because it discloses squareness.” (CIB at 77 (citing CX-1150C at Q/A at 1418-20 and RX-0006C at Q/A at 277).) Thus, Complainants contend that “[j]ust like with Mori, Dr. Wang’s conclusion is incorrect, because it is based on an equation from Tokuoka that is not axiomatic for all tapes.” (*Id.*)

Staff concludes that Naoe does not inherently teach the claimed orientation ratio because, as was the case with Mori, “the dispute is over whether Tokuoka’s (RX-0285) alleged linear relationship between squareness and orientation ratio applies to Naoe.” (SIB at 71.) Staff reasons that because the expert are in conflict on this issue, that Complainants have not met their burden to show that Naoe teaches all of the features of claims 1-3, 9-11, 13, 16 and 17 by clear and convincing evidence. (*Id.*)

As was the case with Mori, and based on the evidence of record, the undersigned finds that it is too speculative to project the behavior of certain materials under a particular set of conditions

## PUBLIC VERSION

from one reference (*i.e.*, Tokuoka) onto a second reference (*i.e.*, Naoe) that Respondents contend anticipates where the conditions of the first reference have not been demonstratively shown to be applicable to the second reference. (*See* RX-0006C at Q/A at 227.) Here, Respondents' expert at best speculates that the conditions and empirical relationships of Tokuoka are applicable and/or equivalent to those of Naoe. As such, the undersigned cannot agree that Naoe can be credibly interpreted based on the teachings of Tokuoka so as to establish by clear and convincing evidence that Naoe inherently teaches the orientation ratio recited in independent claims 1 and 16 of the '331 patent. Thus, the undersigned finds that Naoe fails to expressly or inherently teach "an orientation ratio greater than about 2.0" as recited in each of independent claim 1 and 16. The undersigned therefore finds that Mori does not anticipate independent claim 1 or independent claim 16 or the claims depending respectively therefrom, including asserted dependent claims 2, 3, 9-11, 13 and 17, of the '331 patent under 35 U.S.C. §102.<sup>17</sup>

### 2. Obviousness

#### a) *JP 2001-319315 to Aonuma ("Aonuma") in view of Mori*

Respondents contend that claims 1-3, 9-11, 13, 14, 16 and 17 of the '331 patent are obvious under 35 U.S.C. § 103 based upon the combined teachings of Aonuma (RX-0279) and Mori. (RIB at 72-75, RRB at 34-36.) Respondents contend that Complainants "do[ ] not dispute that Aonuma discloses all features of claim 1 of the '331 Patent except volume concentration, coercivity, and Mr\*t...." (RIB at 73 (citing CX-1150C at Q/A at 1488-1519).) The undersigned addresses each of these claims features in turn below.

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<sup>17</sup> Complainants also assert that the '331 patent is entitled to a priority date of "before July 5, 2002." (*See* CIB at 51-52; *see also* RIB at 64-66; RRB at 31 and SIB at 68-69.) On this basis, Complainants argue that Naoe is not prior art. (*See* CIB at 77.) Given that the undersigned has found that Naoe does not teach features of the asserted claims for which it was cited, and thus does not anticipate, it is unnecessary for the undersigned to address whether the '331 patent is entitled to a priority date sufficient to antedate Naoe.

**PUBLIC VERSION**

**(1) Volume Concentration**

Respondents assert that Aonuma inherently discloses a volume concentration of 35.1% because “[t]he volume concentration of the ferromagnetic powders in Aonuma can be calculated based on the recipe disclosed in RX-0279 (Aonuma) at [0105].” (*Id.* (citing RX-0006C at Q/A at 173, 174; RDX-0002C at 14).) Respondents acknowledge that their expert relied on a value for specific gravity for a particle from Ejiri ’846 that is different from the one actually used in Aonuma, but argue that “the[ ] differences would likely *increase* the determined volume concentration to above 35.1%.” (*Id.* (citing CX-1150C at Q/A at 1513-1516 and RX-0006C at Q/A at 176).) In the alternative, Respondents contend that the “filling rate” of Mori would satisfy the volume concentration feature of the asserted claims. (*Id.* at 74.)

Complainants counter that Aonuma neither expressly nor inherently teaches “a volume concentration of about 35%” as is recited in independent claims 1 and 16. (CIB at 79 (citing CX-1150C at Q/A at 1488-1496).) Complainants contend, as was the case with Mori, that the analysis of Respondents’ expert was “based on an equation utilizing a value for the specific gravity of a particle pigment that is not tied in any way to the metallic particle pigments described in Aonuma” and that Respondents expert failed to “explain what the correct value for specific gravity is” for the particles used in Aonuma. (*Id.* (citing CX-1150C at Q/A at 1492-1496).)

Staff agrees with Complainants that Aonuma cannot be said to inherently anticipate the volume concentration where the calculation relies on the physical properties of a powder that differs from the one actually used in Aonuma. (SIB at 72-73.) Staff reasons that “[u]sing Ejiri ’846 to calculate the volume concentration of Aonuma presents the same problem as with respect to using Ejiri ’846 to calculate the volume concentration of Mori” and observes that Respondents’ expert testified “that Ejjiri (sic.) would be ‘good estimate’ of the specific gravity,

## PUBLIC VERSION

but that is not enough to clearly and convincingly prove that Ejiri (sic.) '846 can be used to calculate the volume concentration in Aonuma.” (*Id.*) Thus Staff concludes that “because both Mori and Aonuma suffer from the same problem, the combination fails to disclose “a volume concentration of at least about 35%.” (*Id.* at 73.)

The undersigned agrees with Complainants and Staff that Aonuma suffers from the same deficiencies as Mori with respect to volume concentration as discussed previously. Namely, Respondents' expert is relying on a speculative equivalency between the particles in Aonuma and Ejiri '846 in order to establish inherent anticipation of the '331 patent by clear and convincing evidence. (*See* RX-0006C at Q/A at 176; *see also* CX-1150C at Q/A at 1513-16.) Indeed, even Respondents equivocate on the effects of projecting the data values from Ejiri '846 to Aonuma with respect to volume concentration. (RIB at 73 (“[T]hese differences would **likely increase** the determined volume concentration to above 35.1%.”) (bold emphasis added).) In fact, Respondents' expert similarly indicated that “[t]he magnetic metal powder in Aonuma has a lower Co content and thus it *likely* has a lower specific gravity.” (RX-0006C at Q/A at 176.) As such, the undersigned finds that the evidence fails to clearly and convincingly show that Aonuma inherently teaches “a volume concentration of at least about 35%.”

### (2) Coercivity

Respondents argue that although Aonuma does not disclose the claimed coercivity, “Mori discloses a coercivity “equal to or higher than 2,100 Oe, ... with a level ranging from 2,200 to 3,500 Oe being suitable from a practical standpoint with regard to recording head power.” (RIB at 74 (citing RX-0276 (Mori) at ¶ [0011]).) Respondents also note that Aonuma discloses a coercivity of 1998 Oe “as a preferable range, not as a cap.” (*Id.* (citing RX-0279 (Aonuma) at ¶ [0123]).) Respondents further contend that “Mori discloses a thin magnetic layer of 30 to 100 nm,

**PUBLIC VERSION**

in contrast to Aonuma's disclosure of 150 to 250 nm" and therefore one of ordinary skill in the art "would have been motivated to combine Aonuma with Mori, because a POSA would have known that that the thinner magnetic layer disclosed in Mori can further resolve the higher coercivity issues described by Aonuma." (*Id.* (citing RX-0006C at Q/A at 267).)

Respondents also assert that "Aonuma discloses that PW50 "permits greater density of recording" which is a well-known benefit of PW50" and "[g]iven the well-known relationship between Hc and PW50, a POSA would have been motivated to use a higher Hc powder with a thinner magnetic layer (as disclosed in Mori) to decrease PW50 and achieve greater recording density." (*Id.* (citing RX-0279 (Aonuma) at ¶ [0123]).) Finally Respondents acknowledge that "Aonuma also discloses that higher coercive force can contribute to heating of the recording head and lower signal-to-noise ratio, due to the requirement of setting the recording current to a high level." (*Id.* (citing RX-0279 (Aonuma) at ¶ [0014]).) Respondents contend, however, that this disclosure does not represent a "teaching away" and that one of ordinary skill in the art "would have recognized that Aonuma's concern regarding heating would be offset by the benefits of using a higher Hc, including a decreased PW50 and improved stability." (*Id.* at 74-75 (citing RX-0276 (Mori) at 2:39-40 ("Further, the coercivity Hc is desirable equal to or higher than 167 kA/m (2,100 Oe) to maintain stable recording magnetization.") and Bain, Tr. at 697:10-698:9).)

In response, Complainants first note that Aonuma discloses "at most a coercivity of 160.8 kA/m (which can be converted to 2020.6 Oe). 2020.6 Oe is far less than the 2300 Oe required by the claims." (CIB at 79 (citing CX-1150C at Q/A at 1498). Complainants then argue that Aonuma discourages the use of high coercivity powders because they "saturate[ ] the MR head and facilitates heating of the recording head," which "causes deterioration of the MR head integrated with the recording head, producing a tendency for playback output to decline and for the S/N value



PUBLIC VERSION

to decline.” (*Id.* at 79-80 (citing CX-1150C at Q/A at 1499 and quoting RX-0279 (Aonuma) at ¶ [0014]).) Complainants contend that as a result, “Aonuma teaches that it is preferred that coercivity be between 1709 to 1947 Oersted—a range which falls well outside the 2300 Oe required by the claim.” (*Id.* at 80 (citing CX-1150C at Q/A at 1499.)) In view of this disclosure, Complainants conclude that one of ordinary skill in the art would not combine Mori’s disclosure of higher coercivity materials with Aonuma as proposed by Respondents’ expert. (*Id.* at 80-81.)

Staff agrees with Complainants that “the evidence does not show that a POSITA would be motivated to combine the references because Aonuma teaches away from use of higher coercivity powders.” (SIB at 73 (citing CX-1150C at Q/A at 1499.)) Staff cites several excerpts from Aonuma indicating that while there are some benefits from using powders with higher coercivity, that there are also attendant negative consequences for doing so. (*Id.* (citing Aonuma at ¶ [0014]).) Staff also notes that Aonuma utilizes thicker powder layers than Mori which in turn reduces the coercivity. Given these teachings and differences between Aonuma and Mori, Staff concludes that “[t]he evidence therefore does not show that a POSITA would combine Aonuma with the Mori reference.” (*Id.* at 74.)

The undersigned agrees with Complainants and Staff that Respondents have failed to show that one of ordinary skill in the art would combine the teachings of Aonuma and Mori with respect to coercivity. Paragraph [0014] of Aonuma provides:

Although typically a greater recording density is provided by ferromagnetic powder with higher coercive force, in order to achieve this it is necessary to set the recording current to high level. However, although setting the recording current to a high level provides high playback output, it saturates the MR head and facilitates heating of the recording head. As a result, this causes deterioration of the MR head integrated with the recording head, producing a tendency for playback output to decline and for the S/N value to decline. In view of this, it is preferred that the coercivity of the ferromagnetic powder used in this invention is within the range of 136.0-155.0kA/m (even more preferably, 140.0-148.0kA/m).

(RX-0279 (Aonuma) at ¶ [0014].)

## PUBLIC VERSION

Thus, Aonuma acknowledges that there are benefits to the use of materials with higher coercivity, but that using such material comes with consequences that they wish to avoid by using powders within a defined lower coercivity range (*i.e.*, “In view of this, it is preferred that the coercivity of the ferromagnetic powder used in this invention is within the range of 136.0-155.0kA/m (even more preferably, 140.0-148.0kA/m).”) The undersigned find this disclosure from Aonuma to be a clear teaching away from the use of higher coercivity powders (such as those disclosed in Mori). Respondents argument that one of ordinary skill in the art “would have recognized that Aonuma’s concern regarding heating would be offset by the benefits of using a higher Hc, including a decreased PW50 and improved stability” seems to confirm this conclusion. (RIB at 74-75.) After all, citing potential benefits that serve to “offset” problems disclosed by Aonuma only highlights that there were problems associated with high coercivity materials that Aonuma was seeking to avoid in the first place. Merely because potential “offset” benefits exist does not obviate that which Aonuma was expressly teaching away from, nor do they provide a basis to ignore or otherwise discount those teachings away. The undersigned therefore finds that the evidence fails to clearly and convincingly show that Aonuma inherently teaches, and in fact teaches away from, “a coercivity of at least about 2300 Oe” as recited in independent claim 1 and “a coercivity of at least about 2500 Oe” as recited in independent claim 16.

### (3) Remanence-Thickness Product (Mr\*t)

Respondents argue that “[i]t would have been obvious for a POSA to provide a magnetic medium having a Mr\*t of 2.84 memu/cm<sup>2</sup> or less, in view of Mori, to achieve a narrower PW50.” (RIB at 75 (citing RX-0284 (Mee) at 13, 26; RX-0006C at Q/A at 364).) Respondents make a similar argument for each of claims 16 and 17. (*Id.*)

Complainants offer (i) that “Aonuma also does not disclose, and in fact teaches away

PUBLIC VERSION

from, a remanence-thickness product of less than about 2.84 memu/cm<sup>2</sup>” and (ii) that “[a]t best Aonuma discloses an Mr\*t of 3.98 memu/cm<sup>2</sup> which is not ‘less than about 2.84 memu/cm<sup>2</sup>.’” (CIB at 80 (citing CX-1150C at Q/A at 1500-1501).) Complainants also contend that Aonuma teaches away from a medium having remanence-thickness product Mr\*t values below 3.66 because the “S/N or O/W is degraded.” (*Id.* (citing CX-1150C at Q/A at 1501).)

Staff asserts that “Aonuma discloses a remanence-thickness product (Mr\*t) of 3.98-4.77 memu/cm<sup>2</sup>, which is above the claimed range of 2.84 memu/cm<sup>2</sup>.” (SIB at 74.) Staff takes some exception to Complainants’ argument that Aonuma teaches away from remanence-thickness product Mr\*t values below 3.66 because the cited “portion of Aonuma is about problems encountered with a Mr\*t **higher** than 3.98-4.77 memu/cm<sup>2</sup>. It does not therefore necessarily teach away from a **lower** Mr\*t.” (*Id.* (emphasis in original).) Staff nevertheless concedes that Complainants have demonstrated that one having ordinary skill in the art would not deviate from the range of remanence-thickness product Mr\*t values disclosed in Aonuma “because Sony has demonstrated possible problems with different ranges.” (*Id.* (citing CX-1150C at Q/A at 1499).) Staff also submits that Respondents “do[ ] not clearly and convincingly explain why a POSITA would use Mori’s lower Mr\*t when Aonuma already gives a range.” (*Id.*)

The undersigned finds that Respondents have failed, for several reasons, to establish that the combination of Aonuma and Mori clearly and convincingly teaches “a remanence-thickness product Mr\*t, of less than or equal to about 2.84 memu/cm<sup>2</sup>” as is recited in independent claim1, “a remanence-thickness product Mr\*t, of less than or equal to about 2.12 memu/cm<sup>2</sup>” as is recited in independent claim 16 and/or “a remanence-thickness product Mr\*t, of less than or equal to about 1.59 memu/cm<sup>2</sup>” as is recited in dependent claim17.

## PUBLIC VERSION

Respondents offer a single conclusory sentence with respect to each of claims 1, 16 and 17 regarding the remanence-thickness product Mr\*t value. (RIB at 75.) Standing alone, such does not carry Respondents obligation to establish invalidity by clear and convincing evidence.

Moreover, Aonuma indicates that a particular balance of properties is needed to fall within the scope of the disclosed invention. (See RX0279 at ¶ [0124].) This disclosure would presumably encourage one having ordinary skill in the art to not deviate from those parameters in order to maintain the benefits of the disclosed subject matter. As such, the undersigned finds that Respondents have failed, as Staff puts it, to “clearly and convincingly explain why a POSITA would use Mori’s lower Mr\*t when Aonuma already gives a range.”

### (4) Summary

The undersigned finds Respondents have failed to clearly and convincingly establish that Aonuma and Mori teach or suggest above-discussed features of independent claims 1 and 16. As such, the undersigned finds that Aonuma and Mori do not render obvious independent claim 1 or independent claim 16 or the claims depending respectively therefrom, including asserted dependent claims 2, 3, 9-11, 13, 14 and 17, of the ’331 patent under 35 U.S.C. § 103.

#### *b) Mori in view of Aonuma*

Respondents contend that dependent claim 14 of the ’331 patent is obvious under 35 U.S.C. § 103 based upon the combined teachings of Mori and Aonuma. (RIB at 76.) In making this rejection, Respondents are relying on Aonuma only as providing the features of dependent claim 14 (in contrast to the combination of Aonuma and Mori set forth above). Thus, Respondents are otherwise relying on Mori as teaching all of the features of independent claim 1, from which claim 14 depends, as set forth in their anticipation contentions.

Even assuming *arguendo* that Aonuma supplies the deficiencies for which Respondents rely upon Aonuma (*i.e.*, the features of dependent claim 14), those teachings do not supply the

## PUBLIC VERSION

deficiencies of Mori that prevent it from anticipating independent claim 1 from claim 14 depends. Put differently, in proposing this combination of art in this manner Aonuma has not been asserted by Respondents as curing any or all of the deficiencies of Mori described above. Therefore, the combined teachings of Mori and Aonuma as set forth in this rejection by Respondents cannot establish a *prima facie* case of obviousness as to independent claim 1 or the claims depending respectively therefrom, including dependent claim 14, under 35 U.S.C. § 103.

In view of the above, the undersigned finds that Mori and Aonuma do not render obvious dependent claim 14, of the '331 patent under 35 U.S.C. § 103.

### c) *Naoe in view of Aonuma*

Respondents contend that dependent claim 14 of the '331 patent is obvious under 35 U.S.C. § 103 based upon the combined teachings of Naoe and Aonuma. (RIB at 76.) In making this rejection, Respondents are relying on Aonuma only as providing the features of dependent claim 14. Thus, Respondents are otherwise relying on Naoe as teaching all of the other features of independent claim 1, from which claim 14 depends, as set forth in their anticipation contentions.

Even assuming *arguendo* that Aonuma supplies the deficiencies for which Respondents rely upon Aonuma (*i.e.*, the features of dependent claim 14), those teachings do not supply the deficiencies of Naoe that prevent it from anticipating independent claim 1 from claim 14 depends. Put differently, in proposing this combination of art in this manner Aonuma has not been asserted by Respondents as curing any or all of the deficiencies of Naoe described above. Therefore, the combined teachings of Naoe and Aonuma as set forth in this rejection by Respondents cannot establish a *prima facie* case of obviousness as to independent claim 1 or the claims depending respectively therefrom, including dependent claim 14, under 35 U.S.C. § 103.

In view of the above, the undersigned finds that Naoe and Aonuma do not render obvious dependent claim 14, of the '331 patent under 35 U.S.C. § 103.

PUBLIC VERSION

*d) Mori in view of MAGNETIC RECORDING, VOL. 1 to Mee et al. ("Mee") and U.S. Patent No. 4,347,291 to Tokuoka ("Tokuoka")*

Respondents contend that claims 1-3, 9-11, 13, 16 and 17 of the '331 patent are obvious under 35 U.S.C. § 103 based upon the combined teachings of Mori, Mee (RX-0284) and Tokuoka (RX-0285). (RIB at 76-77.) Respondents argue that "[t]o the extent that the ALJ believes that the claimed PW50 and orientation ratio are not inherently disclosed by Mori, it would have been obvious to combine Mori with Mee and Tokuoka to obtain the claimed PW50 and orientation ratio." Thus, Respondents are otherwise relying on Mori as teaching all of the other features of independent claims 1 and 16 as set forth in their anticipation contentions.

Even assuming *arguendo* that Mee and Tokuoka supply the deficiencies for which Respondents rely upon them, those teachings do not supply all of the deficiencies of Mori (*i.e.*, with respect to the volume concentration) that prevent it from anticipating claims 11-3, 9-11, 13, 16 and 17 of the '331 patent. Put differently, Mee and Tokuoka have not been asserted by Respondents as curing all of the deficiencies of Mori described above. Therefore, the combined teachings of Mori, Mee and/or Tokuoka cannot establish a *prima facie* case of obviousness as to independent claims 1 and 16 or the claims depending respectively therefrom, including dependent claims 2, 3, 9-11, 13 and 17, under 35 U.S.C. § 103.

In view of the above, the undersigned finds that Mori, Mee and/or Tokuoka do not render obvious independent claims 1 and 16 or the claims depending respectively therefrom, including dependent claims 2, 3, 9-11, 13 and 17, under 35 U.S.C. § 103.

*e) Secondary Considerations*

Given that the undersigned finds that the asserted claims of the '331 patent are not invalid as obvious, it is unnecessary to address the sufficiency of Complainants' evidence of secondary considerations of non-obviousness. (CIB at 83-84.)

PUBLIC VERSION

*f) Priority Date*

As explained in note 19, *supra*, Complainants contend that the '331 patent is entitled to a priority date of "before July 5, 2002." (See CIB at 51-52; see also RIB at 64-66; RRB at 31 and SIB at 68-69.) Based on this contention, Complainants argue that one reference (*i.e.*, Naoe) cited against the asserted claims is not prior art to the '331 patent. (See CIB at 77.) Other than antedating Naoe, Complainants do not otherwise appear to rely on establishing an earlier priority date for the '331 patent. Given that the undersigned has found that Naoe does not teach features of the asserted claims for which it was cited, and thus does not anticipate, it is unnecessary for the undersigned to otherwise address whether the '331 patent is entitled a priority date of "before July 5, 2002."

**3. Indefiniteness**

Respondent asserts that several claim terms render independent claims 1 and 16 are invalid as indefinite under 35 U.S.C. § 112, (b)/¶ 2. (RIB at 50-55.)

*a) "PW50"*

Respondents contend that the use of the term "PW50" renders independent claims 1 and 16 indefinite. (*Id.* at 51-53 and RRB at 24-25.) Respondents argue that although there is general agreement among the private parties and Staff that the '331 patent expressly defines the term "PW%," it is nevertheless indefinite because "the definition does not disclose the system parameters that should be used to obtain a PW50 measurement." (RIB at 51 (citing JX-0004 ('331 Patent) at 3:32-48; RX-0006C at Q/A at 418-419; CX-0969C at Q/A at 886; Bain, Tr. at 263:19-264:5).) Respondents contend that exacting measurement guidelines are needed to measure PW50 because "PW50 is not an absolute parameter, and thus, PW50 measurements taken by different equipment, even on exactly the same media, do not yield an absolute or consistent result" and "the procedure defined in the '331 Patent provides a *relative* result that is dependent on, and varies with, the very equipment used to take the measurement." (*Id.*

PUBLIC VERSION

(emphasis in original) (citing Bain, Tr. at 702:1-705:6 and *Dow Chem. Co. v. Nova Chemicals Corp. (Canada)*, 803 F.3d 620, 633 (Fed. Cir. 2015)).)

Respondents argue, for example, that their expert demonstrated that “varying the head-medium spacing and the read gap distance provide concrete evidence that determining whether PW50 is within range of the claims depends on system parameters not disclosed or claimed in the ‘331 Patent.” (*Id.* at 52 (citing RX-0006C at Q/A at 433-447).) Respondents acknowledge that the ‘331 patent provides examples of condition under which the PW50 was measured. (*Id.*) However, Respondents contend that these examples do not provide sufficient guidance because the measurements were obtained “using a ‘read head [that] had a construction similar to that of a commercially available Ultrium® LTO 1 head with a read gap shield to shield distance of 0.33 micron” and “[t]he specification fails to indicate what is ‘similar to’ an LTO-1 head, or provide guidance regarding whether such a read head would be appropriate for later generation tapes such as LTO-4 or LTO-5.” (*Id.* at 52-53 (citing JX-0004 (‘331 Patent) at 10:3-7).)

Complainants contend that the ‘331 patent “provides *express guidance* for how to determine the PW50 of magnetic tape according to the claimed inventions.” (CIB at 85 (emphasis in original) (citing CX-1150C at Q/A at 942 and JX-0004 at 3:38-48).) Complainants dispute Respondents’ contentions that the use of different testing equipment can lead to different PW50 results because (i) the ‘331 patent discloses a measurement method that Complainants’ expert was able to follow and (ii) and because “the mere possibility of different results from different measurement techniques’ does not render a claim indefinite.” (*Id.* (citing CX-1150C at Q/A at 946 and *Takeda Pharm. Co. Ltd. v. Zydus Pharm. USA, Inc.*, 743 F.3d 1359, 1366-67 (Fed. Cir. 2014)).) Thus, Complainants conclude that “[i]n light of the patent’s teachings, a POSITA would be able to analyze a magnetic tape and determine with reasonable certainty



**PUBLIC VERSION**

whether it has the requisite PW50 (CX-1150C at Q949). The term ‘PW50’ is therefore not indefinite.” (*Id.* (citing CX-1150C at Q949 and *Nautilus*, 134 S. Ct. at 2129).)

Staff asserts that PW50 is both defined in the ’331 patent and well-known to those in the industry. (SIB at 76 (citing JX-0004 (’331 patent) at 3:38-47).) Staff also observes (i) that Respondents’ “own witnesses testified that they understood the term and knew how to measure PW50” (*see Id.* at 76-77 (citing CX-1150C at Q/A at 943 (citing JX-0010C at 113:14-114:4) and 944 (citing JX-0009C at 50:5-51:11).) and (ii) that the “’331 patent gives examples of how to measure PW50.” (*Id.* at 77 (citing JX-0004 (’331 patent) at 10:3-7).) As such, and despite there being other possible ways to measure PW50, Staff concludes that Respondents have failed to establish that “PW50” is indefinite. (*Id.*)

The undersigned agrees with Complainants and Staff. As summarized by Staff, Respondents’ “indefiniteness argument rests largely on the assertion that there are many variables in measuring for PW50....” (*Id.*) The mere fact that there are multiple variables and/or changes to the testing condition that can lead to other results does not render the term indefinite. The ’331 patent describes a testing methodology, and other than contesting the meaning of the word “similar” in the described methodology (*i.e.*, “The following table lists the physical attributes along with the PW50 results measured at 1.77 m/s. The read head had a construction similar to that of a commercially available Ultrium® LTO 1 head with a read gap shield to shield distance of 0.33 micron.” JX-0004 (’331 patent) at 10:3-7), Respondents and their expert have failed to adequately describe why they could not follow that testing methodology. Rather, Respondents appear to be demanding a certain level of specificity from the ’331 patent disclosure that is at odds with the prevailing requirements of 35 U.S.C. § 112 which require only that the patent specification (and its prosecution file history) inform one of ordinary skill in the

## PUBLIC VERSION

art with “reasonable certainty” as to the meaning of a claim term. *See Nautilus*, 134 S. Ct. at 2129. The ‘331 patent does that.

As such, the undersigned finds that Respondents have failed to prove by clear and convincing evidence that the term “PW50” as used in the ‘331 patent renders the asserted claims indefinite under 35 U.S.C. § 112.

### b) “Volume Concentration”

Respondents also contend that the term “volume concentration” renders independent claims 1 and 16 indefinite. (RIB at 54-55 and RRB at 25-26.) Respondents argue that (i) the ‘331 patent does not define the term “volume concentration” and (ii) both Complainants’ and Respondents’ experts agree “that the term ‘volume concentration’ can refer to two different techniques: either before the magnetic layer is formed using ‘pigment volume concentration’ by considering nonvolatile materials set forth in a recipe, or after the magnetic layer is formed by determining the ‘packing fraction’ of magnetic particles.” (RIB at 53 (citing RX-0006C at Q/A at 450-451; CX-0969C at Q/A at 925-926; CX-1150C at Q/A at 951 and Bain, Tr. at 642:12-25).) Respondents further argue that Complainants’ expert “conceded that the term volume concentration itself is ambiguous and that the two measurement methods yield different quantities.” (*Id.* (citing Bain, Tr. at 644:16-645:4).) Respondents contend that this situation is akin, for example, to that in *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 789 F.3d 1335, 1338, 1341 (Fed. Cir. 2015), in which the Federal Circuit determined the term “molecular weight” was indefinite where “there were three different measures of molecular weight: peak average molecular weight (Mp), number average molecular weight (Mn), and weight average molecular weight (Mw)” each yielding a different result.<sup>18</sup> Thus, Respondents conclude that “since there are at least two methods for calculating volume

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<sup>18</sup> Respondents also contend the situation is similar to that in *Dow Chem. Co. v. Nova Chemicals Corp. (Canada)*, 803 F.3d 620, 624-25, 633 (Fed. Cir. 2015). (RIB at 54.)

## PUBLIC VERSION

concentration that produce different results, and the patent does not provide guidance as to which method to use, the claims are indefinite.” (*Id.* at 54.)

Complainants assert that if Respondents’ argument is correct that there are two different interpretations for volume concentration (*i.e.*, “(1) ‘the volume of the primary magnetic metallic particulate pigment divided by the volume of all materials that form the magnetic layer’; or (2) ‘the volume of the primary magnetic metallic particulate pigment divided by the volume of the magnetic layer’”) it amounts to nothing more than “a distinction without a difference: a POSITA would understand that ‘volume concentration’ refers to the magnetic metallic particulate pigment’s concentration, by volume, in the magnetic layer—which both ‘interpretations’ represent.” (CIB at 85-86 (citing CX-1150C at Q/A at 951 and RX-0006C at Q/A at 450-451); see also SRB at 19 (discussing the “volume concentration of the recipe or “slurry” for the magnetic tape and that of the formed magnetic tape).) As such, and further noting that Respondents’ witnesses acknowledged their familiarity with the term “volume concentration,” Complainants conclude that the term “volume concentration” cannot be indefinite. (*Id.* at 86 (citing JX-0010C at 107:15-23).)

Staff also acknowledges that “[v]olume concentration can be interpreted two ways: (1) the volume of the primary magnetic metallic particulate pigment divided by the volume of all materials that form the magnetic layer, or (2) the volume of the primary magnetic metallic particulate pigment divided by the volume of the magnetic layer.” (SIB at 77 (citing RX-0006C at Q/A at 450-51).) Staff explains that the difference between the two methods is that the second method relates to “focuses on the final product and includes voids in the magnetic layer” whereas the first method does not. (*Id.*) Staff then concludes, despite the potential outcome differences between the two methods of measuring volume concentration that “[t]he evidence shows that a

## PUBLIC VERSION

POSITA would understand ‘volume concentration’ with reasonable certainty and the term is not indefinite.” (*Id.* at 78 (citing CX-0979C at Q/A at 33; CX-1150C at Q/A at 952-53).)

Respondents’ argument utilizes the same basic premise as its arguments for “PW50”— that there is more than one way to “interpret” and/or determine a property recited in the claims and the ‘331 patent fails to sufficiently describe which “interpretation” or methodology should be used. (*See* RX-0006C at Q/A at 450-452; *see also* CX-1150C at Q/A at 951.) As discussed above, in order to demonstrate that a term is indefinite, Respondents are obligated to establish by clear and convincing evidence that the patent specification and file history fails to inform one of ordinary skill in the art of the meaning of a claim term with “reasonable certainty.” *See Nautilus*, 134 S. Ct. at 2129.

Here, Respondents acknowledge that there are at most two “interpretations” for the term “volume concentration, one referring to the recipe or slurry used to form the magnetic layer or the volume concentration in the layer as formed.” (*See* RX-0006C at Q/A at 450-451; CX-1150C at Q/A at 951-953 and CX-969C at Q/A at 925-926.) The relevant portion of independent claims 1 and 16 recites that “the magnetic upper recording layer compris[es] a volume concentration of at least about 35% of a primary magnetic metallic particulate pigment ... and a binder for the pigment.” (JX-0004 (’331 patent) at Cls. 1 and 16.) In this regard, the ’331 patent states among other things that

- “[T]he *magnetic layer contains a volume concentration of at least about 35% of a magnetic metallic particulate pigment....*” (JX-0004 (’331 patent) at Abstract (emphasis added).);
- “The present invention relates to magnetic recording media such as magnetic tapes, and more specifically to *the magnetic layer of the media which contains particulate metallic pigments that have high magnetic coercivity and a high volume concentration.*” (JX-0004 (’331 patent) at 1:12-16 (emphasis added).);
- “It has now been discovered that using magnetic recording media having multiple layers wherein *the upper magnetic layer contains certain metallic pigments in the magnetic layer of a magnetic recording medium, e.g., particle pigments having a*

## PUBLIC VERSION

coercivity of greater than about 2000 Oersteds (Oe), with particles having lengths of less than about 100 nanometers (nm), preferably less than 80 nm *at a volume concentration of greater than about 35%*, significantly narrows the PW50 characteristics of the resulting medium.” (JX-0004 ('331 patent) at 2:47-56 (emphasis added).);

- “The *magnetic upper layer* is disposed over the lower support layer on the front side of the substrate and *includes a volume concentration of at least about 35% of a primary magnetic metallic particulate pigment material....*” (JX-0004 ('331 patent) at 2:65-3:1 (emphasis added).);
- “Another aspect of the invention provides a dual-layer magnetic recording medium comprising a non-magnetic substrate having a front side and a back side, a lower support layer and an upper magnetic recording layer formed on the front side, *said upper magnetic layer including a volume concentration of at least about 40% of a primary magnetic metallic particulate pigment material....*” (JX-0004 ('331 patent) at 3:9-15 (emphasis added).); and
- “The magnetic metal particle pigment comprises a primary magnetic metal particle pigment having a coercivity of at least about 2000 Oe, preferably at least about 2300 Oe. Such pigment preferably has an average particle length of less than about 100 nm, preferably less than about 80 nm. *The pigment is present in the upper magnetic layer in a volume concentration of at least about 35%, preferably about 40%.*” (JX-0004 ('331 patent) at 4:28-34 (emphasis added).)

As can be seen from the above, the '331 patent expressly describes the “volume concentration” of the magnetic layer, not that of the recipe or “slurry” used to make up that layer. Even putting aside the evidence from Complainants that each of Respondents’ proposed “interpretations” refers to the same thing, (*see* CX-1150C at Q/A at 951), the undersigned finds that the '331 patent informs one of ordinary skill in the art with “reasonable certainty” that the term “volume concentration” in independent claims 1 and 16 refers to the “volume concentration” in the magnetic layer. The fact that the term “volume concentration” can be used in another context to describe the property of something else (*i.e.*, the recipe or “slurry” used to form the magnetic layer) disclosed in the '331 patent specification does not nullify the above disclosures and therefore does not render the '331 patent indefinite.

**PUBLIC VERSION**

As such, the undersigned finds that Respondents have failed to prove by clear and convincing evidence that the term “volume concentration” as used in the ’331 patent renders the asserted claims indefinite under 35 U.S.C. § 112.

*c) “About”*

Respondents further contend that the term “about” renders independent claims 1 and 16 indefinite. (RIB at 54-55 and RRB at 26.) Respondents assert the term “about” is indefinite because “the patent does not provide any objective boundaries to determine the specific range of parameters covered by the term ‘about.’” (RIB at 54.) Citing *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200, 1218 (Fed. Cir. 1991), Respondents contend that “[w]hen, as here, ‘nothing in the specification, prosecution history, or prior art provides any indication as to what range of specific activity is covered by the term ‘about’ and when ‘no expert testified as to a definite meaning for the term in the context of the prior art,’ the term is indefinite.” (*Id.* at 55.)

Complainants argue that the ’331 patent “describes how to measure each of the recited claim terms in a way that a POSITA would understand with reasonable certainty.” (CIB at 86 (citing (CX-1150C at Q/A at 968 and 970; JX-0004 at 3:38-61, 4:33-35).) Complainants offer the testimony of both their expert and that of the inventor attesting “that [the term] ‘about’ does not reflect an ‘exact number’ but, rather, refers to something being reasonably close, such as within rounding or measurement error.” (*Id.* (citing CX-1150C at Q/A at 969, 972; JX-0025C at 81:23-82:14 and CX-0979C at Q/A at 35).) Complainants also point out that Respondents’ expert “admitted he knows the meaning of ‘about’ wherever it is used in his own patents, even when referring to numerical ranges.” (*Id.* (citing Wang, Tr. at 572:10-18).) As such, Complainants argue that Respondents’ contentions are without merit. (*Id.*)

Staff agrees with Complainants that the term “about” is not indefinite because “[t]he term ‘about’ generally means ‘approximately.’” (SIB at 79 (citing *Merck & Co. v. Teva Pharm. USA*,

## PUBLIC VERSION

395 F.3d 1364, 1369 (Fed. Cir. 2005)).) Staff notes that the meaning of the term nevertheless must be demined “depend[ing] on the technological facts of the case.” (*Id.* (citing *Pall Corp. v. Micron Separations, Inc.*, 66 F.3d 1211, 1217 (Fed. Cir. 1995)).) Here, Staff concludes that the term “about” is not indefinite because (i) “[t]he term is used in a number of contexts in the patent claims” such as “[t]he claimed values for volume concentration, coercivity, average particle length, remanence-thickness product, orientation ration, and PW50” and (ii) the ’331 patent explains how to measure each of those features as claimed with reasonable certainty. (*Id.* at 78-79 (citing CX-1150C at Q/A at 968-970).)

The undersigned agrees with Complainants and Staff that the term “about” as used in the ’331 patent is not indefinite. Respondents again argue that the ’331 patent must provide a “the *specific* range of parameters covered by the term ‘about.’” (RIB at 54 (emphasis added).) However, as discussed above, compliance with 35 U.S.C.¶2/(b) does not require that level of specificity. As Staff explains, the ’331 patent describes how to measure each of the claim terms that utilize the term “about.” (SIB at 78-79.) Given those disclosures, the undersigned finds that it is both unnecessary and unreasonable to require that the ’331 patent to further provide a “specific” definition for each use of the term “about” as urged by Respondents.

Moreover, Respondents reliance on *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200, 1218 (Fed. Cir. 1991) is somewhat misplaced. As Respondents correctly note, in *Amgen* one of the reasons the term “about” was found indefinite was because of “the fact that no expert testified as to a definite meaning for the term in the context of the prior art.” *Amgen*, 927 F.2d at 1218. Here, that is not the case. Both Complainants’ expert and the inventor of the ’331 patent testified that they understood the meaning to the term “about” in the context and subject matter

## PUBLIC VERSION

of the '331 patent.<sup>19</sup> (See CX-1150C at Q/A at 969, 972; JX-0025C at 81:23-82:14 and CX-0979C at Q/A at 35.) Indeed, Respondents expert acknowledged his familiarity of the meaning of the term “about” from its use in his own patents. (See Wang, Tr. at 572:10-18.) Thus, there was expert testimony—including from Respondents’ expert—that those skilled in the art understand the meaning of the term “about” in this technology field.

In view of the forgoing, the undersigned finds that Respondents have failed to prove by clear and convincing evidence that the term “about” as used in the '331 patent renders the asserted claims indefinite under 35 U.S.C. § 112.

### *d) Summary*

In view of the forgoing, therefore, the undersigned finds that Respondents have failed to prove by clear and convincing evidence that the '331 patent is indefinite under 35 U.S.C. § 112.

## VI. DOMESTIC INDUSTRY – ECONOMIC PRONG

Complainants argue that they have satisfied the economic prong of the domestic industry requirement under Section 337(a)(3)(B) based upon (i) the investment and economic activities of three (3) Sony Corporation subsidiaries (*i.e.*, Sony Latin America Inc. (“SOLA”), Sony DADC US Inc. (“Sony DADC”) and Sony Services and Operations of Americas (“SSOA”)) and (ii) the investment and economic activities of its cross-licensee IBM. (CIB at 128-129 and CRB at 54; 59.)

Respondents dispute that the investments of either Sony Corporation’s subsidiaries or IBM are sufficient to satisfy the economic prong. (RIB at 110-112 and RRB at 55-72.) With respect to the Sony subsidiaries, Respondents argue that the identified domestic industry products are manufactured entirely in Japan and that Complainants’ “domestic activities consist of importing

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<sup>19</sup> It is a “well-settled understanding that inventors are typically persons skilled in the field of the invention and that patents are addressed to and intended to be read by others of skill in the pertinent art.” *Phillips*, 415 F.3d at 1313 (internal citations omitted).



## PUBLIC VERSION

finished saleable products from Japan in shrink-wrapped packages, applying stickers to some of those products, storing the imported products in inventory, shipping the imported products when an order is received, and calling FedEx when a package is lost.” (RIB at 111 and RRB at 55-56.) As to IBM’s activities, Respondents assert several deficiencies, including that (i) they are improperly premised on a typographical error in a Sony/IBM license and (ii) that “Sony is alleging a domestic industry for patent claims that indisputably cover tape *cartridges* by IBM’s investments in tape *drives*.” (RIB at 112 (emphasis in original) and RRB at 57-72.)

Staff contends that the investments of the Sony subsidiaries are insufficient to satisfy the economic prong. (SIB at 112-117 and SRB at 27-28.) However, Staff asserts that Complainants have satisfied the economic prong by virtue of IBM’s investments. (SIB at 108 and 117-124 and SRB at 28-32.)

### A. Sony Subsidiaries

With respect to the Sony subsidiaries, Complainants assert that it “has made and continues to make investments in the employment of labor and capital in support of the Sony DI Products in the United States” and that the “investments generally relate to activities including custom labeling, customer service, warehousing and logistics, distribution and order management for the Sony DI Products” which Complainants fall “within the scope of Section 337(a)(3)(B).” (CIB at 124-125.) According to Complainants, “[a]cross SOLA, Sony DADC and SSOA, Sony has invested approximately [REDACTED] in labor and capital related to the Sony DI Products that can be attributed to the ’779 and ’331 Patents and approximately [REDACTED] to the ’137 Patent.” (*Id.* at 138 (citing CX-0971C.40; CDX-0001C.8).)<sup>20</sup>

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<sup>20</sup> As noted above, following the evidentiary hearing and briefing, Complainants moved on December 1, 2017, without opposition for partial termination of this Investigation with respect to all asserted claims of the ’137 patent. (Mot. 1036-030.) This motion was granted on December 6, 2017. (Ord. No. 45.)

## PUBLIC VERSION

As noted above, Respondents and Staff disagree that the investments and activities of the three Sony Corporation's subsidiaries satisfy the economic prong. (RIB at 114-129, RRB at 55-57, SIB at 110-117 and SRB at 27-28.) The investments and activities of each Sony Corporation's subsidiaries are discussed in turn below.

### 1. SOLA

Complainants assert that "SOLA, through its Americas Media and Energy Group ('AMEG'), is responsible for supporting Sony's LTO-branded business in the United States, including warehousing, distribution, labeling, packaging and customer support." (CIB at 125-126.) According to Complainants, the "AMEG group support all aspects of Sony's branded LTO business in the United States, including tracking sales and inventory, maintaining supply chains and distribution channels for shipping products to customers, processing orders, responding to customer complaints, and packaging and labeling products." (*Id.* at 126.) According to Complainants, the "BTB tape group" within AMEG "is responsible for LTO and other storage products." (*Id.*)

Complainants performed a "sales-based" allocation in order to assess the domestic industry investments regarding the DI products because "SOLA does not track investments and expenditures on a per-product basis." (*Id.* at 126-127.) Based on its calculations, Respondents contend that "SOLA invested approximately [REDACTED] in fiscal year 2015 to support the Sony DI Products, and approximately [REDACTED] in fiscal year 2016 to support the Sony DI Products" for an approximate total of [REDACTED] and argues that "[t]he full amount can be attributed to the '779 and '331 Patents...." (*Id.* at 127 (citing CX-0971C.35; CDX-0001C.0016 and relying on data and computations in CX-0971C.30; CX-0974C.23-25; CDX-0001C.18; JX-0097C; JX-0099C; CX-0971C.29-36; CX-0974C.25-26 CDX-0001C.0016-17; JX-0097C; JX-0099C; CX-0224C).)

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## PUBLIC VERSION

Respondents argue that SOLA, along with Sony DADC and SSOA, “import the Sony DI Products from SSMS in Japan and distribute them in the United States” and that none of these entities “manufactures LTO tape products in the United States.” (RIB at 5.) According to Respondents, “SOLA’s distribution and logistics for imported products from Japan fail to qualify toward a domestic industry, especially in the absence of any manufacturing activities undertaken in the United States....” (*Id.* at 116 (citing RX-0011C at Q/A at 87-129).) In particular, Respondents contend that the storage and “special” labeling expenses Complainants’ rely upon cannot establish a domestic industry given that “[t]he Commission and Federal Circuit have previously discounted packaging and labeling alone as activities too far distanced from the patented technology to constitute a domestic industry.” (*Id.* at 116-117 (citing *Schaper Mfg. Co. v. Int’l Trade Comm’n*, 717 F.2d 1368, 1373 (Fed. Cir. 1983) and JX-0033C Taniguchi, Tr. at 87:17-22 and RX-0011C at Q/A at 17-34, 42-53, 78-87, 90-115).) Respondents also critique the analysis and treatment of SOLA’s expenses by Complainants’ expert, for example by not excluding foreign costs and sales, general, and administrative expenses. (*Id.* at 123-126)

Staff reaches the same general conclusion as Respondents. In particular, Staff cites the same financial data cited by Complainants but concludes that “[t]he B2B tape group services are neither qualitatively or quantitatively significant as these are more like the activities of an importer.” (SIB at 113.) Staff cites the fact that the LTO tapes are not manufactured in the United States and argues that “[t]he evidence does not show that the expenses for distribution, packaging, and labeling are qualitatively or quantitatively significant.” (*Id.* (citing Sony PrHB at 215 and CX-0971C at Q/A at 46).)

PUBLIC VERSION

2. Sony DADC

Complainants assert that “Sony DADC performs warehousing, distribution, customer support, and certain labeling operations in the United States for Sony’s LTO tape cartridge OEM business” and that four areas of its expenditures associated with these activities establish a domestic industry: “(1) labor related to distribution, packaging, and labeling services for LTO products; (2) facilities costs associated with activities involving the Sony DI Products; (3) customer service activities associated with the Sony DI Products, including Sony DADC’s Global Platform Service (GPS); and (4) transportation services associated with the Sony DI Products.” (CIB at 132.)

With respect to “labor related to distribution, packaging, and labeling services for LTO products” (*i.e.*, area (1) above), Complainants contend that “Sony DADC performs various order management, distribution, packaging, and labeling services in its Bolingbrook facility on LTO magnetic tape products received from SSSM (formerly known as SSMD) in Japan. These services include packaging, labeling, warehousing, distributing, and supporting customer use of OEM LTO-compliant tape cartridges” (*Id.*) Complainants argue that “labeling activities are a critical service performed by Sony DADC in the Bolingbrook facilities, because the LTO tape cartridges cannot be used by Sony’s OEMs until they are labeled” and that labelling is a “value-added step.” (*Id.* at 133 (citing CX-0971C.15; CX-0972C.4-5; CX-0976C.48; JX-0017.128-129.) According to Complainants,

[f]or fiscal years 2015 and 2016, Sony DADC incurred approximately [REDACTED] and [REDACTED] respectively, in direct labor and supply expenses related to the labeling and other distribution activities performed by the [REDACTED] full-time equivalent employees in the clean rooms. This total distribution and labeling expenditure of [REDACTED] relates specifically to the activities and services performed on LTO products.

(*Id.*)

**PUBLIC VERSION**

Regarding “facilities costs associated with activities involving the Sony DI Products” (*i.e.*, area (2) above), Complainants’ contend that Sony DADC’s domestic industry activities occur in the approximately [REDACTED] square foot Building F at its Bolingbrook facility and that “approximately [REDACTED] square feet of Building F is specifically used for LTO operations, such as shipping, receiving and storage” and include LTO-dedicated equipment such as “computers, office printers, and a dedicated label printer.” (*Id.* at 134 (citing CX-0971C.17-18; CX-0972C.4-7; JX-0030C.20-21).) As such, Complainants assert that “Sony DADC had expenditures related to Building F of [REDACTED] allocable to LTO products over the course of FY 2015 and FY 2016,” reasoning “that [REDACTED] percent of the rent expense is allocable to the LTO products, while [REDACTED] percent of other fixed costs are allocable to the LTO products.” (*Id.* at 134-135 (citing CX-0971C.17-19, CX-0972C.6-7 and JX-0110C).)

As to “customer service activities associated with the Sony DI Products, including Sony DADC’s Global Platform Service (GPS)” (*i.e.*, area (3) above), Complainants assert that “Sony DADC also has [REDACTED] full-time employees in its Global Platform Services (GPS) division who perform customer service and finance activities to support the Sony DI Products.” (*Id.* at 135 (citing CX-0971C.19-21; CX-0972C.7-9; JX-0110C).) Complainants ascribe “domestic expenditures related to GPS of [REDACTED] allocable to LTO products” for “expenses related to labor (salaries, benefits, and training); training; and equipment and software maintenance, among others.” (*Id.* (citing CX-0971C.19-21; CX-0972C.7-9; JX-0110C).)

Finally, regarding “transportation services associated with the Sony DI Products” (*i.e.*, area (4) above), Complainants assert that Sony DADC has employees who “deal with transportation issues or questions, and communicate with FedEx and UPS, for example, regarding shipments” and that “[f]or fiscal years 2015 and 2016, the total expenses associated

PUBLIC VERSION

with this service were [REDACTED] [REDACTED], respectively.” (*Id.* at 135-136 (citing CX-0971C.21-22; CX-0972C.9; JX-0110C).)

Respondents provide several grounds disputing whether Sony DADC’s expenses can be utilized to establish a domestic industry, and instead contend that Sony DADC’s activities represent “the typical post-production activity undertaken by any importer” as evidenced by Complainants’ own witnesses. (RIB at 116 (citing JX-0030C at 21:2-6, 75:16-76:1, 113:12-114:2, 157:8-12; CX-0972C at Q/A at 64; CX-0976C at Q/A at 50 and RX-0011C at Q/A at 87-129).) (*Id.* (citing RX-0011C at Q/A at 17-86).)

Respondents first contend that Sony DADC’s expenses with respect to the DI products consist of “warehousing imported goods, shipping, managing inventory, and sales, general, and administrative (“SG&A”) labor” and are therefore “removed from actual manufacturing.” (*Id.* at 114 (citing CX-0971C at Q/A at 46 and RX-0011C at Q/A at 43-79, 83).) Respondents further argue that Sony DADC’s expenses related to labeling “are a tiny fraction of DADC’s cost of goods sold—goods made entirely in Japan” and, moreover, that “Sony DADC labeled on average less than [REDACTED] of all imported DI Products in the last two years.” (*Id.* at 117-118 (citing RX-0011C at Q/A at 85; JX-0111C (SONYITC2-001907426) and RX-0011C at Q/A at 17-34, 42-53, 78-87 and 90-115).)

Respondents also contend that Complainants’ expert improperly relied on Sony DADC “expenditures toward distribution, labeling, storage and supplies dating back to 2011” and thus “are far too remote to be considered.” (*Id.* at 119 (citing *Certain Video Game Systems and Controllers*, Inv. No. 337-TA-743, ID, 2011 WL 6210524 at \*92-93 (Nov. 2, 2011) for the proposition that expenses incurred more than three years prior to the filing of the complaint from the economic prong analysis).)

**PUBLIC VERSION**

Respondents next criticize Complainants' reliance on overhead expenses associated with Sony DADC's Bolingbrook facility (*i.e.*, Building F) and Global Platform Service (GPS) division because "none of Sony's labor force in the Bolingbrook facility, nor in the GPS division, designs, engineers, manufactures, or performs R&D on any Sony DI Product." (*Id.* at 120 (citing JX-0030C at 21:2-6 and 180:3-13 and JX-0033C at 31:1-15 and 65:1-5, 66:3-14).) Respondents contend that (i) "[t]he only tasks performed in Bolingbrook relate to 'shipping, receiving and storage, including for performing the labeling activities'" for Sony DI Products imported from Japan" and (ii) "the 'GPS' labor at DADC merely performs financial/non-technical services relating to 'collections, receipts, and accounts receivable.'" (*Id.* (citing CX-0971C at Q/A at 56 and 61 and RX-0011C at Q/A at 19, 21, 25-28, 44-55).) As such, Respondents argue that Complainants cannot include "overhead expenditures such as building rent, building insurance, repair and maintenance, 'insurance for any workers' comp,' depreciation of financial software, telecommunication equipment, utilities such as 'electric and water' among others, under its "Fixed Facilities" expenditures" in order to establish a domestic industry. (*Id.*) Respondents also call into question the accuracy of the analysis of Sony DADC's expenses by Complainants' expert, for example, (i) by noting that the analysis does not account for the fact that only approximately [REDACTED] of the DI products are labeled domestically and therefore "failed to differentiate between the labor used to perform labeling operations from labor that is simply used to receive and ship the imported products," (ii) "fail[ing] to allocate the correct portion of the 'Transportation Services' expenses to any of Sony DI Products" and (iii) improperly allocating sales, general, and administrative expenses of Sony DADC. (*Id.* at 123-126 (citing CX-0971C at Q/A at 52, 53, 71, 86-88, 91, 96; CDX-0001C.0012; CX-0233C (SONYITC2-001908415); JX-0030C at 42:4-18); RX-0011C at Q/A at 21-25; JX-0097C (SONYITC2-001856484) and JX-0099C (SONYITC2-001856488).)

## PUBLIC VERSION

Staff cites the same financial data cited by Complainants discussed above. Staff concludes, however, that each fails to establish a domestic industry related to the domestic industry products. (SIB at 113-116.)

First, Staff concludes that “[t]he evidence does not show that the expenses for distribution, packaging, and labeling are qualitatively or quantitatively significant.” Staff asserts that no LTO manufacturing occurs in the United States and points out that “[b]y Sony’s own characterization, this subset of investments only covers checking for inventory discrepancies, validating the correct label sequences, dealing with shipping or distribution issues, and then shipping the product to Sony’s OEM customers or customer warehouses” and that “[t]here appears to be no activities of the type described in the statute—such as engineering or research and development—at all.” (SIB at 114.) Staff reasons that “distribution and packaging services are neither qualitatively or quantitatively significant as these are more like the activities of an importer.” Staff also posits that to the extent Sony DADC’s labelling expenses may qualify toward establishing a domestic industry, such expenses are “not significant in relation to the money invested in manufacturing the tape,” especially considering that “only approximately [REDACTED] of the tapes are labeled in the United States. The rest arrive in the United States labeled.” (*Id.* at 114 (citing RX-0079C (SONYITC2-000486652) at 7).)

Second, with respect to facilities costs associated with building F activities, Staff asserts that “[n]one of the activities in the Bolingbrook facility involve the types of activities normally considered as part of a domestic industry. Instead they are related to shipping, receiving, storage, and labeling.” (*Id.* at 115 (citing CX-0971C at Q/A at 56).)

Third, as to Sony DADC’s Global Platform Service (GPS), Staff compares them to SOLA’s distribution, packaging, and labeling activities, and concludes that these activities “are neither qualitatively nor quantitatively significant.” (*Id.* at 115-116.)



**PUBLIC VERSION**

Fourth, Staff concludes that “the evidence does not show that [Sony DADC’s] transportation expenses are attributable to the Sony DI Products for purposes of satisfying the economic prong of the domestic industry requirement.” (*Id.* at 116.)

**3. SSOA**

Complainants indicate that SSOA includes █████ employees that “provide technical support and quality assurance work related to Sony’s LTO and other tape products.” (CIB at 137.) According to Complainants, one of these employees (*i.e.*, Mr. Sasaki) “spends approximately █████ percent of his time supporting Sony’s OEM LTO business” and the remaining time working for SOLA. (*Id.* (citing CX-0971C.36-39 and CX-0974C.21, 2).)<sup>21</sup> Based on this estimation and the fact that the Mr. Sasaki works on other non-DI LTO products, Complainants assert that “[f]or FY2015, Sony invested approximately █████ in labor and capital to support the Sony DI Products (using the allocations set forth above), and approximately █████ in fiscal year 2016 in labor and capital to support the Sony DI Products” where “[t]he full amount █████) can be attributed to the ’779 and ’331 Patents...” (*Id.* at 137-138 (citing CX-0971C.36-39 and CDX-0001C.0019-20).)

Respondents argue that SSOA’s expenses associated with Mr. Sasaki’s salary do not establish a domestic industry because “the evidence showed that Mr. Sasaki does not provide any technical customer service, and instead provides customer support to rectify order discrepancies; and has not provided any product evaluation services for Sony DI Products in the last three fiscal years.” (RIB at 116-117 (citing RX-0011C at Q/A at 130-144).) Respondents assert that Mr. Sasaki performed two functions relevant to the DI products: “(i) ‘customer support’ to rectify any ‘discrepancy between the number of orders and the numbers delivered or, hypothetically, the price was different ...’ and (ii) product evaluation for ‘when a new generation LTO is

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<sup>21</sup> Complainants do not appear to allocate any expenses █████.

**PUBLIC VERSION**

introduced.” (*Id.* at 121-122 (citing JX-0035C at 79:8-13 and 41:2-42:16).) According to Respondents neither of these activities establishes a domestic industry in the DI products because (i) “expenditures towards non-technical customer support are routinely excluded from economic prong analysis” and (ii) “there is no evidence that any expenditure towards product evaluation for Sony DI Products has occurred in the last two years.” (*Id.* at 117 (citing *Video Game Systems*, 2011 WL 6210524, at \*92-93 for the proposition that expenses incurred more than three years prior to the complaint should be excluded).)

Staff again relies on the same financial data cited by Complainants discussed above. (SIB at 116-117 (citing Sony PrHB at 220).) Staff acknowledges that “[t]echnical support is ordinarily considered an appropriate domestic industry expense,” but questions whether Mr. Sasaki’s work actually qualifies as “technical support.” (*Id.* at 117.) According to Staff, the evidence shows that Mr. Sasaki “provides customer sales support, such as dealing with discrepancies in price or quantity of tapes sold to customers” and that “[i]f a customer has technical problems with the product, those inquiries are referred by Mr. Sasaki to technicians in Japan.” (*Id.* (citing RX-0011C at Q/A at 136 (citing JX-0035C).) As such, Staff concludes that “[t]he evidence therefore does not show that [SSOA’s] investments are attributable to the Sony DI Products for purposes of satisfying the economic prong of the domestic industry requirement.” (*Id.*)

**4. Analysis**

The Commission has explained that “[t]he economic prong requirement exists to assure that domestic production-related activities, as opposed to those of a mere importer, are protected by the statute.” *Certain Male Prophylactic Devices*, Inv. No. 337-TA-546, Comm’n Op. at 39 (August 1, 2007). This distinction assesses, in part, the qualitative significance of an investment. *See Certain Printing and Imaging Devices and Components Thereof*, Inv. 337-TA-690, Commission Opinion at

PUBLIC VERSION

27 (Feb. 17, 2011) (explaining that “[T]he magnitude of the investment cannot be assessed without consideration of the nature and importance of the complainant’s activities to the patented products in the context of the marketplace or industry in question.”). However, such “qualitative factors alone are insufficient” to show that an investment is significant or substantial. *Lelo Inc. v. Int’l Trade Comm’n*, 786 F.3d 879, 885 (Fed. Cir. 2015). Rather, Section 337(a)(3) “requires a quantitative analysis to determine whether there is a ‘significant’ [or ‘substantial’] increase or attribution by virtue of the claimant’s asserted commercial activity in the United States.” *Id.* at 883.

In addition, for purposes of Section 337(a)(3), the Commission has determined that the term “significant” means “an assessment of the relative importance of the *domestic activities*.” *Certain Concealed Cabinet Hinges and Mounting Plates*, Inv. No. 337-TA-289, Comm’n Op. at 11 (Jan. 8, 1990) (emphasis added); *see also Certain Printing and Imaging Devices and Components Thereof*, Inv. 337-TA-690, Commission Opinion at 27 (Feb. 17, 2011) (explaining that in assessing significance, “[t]he Commission has also assessed the relative domestic contribution to the protected article by comparing complainant’s product-related domestic activities to its product-related foreign activities.”).

In *Certain Male Prophylactic Devices*, the Commission further noted that the 1988 Omnibus Trade and Competitiveness Act (i) codified existing Commission practice by adding subsections (A) and (B) to Section 337(a)(3) and (ii) added new subsection (C) (*i.e.*, “substantial investment in its exploitation, including engineering, research and development, or licensing”) which, according to its legislative history, “goes beyond ITC’s recent decisions in this area.” *Id.* (citing H.R. Rep. No. 40, 100<sup>th</sup> Cong., 1<sup>st</sup> Sess., pt. 1 at 157 (1987)). Immediately thereafter, the House Report states that “[t]his definition does not require actual production of the article in the

## PUBLIC VERSION

United States if it can be demonstrated that significant investment and activities of the type enumerated are taking place in the United States.” *Id.*

Within the above framework, the undersigned finds that the expenditures of the Sony subsidiaries fail to establish the economic prong of the domestic industry requirement under Section 337(a)(3)(B) because they are not qualitatively and quantitatively significant.<sup>22</sup>

First, the undersigned agrees with both Respondents and Staff that the Sony subsidiaries’ activities *vis-à-vis* the DI products are akin to those of a “mere importer” and are thus not quantitatively or qualitatively significant. Complainants argue that this position is incorrect because it relies on the faulty premise that Complainants “do[ ] not *fully* manufacture LTO-products in the US.” (CIB at 125 (emphasis added).) It is not, however, a question of whether Complainants “fully” manufacture the DI products in US; rather the salient issue is whether the Sony subsidiaries perform any manufacturing and/or perform any other significant qualifying activities in the United States sufficient to elevate them from being mere importers of the DI products.

The undersigned finds that the actions of the Sony subsidiaries do not contribute in any significant manner, if at all, to the manufacture the DI products. The evidence clearly shows that the DI products are fully manufactured in Japan unless one considers “special” labeling—where that labeling consists of adding [REDACTED] label to only approximately [REDACTED] of the imported DI products—to be a manufacturing process of sufficiently significant economic and financial impact to satisfy Section 337(a)(3)(B). (See RX-0011C at Q/A at 17-34, 42-53, 78-87 and 90-115.) The undersigned finds that it does not. Nor does the undersigned find the “special” labeling to be a significant non-manufacturing or “value added” activity. This point is particularly true where, as here, [REDACTED]

[REDACTED]. (See JX-0030C at

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<sup>22</sup> Respondents did not assert that the expenditures of the Sony subsidiaries satisfied either of Section 337(a)(3)(A) or Section 337(a)(3)(C).

PUBLIC VERSION

153:9-155:15, 157:2-7; RX-0011C at Q/A at 42; RX-0079C (SONYITC2-000486652) at 7.) Put differently, the undersigned does not find the application of a *different* label on only approximately ■ of the imported DI products to be a quantitatively or qualitatively significant activity or expense. Similarly, the undersigned finds that the domestic support activities of the Sony subsidiaries—such as sales, warehousing and distribution—do not constitute significant “domestic production-related activities.” These sorts of activities, standing on their own, do not have a direct bearing on the practice of the DI products given that those products are manufactured entirely outside of the United States. *See, e.g., Certain Printing and Imaging Devices and Components Thereof*, Inv. 337-TA-690, Commission Opinion at 30 (Feb. 17, 2011).

Complainants take much exception to the Sony Subsidiaries being characterized as a “mere importers” despite the fact the DI products are not manufactured in the United States. Indeed, Complainants strongly criticize Respondents for their emphasis on this fact because it is rooted in “pre-1988 Commission authority” that Complainants contend is “outdated and irrelevant.” (CRB at 55.) That is simply not correct. The Commission Opinion in *Certain Male Prophylactic Devices*, Inv. No. 337-TA-546 cited above, for example, is dated August 1, 2007. Thus, the Commission has maintained post-1998 that the purpose of the economic prong remains to distinguish between “domestic production-related activities” that satisfy the statute and the actions of “a mere importer” notwithstanding the 1988 Omnibus Trade and Competitiveness.

Even assuming *arguendo* that the 1988 amendments to Section 337 expanded the types of activities that can be properly considered Section 337(a)(3)(B) in the manner asserted by Complainants, their evidence still lacks significance to establish the economic prong where, as here, the imported DI products do not require any further processing to be saleable to the consumer. (*See* RX-0011C at Q/A at 41.) In *Certain Male Prophylactic Devices* the Commission

## PUBLIC VERSION

explained that “[p]rior investigations instruct that if the product is not saleable without the domestic activities, this factor supports finding a domestic industry.” *Certain Male Prophylactic Devices*, Inv. No. 337-TA-546, at 42. The Commission explained that in another Investigation “the economic prong was held to be satisfied even though the entire patented process for the drug in question was practiced overseas by one co-complainant” because “the drug as imported in bulk form was not usable until it was converted into dosage form at domestic facilities (owned by the second co-complainant).” *Id.* (citing *Certain Diltiazem Hydrochloride and Diltiazem Preparations*, Inv. No. 337-TA-349, USITC Pub. 2902 (June 1995), Initial Determination at 133-45). The Commission came to a similar decision in *Certain Male Prophylactic Devices* because “the bulk condoms [are] not useable or saleable as imported, the lubrication added in the United States is directed to the practice of certain patent claims....” *Id.* Put differently, the patented products could not be exploited without the domestic activities and their attendant costs.

Here, the opposite is true; the evidence shows that the DI products are useable by consumers upon importation. (See RX-0011C at Q/A at 41.) The undersigned notes that Complainants argue that “custom-labeling” makes the DI products “saleable.” (CRB at 57.) Complainants, however, are conflating “saleable” with “marketable.” The evidence shows that only approximately [REDACTED] of the DI products receive “custom” labels while the remainder of the DI products arrives with labels. (See JX-0030C at 153:9-155:15, 157:2-7; RX-0011C at Q/A at 42; RX-0079C (SONYITC2-000486652) at 7.) It certainly cannot be the case that Complainants are arguing that the remaining [REDACTED] or so of the DI products are not “saleable” to or “useable” by consumers. Indeed, the trial testimony Complainants cites regarding the DI products being “saleable” due to “custom labeling” merely provides “that Sony’s customers demand custom-labeling (barcodes) in order to manage, administer, and identify LTO tapes that contain specific information.” (CRB at 57 (Yamaguchi Tr.

## PUBLIC VERSION

at 87:12-21 and 97:25-98:8.) This testimony does not address the usability of the DI products; it only speaks to post-manufacturing steps to make a subset of the imported DI products more desirable—and therefore perhaps easier to market—to some consumers.

In view of the foregoing, therefore, the undersigned finds that the expenditures of the Sony subsidiaries are quantitatively and qualitatively insignificant and therefore fail to establish alone or in conjunction with the IBM expenses (discussed below) the economic prong of the domestic industry requirement under Section 337(a)(3)(B).

### B. IBM

Complainants contend that IBM is a licensee of the asserted patents and that the economic prong is satisfied based upon IBM's 3592 family of products.<sup>23</sup> (CIB at 138.) Complainants assert that they have established the economic prong of the domestic industry requirement under Section 337(a)(3)(B) because "IBM has made and continues to make investments in the employment of labor and capital in support of its 3592 products. These investments generally relate to labor costs associated with customer service, field work and research, development and commercialization of the IBM DI Products." (*Id.* at 138-139 (citing CX-0978C.14-16).) Complainants alternatively contend that these expenses establish the economic prong under Section 337(a)(3)(C). (*Id.* at 141-142.)

Complainants argue that the DI products include both 3592 tapes *and* the 3592 drives. (*Id.* at 138.) The asserted patents, however, do not claim a tape drive but are instead directed to "a data storage cartridge" (the '779 patent) and "a dual-layer magnetic recording medium" (the '331 patent). Complainants nevertheless argue that the 3592 drives also constitute a part of the DI products and contribute to the associated domestic industry because the "3592 tape and drive

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<sup>23</sup> There is a dispute between the private parties as to the scope of that license (which will be discussed in more detail below).

**PUBLIC VERSION**

products [ ] operate as two interrelated components of a single data storage system, and neither the tape nor the drive product can function independently without the other” and the “3592 tape media products that meet the asserted claims of the ‘779 and ‘331 Patents cannot be used without a 3592 tape drive—*i.e.*, the drive is central to enabling IBM to exploit the patented technology of these 3592 tape media products.” (*Id.* at 139 (citing CX-978C.5; JX-0012C.92-93; and JX-0015C.26-27; *see also* Vander Veen, Tr. 583:14-22).)

Complainants assert that “[d]ue to the interoperability between 3592 tape and drive products, IBM cannot attribute its IBM’s engineering and research and development investments solely to tape cartridges as compared to tape drives.” (*Id.* (citing CX-978C.22).) As such, Complainants offer the following approximate domestic labor and capital expenses associated with the 3592 tape and 3592 drive products:

	<b>Maintenance Operations<sup>24</sup></b>	<b>Research and Development<sup>25</sup></b>
<b>'779 Patent</b>	██████████	██████████
<b>'331 Patent</b>	██████████	██████████
<b>Subtotal</b>	██████████	██████████
<b>Total</b>	██████████	

(*See Id.* at 141 (citing CX-0971C.46-47; CDX-0001C.21); 143-144 (citing CX-0971C.51; CDX-0001C.0023) and 145.) Thus, Complainants ascribe ██████████ in expenses for labor associated with maintenance and operations and ██████████ in expenses for labor associated with research and development for a total of ██████████ in expenses. On a per patent basis, Complainants ascribe ██████████ to the '779 patent and ██████████ to the '331 patent. Although Respondents

<sup>24</sup> Estimated from 2014 through March 2017. (CIB at 141 (citing CX-0971C.46-47; CDX-0001C.21).)

<sup>25</sup> Estimated from 2012 to 2016. (CIB at 143-144 (citing CX-0971C.51; CDX-0001C.0023).)



PUBLIC VERSION

contest whether the 3592 tape drives should be included in assessing the economic prong. Complainants note that neither Respondents nor Staff has challenged Complainants' allocation methodologies of expenses attributed to "labor and capital associated with maintenance operations" and "labor and capital associated with research and development." (*Id.* at 140 and 143.)

Respondents disagree that Complainants can rely on IBM's 3592 tapes and 3592 tape drive products to establish the economic prong of the domestic industry requirement. (RIB at 129.) In fact, Respondents argue [REDACTED]

[REDACTED]  
[REDACTED]” (*Id.* at 129-130 (citing RX-0569C at Q/A at 14; JX-0012C at 90:9-23; 92:10-93:14; JX-0015C at 26:15-18).) Respondents also contend Complainants' reliance on IBM's 3592 drives is misplaced because (i) they are made in China and (ii) are directed to products not covered by any of the asserted patents. (*Id.* at 130 and 136-140.)

Respondents also argue that the license between Complainants and IBM—as written—does not cover IBM's 3592 tapes, and therefore prevents Complainants from relying on IBM's 3592 tapes to establish the economic prong. (*Id.* at 132.) According to Respondents, [REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

<sup>26</sup> Respondents contend that several courts interpreted clauses in other IBM contracts similar to the [REDACTED] as applying only to products that IBM did not have manufactured by others and that IBM did not design. (RIB at 133.)

PUBLIC VERSION

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]” (*Id.* (emphasis in original).) Respondents dispute Complainants’ contention that the reference to [REDACTED] in § 2.2.4 is a typographical error (and should instead refer to [REDACTED]), and further argue that even if there is an error it was not timely corrected so as to be applicable in this Investigation. (*Id.* at 134-136.)

Respondents also argue that Complainants cannot rely on IBM’s research and development expenses to establish the economic prong under Section 337(a)(3)(B). (*Id.* at 140-142; RRB at 68-69.) Respondents contend that such expenses can only be properly credited under Section 337(a)(3)(C), and that by asserting them under subsection (B) Sony is attempting “to avoid the exacting requirements of prong (C)—requiring a nexus between domestic activities and the claims, not just the domestic industry article.” (RIB at 141 (citing *Certain Integrated Circuit Chips & Prods. Containing the Same*, Inv. No. 337-TA-859, Comm’n Op. at 36-38 (Aug. 22, 2014) as holding that “exploitation [under] (a)(3)(C) must refer to the patent and not to the articles” and that “Commission requires that the complainant establish a nexus between the asserted patent and the U.S. investment in its exploitation.”).)

With respect to the license, [REDACTED]

[REDACTED]. (CIB at 141 n. 46 (citing CX-0975C.44-47); *see also* CX-0975C at Q/A at 65-73, 77 and 78.) In this regard, Complainants offered evidence from

[REDACTED]. (See CX-0975C at Q/A at 65-78.) As such, Complainants contend that they can rely on IBM's expenses in order to satisfy the economic prong.

Staff takes the position that Complainants and IBM have a valid license. (SIB at 117-118.) As such, Staff argues that the IBM investments—including those directed to the 3592 drives—establish the economic prong. (*Id.*) Staff contends, citing Commission precedent, that the 3592 tape drives should also be considered a DI product because “the tapes and drives, although sold separately, are not compatible with other devices or tapes.” (SIB at 120 (citing CX-0978C at Q/A at 20).) Staff then asserts that IBM's investments in labor and capital for maintenance and for research and development “relating to the '137 patent” are qualitatively and quantitatively significant. (*See Id.* at 121, 123; SRB at 31.)

Staff does not draw the same conclusion with respect to the '779 patent or the '331 patent. Rather, Staff notes that “[b]ecause the '137 patent requires both a tape and a tape machine, IBM's investments are more closely tied to this patent than to the '779 or '331 patents. The evidence therefore shows that IBM's investments are attributable to the '137 patent, but not the '779 or '331 patents” and that “[t]he '137 patent requires both a tape and tape drive, and so IBM's investments in the tape drives relate to the '137 patent. The '779 and '331 patents relate only to the tapes and so tape drive investments are too attenuated to satisfy the economic prong for those two patents.”<sup>27</sup> (SIB at 123 n. 45; SRB at 30 n. 20.) Thus, Staff's conclusion that “[t]he evidence therefore shows that IBM's investments in licensed products satisfy the economic prong of the domestic industry requirement” is apparently limited only to the '137 patent which is no longer part of this

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<sup>27</sup> These conclusions seem at odds with Staff's contention that the 3592 tape drives are DI products because they can only be used in conjunction with 3592 tapes. It is unclear why Staff makes that argument only with respect to the '137 patent which explicitly recites a tape drive apparatus and not with respect to the '779 and '331 patents even though 3592 tapes covered by those would necessarily need to be used with 3592 drives.

PUBLIC VERSION

Investigation.<sup>28</sup> Staff does not argue or otherwise assert that the IBM investments establish the economic prong with respect to the '331 patent and/or the '779 patent. Staff also notes that “the evidence does not show that Sony has proven a nexus between the patented features and the expenditures required by subsection (C).” (SIB at 123 n. 44.)

1. Analysis of Sony-IBM License

The crux of the dispute regarding the Sony-IBM license is whether [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (See CIB at 137 n. 46.) As discussed above, Respondents contend that the Sony-IBM license as written does not cover the IBM DI products, and that the purported typographical error cannot be properly corrected (*i.e.*, reformed under New York law) so as to render it effective in this Investigation. (RIB at 131-136.)

Respondents contend that “[i]n essence, Sony is asking the CALJ to rewrite the IBM agreement under what the Staff correctly refers to as ‘the exacting standard of New York law.’” (RRB at 59.) The undersigned disagrees. The undersigned is not being asked to rewrite or reform the contract. Rather, the undersigned is tasked with *interpreting* how this contract would be treated under the laws of New York.

As noted by Staff, under New York law, reformation is proper “[w]hen an error is not in the agreement itself, but in the instrument that embodies the agreement, ‘equity will interfere to compel the parties to execute the agreement which they have actually made, rather than enforce the instrument in its mistaken form.’” (SRB at 29 (citing *Hadley v. Clabeau*, 555 N.Y.S.2d 951 (4th Dept. 1990) (internal citations omitted)).) Indeed, New York law also provides

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<sup>28</sup> See note 20, *supra*.

**PUBLIC VERSION**

that “[w]here there is no mistake about the agreement, and the only mistake alleged is in the reduction of that agreement to writing, such mistake of the scrivener, or of either party, no matter how it occurred, may be corrected” and that “[t]he principle thus formulated is applicable where the parties have a real and existing agreement on particular terms and subsequently find themselves signatories to a writing which does not accurately reflect that agreement, as opposed to a situation where there is a mistake as to the agreement itself on the part of one of the parties.” *Harris v. Uhlenhof*, 24 N.Y.2d 463, 467 (1969).

The undersigned is unwilling to interpret the Sony-IBM license other than how it is written. Given that a significant evidentiary component of Complainants’ domestic industry case relied on the existence and operation of the license, the undersigned determines that the license should therefore be interpreted the way it was initially brought to this Investigation. Conversely, if as Complainants now contend that license is at least partially defective, then that defect should have been corrected as part of Complainants’ due diligence *before* filing the Complaint in this Investigation (especially in view of the significant reliance Complainants were going to be placing on it). Thus, the undersigned concludes that the Sony-IBM contract does not cover the IBM domestic industry products and that those products cannot be relied upon by Complainants for establishing the economic prong of the domestic industry requirement in this Investigation.

However, in the event that the Commission decides that the evidence shows that the Sony-IBM would be ripe for correction via reformation and thus cover the IBM domestic industry products, the undersigned provides the following analysis of the IBM domestic industry products *vis-à-vis* the economic prong of the domestic industry requirement.

## PUBLIC VERSION

### 2. Analysis of Unpatented Tape Drives

Assuming *arguendo* that the Commission determines that the IBM domestic industry products should be considered with respect to the economic prong, Respondents and Staff dispute that the 3592 tape drives constitute a DI product with respect to the '779 and '331 patents. Respondents and Staff argue that the 3592 tape drives are not DI products because neither the '779 patent nor the '331 patent claims a tape drive. Complainants contend that the 3592 tape drives are DI products because the 3592 tape drives and 3592 tapes cannot function independently from one another.

As a general matter, “the domestic industry is defined by the patented article.” *Video Game Systems & Wireless Controllers & Components Thereof*, Inv. No. 337-TA-770, Comm’n Op. at 66 (Oct. 28, 2013)). Clearly, the 3592 tape drives are not the patented article of the '779 patent or the '331 patent. However, “[t]he Commission has held that in certain circumstances, the realities of the marketplace require a modification of the principle that the domestic industry is defined by the patented article.” *Video Game Systems*, Inv. No. 337-TA-770, Comm’n Op. at 66 (citing *Certain Modular Structural Systems*, Inv. No. 337-TA-164, Comm’n Op. at 12 (June 1984)). Thus, the question here is whether a modification of that principle is warranted with respect to the 3592 tape drives. Although the facts of this Investigation present a very difficult question, the undersigned finds that such a modification would be warranted.

As noted above, there is Commission precedent establishing that the DI products are limited only to the article as claimed in circumstances similar to those presented here. For example, in *Certain Modular Structural Systems*, the patented article was a connector for use in assembling structures. *Certain Modular Structural Systems*, Inv. No. 337-TA-164 (Comm’n Op.), 0084 WL 951886 (June 1984). The Complainant had argued “that the extrusions and connectors,

## PUBLIC VERSION

when assembled, form a 'system' (the 'modular structure'), stating that the connectors are essential to the modular structure, even though forming only a small percent of its price" and "that the value added to the connectors includes the value of the extrusions themselves and also that significant value is added to the patented connector per se by the following: 'purchasing effort', 'freight', 'customs duties and costs', 'inspection and quality control', 'installation and assembly', and 'profit.'" *Id.* at \*5 (emphasis in original). In rejecting that argument, the Commission reversed the ALJ's finding that an industry existed because "the connectors are a critical component of a system which is otherwise substantially manufactured domestically." *Id.* at \*6. In doing so, the Commission indicated that the reason for doing so was because "the industry must be defined in terms of the patented connector, a separate article of commerce for which the nature and significance of FSD's activities in the United States are insufficient to support a finding that there is an industry 'in the United States' with respect thereto." *Id.*

Complainants' arguments are similar to those set forth in *Certain Modular Structural Systems*. Complainants expressly argue that the 3592 tapes and 3592 tape drives form a system despite the fact that neither of the '779 patent nor the '331 patent claims such a system. (CIB at 138-139.) Complainants also argue that the 3592 tapes and 3592 drives are critical to one another given that they cannot operate independent of one another. (CIB at 138.) Thus, a good argument can be made based on the outcome of *Certain Modular Structural Systems* that the 3592 tape drives do not count as DI products because they are not the claimed subject matter of the asserted patents despite playing a key role in the use of the patented articles.

The Commission has provided for exceptions to the general rule pertaining to DI products being "patented articles" where, for example, "the patented article is not itself an actual article of commerce, but is physically incorporated as a component in a downstream article of

**PUBLIC VERSION**

commerce.” *Video Game Systems*, Inv. No. 337-TA-770, Comm’n Op. at 66. The Commission explained that “where the imported product is a component of a complete downstream product, the relevant domestic industry under the economic prong may, under appropriate circumstances depending on the realities of the marketplace, be defined in terms of a downstream product.” *Video Game Systems*, Inv. No. 337-TA-770, Comm’n Op. at 67.

An example of a protected article that is (i) not an article of commerce but (ii) incorporated in a downstream product is “imported copyrighted software components from abroad and incorporated [ ] into personal computers assembled in the United States” where the “software components were not sold as separate articles of commerce and were essential components of the domestically assembled computers.” *Video Game Systems*, Inv. No. 337-TA-770, Comm’n Op. at 66 (citing *Certain Personal Computers and Components Thereof*, Inv. No. 337-TA-140). Thus, in *Video Game Systems*, the Commission determined that the DI products extended beyond the patented “magic wand devices” to include certain components (*i.e.*, “electronic receivers within the MagiQuest effect, and the relevant main software that coordinate these effects”) of the devices they attached to, but not the entire devices. *See Video Game Systems*, Inv. No. 337-TA-770, Comm’n Op. at 68 and 70. In this regard, the Commission indicated that the additional components that could be considered along with the patent articles as DI products were those that enable exploitation of the claimed subject matter. *Video Game Systems*, Inv. No. 337-TA-770, Comm’n Op. at 68 and 70.<sup>29</sup> The Commission also indicated that an “important” factor is whether the alleged domestic activities “have a direct relationship to exploitation of the patented

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<sup>29</sup> Respondents summarize it very well: “in *Video Game Systems*, the Commission rejected the complainant’s attempt to extend the domestic industry to include an entire system and, instead, *limited the domestic industry to components within the system that were required to enable the claimed functionality.*” (RIB at 137 n. 74 (emphasis added) (citing *Video Game Systems & Wireless Controllers & Components Thereof*, Inv. No. 337-TA-770, Comm’n Op. at 6-7, 67-68 (Oct. 28, 2013)).)



## PUBLIC VERSION

technology.” *Id.* at 67. This conclusion was consistent with the Commission’s opinion in *Certain Modular Structural Systems* which provided that “a longstanding practice of defining the industry in an intellectual-property-based section 337 case in terms of the article or articles *resulting from the exploitation of the involved intellectual property right.*” *Certain Modular Structural Systems*, 0084 WL 951886 at \*5 (emphasis added).

Here, the 3592 tape drives are not, strictly speaking, necessary to exploit the claimed subject matter of the ’779 patent and/or the ’331 patent. The claimed subject matter of each can be practiced without a tape drive given that the ’779 patent claims “a data storage cartridge” and the ’331 patent claims “a dual-layer magnetic recording medium.” Absent claims directed to a tape drive, it is axiomatic that one can manufacture and sell tapes meeting the claims of the asserted patents without a tape drive. Indeed, one could infringe the claims of the asserted patents irrespective of whether they are used in conjunction with a tape drive. Thus, one can exploit the claimed subject matter of the asserted patents via the manufacture and sale of tapes (*e.g.*, the 3592 tapes) without the associated drives.<sup>30</sup> As such, this fact also supports finding that the 3592 tape drives do not count as DI products because they are not, strictly speaking necessary to exploit the ’779 patent and/or the ’331 patent.

The Commission has instructed, however, that the identification of domestic industry articles need not to be performed in a vacuum. Rather, the Commission has indicated that such a determination can look at other economic factors based on the “realities of the marketplace” depending upon the unique facts of the situation, but should not stray too far afield so as to include activities “far removed from the technology protected by the patent.” *Video Game*

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<sup>30</sup> This conclusion dovetails with Respondents’ arguments that the ’779 patent and the ’331 patent do not claim a “system,” that 3592 tapes and 3592 tape drives are not sold together and that the “3592 cartridges and drives are not downstream products of one another, nor are they combined into a downstream article of commerce.” (RIB at 136-140.)

PUBLIC VERSION

*Systems*, Inv. No. 337-TA-770, Comm'n Op. at 67; see also *Certain Integrated Circuit Chips and Products Containing The Same*, Inv. No. 337-TA-859, Comm'n Op. at 36 (Aug. 22, 2014).

Although the undersigned found above that it is *possible* to exploit the '779 and '331 patents absent the 3592 tape drives, the undersigned finds that the "reality of the marketplace" is that they would not be so exploited. The evidence shows that the 3592 tapes cannot be utilized without a 3592 tape drive and a 3592 tape drive does not perform operations on any tape other than a 3592 tape. Thus, a mutually exclusive operational relationship exists between the 3592 tapes and the 3592 tape drives regardless of whether that relationship is expressly described as a "system" in the asserted patents or whether they are sold and/or packaged together. As discussed previously, in *Video Game Systems* the Commission found that the DI products included non-patented components "which enable [Complainant] to exploit the technology of the claimed toy wands." *Video Game Systems*, Inv. No. 337-TA-770, Comm'n Op. at 68. In *Video Game Systems*, the wands could not be exploited absent certain electronic receivers and software of the devices they attached to. See *Video Game Systems*, Inv. No. 337-TA-770, Comm'n Op. at 70. The situation here is similar; as a practical matter there would be no point or purpose in purchasing a memory storage tape (regardless of whether it was covered by the '779 patent and/or the '331 patent) to which data could not be written or from which data could not be retrieved. Thus, the undersigned finds that the "realities of the marketplace" dictate that tapes of the '779 patent and/or the '331 patent cannot be "exploited" absent their use in conjunction with the non-patented 3592 tape drives. Accordingly, and assuming *arguendo* that the Commission determines to include the IBM domestic industry with respect to the economic prong in the first instance, the undersigned finds that the expenses associated with the non-patented 3592 tapes

**PUBLIC VERSION**

should be considered with respect to satisfying the economic prong of the domestic industry requirement based upon the unique facts of this Investigation.

**3. Analysis of Research and Development Under Section 337(a)(3)(B)**

Respondents contend that IBM's research and development expenses cannot be relied upon to establish the economic prong under Section 337(a)(3)(B). (RIB at 140-142.) Respondents argue that because "research and development" expenses are mentioned only in subsection (C) that such expenses can only be considered under that subsection which in turn further requires establishing "a nexus between the asserted patent and the U.S. investment in its exploitation." (RIB at 140-141 (citing *Certain Integrated Circuit Chips & Prods. Containing the Same*, Inv. No. 337-TA-859, Comm'n Op. at 36-38).) Respondents further argue that subsection (C) would be rendered redundant with subsections (A) and (B) if research and development expenses could be allocated under subsections (A) and/or (B). (*Id.* at 141.)

The undersigned disagrees with Respondents that research and development expenses are the exclusive province of subsection (C) for several reasons. First, merely because research and development expenses are expressly mentioned only in subsection (C) does not, standing alone, render them excluded from consideration under subsections (A) and/or (B). In that regard, Respondents do not cite any authority or legislative history to support their contention that research and development expenses can only be considered under subsection (C). Second, as will be discussed shortly, there is substantial Commission precedent indicating that research and development expenses can be considered under subsection (B).

Second, Commission precedent indicates that research and development expenses can be allocated under subsection (B). In *Certain Ground Fault Current Interrupters*, the Commission permitted research and development expenses to be considered under subsection (B). *Certain*

**PUBLIC VERSION**

*Ground Fault Current Interrupters and Products Containing the Same*, Inv. No. 337-TA-739, Comm'n Op. at 80 (June 11, 2012). In doing so, the Commission explained that "Leviton presented domestic industry evidence organized according to 'articles protected by the patent' when evaluating plant, equipment, labor, and capital expenses," that Leviton GFCIs were articles that practiced the asserted patents and that "virtually all research and development of the Leviton GFCIs occurs in the United States." *Id.* at 78-80.

Citing *Certain Ground Fault Current Interrupters*, the Commission arrived at a similar conclusion in *Certain Electronic Imaging Devices*, Inv. No. 337-TA-850, Comm'n Op. at 92-95. (April 21, 2014). In fact, the Commission addressed this issue directly. *Id.* at 92-93 ("In other words, Respondents essentially argued that Apple's research and development investments should be considered under subsection 337(a)(3)(C) and not under subsection 337(a)(3)(B). The Commission has made no such requirement in the past."). For example, the Commission indicated that expenses for labor and capital for research and development could be considered under subsection (B) where "Flashpoint provided individual head counts for Apple engineers working on research and development for the iPhone 4S and iPhone 5 in the United States." *Id.* at 93. The Commission further indicated, with respect to Flashpoint's licensee Motorola, that "Motorola, has made significant investment in labor with respect to the '471 patent and the '538 patent under subsection 337(a)(3)(B)" that "include[es] expenditures specifically dedicated to Motorola engineers locating (sic.) in U.S. facilities engaging in research and development related to the Motorola domestic industry products." *Id.* at 93-94.

More recently, as noted by Staff, the Commission credited research and development work under subsection (B) in *Certain Marine Sonar Imaging Devices, Including Downscan and Sidescan Devices, Products Containing the Same and Components Thereof*, Inv. No. 337-TA-921,

**PUBLIC VERSION**

Comm'n Op. at 54, 64 (Jan. 6, 2016). As explained by Staff, in *Certain Marine Sonar Imaging Devices* the Commission held that “the record evidence shows that Navico’s expenditures from 2009 to 2014 of approximately [ ] in the domestic design, development, service, repair, and support of the LSS-1 products constitute a significant employment of labor and capital under section 337(a)(3)(B).” (SIB at 122.) In doing so, the Commission again cited evidence of record that indicating that “the research and development [was] performed on products practicing each of the asserted patents, [that] resulted in the creation of a new products category that consumers found valuable” and expressly noted that “[t]he record also shows that Navico conducts the vast majority of its research and development in the United States.” *Id.* at 63-64.

As can be seen, the Commission has consistently allowed research and development expenses to be included under subsection (B) when and where those expenses are (i) related to the *domestic industry article* protected by the patent and (ii) where those expenses occur in the United States.<sup>31</sup> To be clear, the legislative history of subsection (C) describes that the “activities of the type enumerated are taking place in the United States,” but unlike subsection (B) requires a “nexus between the claimed investment and the *asserted patent*, regardless of whether the domestic-industry showing is based on licensing, engineering, or research and development. *Certain Integrated Circuit Chips*, No. 337-TA-859, Comm’n Op. at 37-38 (emphasis added). In other words, a complainant must proceed by way of subsection (C)—and thus be required to establish a nexus—when it is necessary for the complainant to tether its expenses to the *asserted patent* as opposed to a *domestic industry product*.

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<sup>31</sup> IBM’s research and development expenses occurred in the United States. (See CX-0125C.)

## PUBLIC VERSION

Thus, based upon the above-review of Commission precedent, the undersigned finds that under the facts of this case that IBM's research and development investments can be considered under subsection (B) in order to establish the economic prong of the domestic industry requirement.

#### 4. Analysis of Research and Development Under Section 337(a)(3)(C)

As discussed above, the undersigned has found that the 3592 tapes and the 3592 tape drives could constitute the domestic industry products if the Commission elects to interpret the Sony-IBM license differently than the undersigned. In the case of the 3592 tape drives, the undersigned arrived at that conclusion because the 3592 tape drives are necessary to "exploit" the Asserted Patents and despite the fact that the 3592 tape drives are not claimed or otherwise covered by the Asserted Patents. *See Certain Integrated Circuit Chips*, No. 337-TA-859, Comm'n Op. at 36 and *Video Game Systems*, Inv. No. 337-TA-770, Comm'n Op. at 68). At the same time, Commission precedence "demonstrates that a complainant's evidence of its investment in a protected article that practices the patent ordinarily also can support the inference that the investment was itself an exploitation of the patent." *Certain Integrated Circuit Chips*, Inv. No. 337-TA-859, Comm'n Op. at 42. Thus, the question is whether that "ordinary inference" applies where, as here, the domestic industry products include non-patented articles (and their associated research and development expenses) necessary to "exploit" the asserted patents.

Given that the undersigned believes that the 3592 tape drives can be considered a domestic industry product because they are necessary to "exploit" the asserted patents, it follows that investments associated with the research and development of those tape drives is an "investment [that is] itself an exploitation of the patent." Any other conclusion would be inconsistent with the undersigned's finding with respect to subsection (B). As such, the undersigned finds that under

## PUBLIC VERSION

the facts of this case that IBM's research and development investments can be considered under subsection (C) in order to establish the economic prong of the domestic industry requirement.

### 5. Analysis of the Significance of IBM's Investments

Complainants contend that IBM's forgoing expenses are qualitatively and quantitatively significant. (CIB at 145-149.) Among other things, Complainants contend that IBM's "investments up to the filing of the complaint totaled approximately [REDACTED] for the '779 Patent [and] approximately [REDACTED] for the '331 Patent...." (*Id.* at 147.) Complainants also assert that the costs of the DI products associated with the '779 patent was approximately [REDACTED] and the costs of the DI products associated with the '331 patent was approximately [REDACTED]. (*Id.* (citing JX-0073C, JX-0097C, JX-0099C, CX-0233C, JX-0112C, and JX-0113C).)

Respondents further argue IBM's expenses should not be considered at all because they are not covered by the Sony-IBM license. (RIB at 129 and 146.) Alternatively, Respondents assert that "[i]f IBM's domestic activities were covered by the IBM Agreement, it could only be attributed to the '137 Patent." (*Id.* at 146; *see also id.* at 147-148.)<sup>32</sup>

Staff did not address IBM's expenses with respect to either the '779 patent or the '331 patent because it believed the relationship between those patents and the 3592 tape drives to be too attenuated. (SIB at 13 n. 45 and SRB at 30 n. 20.)

Assuming the Commission determines that the Sony-IBM license covers the IBM domestic industry products, the undersigned finds that the evidence shows that the labor and capital investments on maintenance operations associated with the IBM DI Products from 2014 through March 2017 was approximately [REDACTED] for the '779 patent and approximately [REDACTED] for the '331 patent. (*See* CX-0971C at Q/A at 189; *see also id.* at Q/A at 167-179

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<sup>32</sup> As noted above, the '137 patent has been withdrawn from this Investigation.

PUBLIC VERSION

and 181-190.) The evidence further shows research and development and technical support expenses associated with the IBM DI Products from 2012 through 2016 was approximately [REDACTED] for the '779 patent and approximately [REDACTED] for the '331 patent. (See CX-0971C at Q/A at 207; see also *id.* at Q/A at 167-179 and 191-206 and 208-211.) Thus, combined expenses for the '779 patent and the '331 patent are approximately [REDACTED] and [REDACTED], respectively. The evidence also demonstrates that the cost of the DI products associated with the '779 patent was approximately [REDACTED] and the cost of the DI products associated with the '331 patent was approximately [REDACTED]. (See CX-0971C at Q/A at 226.) Based on these figures, it is possible to approximate the percentage of IBM expenses related to the DI products as a function of their costs:

	<b>IBM's DI Expenses Combined<sup>33</sup></b>	<b>DI Cost</b>	<b>Appx. Percentage</b>
	[REDACTED]	[REDACTED]	[REDACTED]
<b>'779 Patent</b>	[REDACTED]	[REDACTED]	[REDACTED]
<b>'331 Patent</b>	[REDACTED]	[REDACTED]	[REDACTED]
<b>Combined</b>	[REDACTED]	[REDACTED]	[REDACTED]

Thus, if the Commission determines to consider these expenses with respect to the economic prong, the undersigned finds these investments to be quantitatively significant and/or quantitatively substantial both in absolute dollar amounts with respect to each of the asserted patents as well as a percentage of the DI cost attributable to each of the asserted patents. That these investments, in part, led to a proprietary storage format for IBM further supports a finding that they are qualitatively significant as well. (See CX-0971C at Q/A at 270; CX-0978C at Q/A at 16-25.)

<sup>33</sup> Complainants' expert performed this same type of analysis separately for IBM's labor and capital investments on maintenance operations and research and development and technical support expenses. (See CX-0971C at Q/A at 222-237.)



**PUBLIC VERSION**

**C. Summary**

As set forth above, the undersigned has determined (i) that the expenditures of the Sony subsidiaries are quantitatively and qualitatively insignificant and therefore fail to establish alone or in conjunction with the IBM expenses the economic prong of the domestic industry requirement under Section 337(a)(3)(B) and (ii) that the IBM domestic industry products are not covered by the IBM domestic industry products and therefore those products cannot be relied upon by Complainants for establishing the economic prong of the domestic industry requirement in this Investigation. Accordingly, the undersigned finds that Complainants have failed to establish the economic prong of the domestic industry requirement with respect to the asserted patents.

## PUBLIC VERSION

### VII. CONCLUSIONS OF LAW

1. The Commission has personal jurisdiction over the parties, and subject-matter jurisdiction over the accused products.
2. The importation or sale requirement of section 337 is satisfied as to all Respondents.
3. Respondents do not infringe any asserted claim of U.S. Patents Nos. 6,345,779 and 7,115,331.
4. Asserted claims 1-4 of U.S. Patent No. 6,345,779 are invalid under 35 U.S.C. §102 as anticipated.
5. Asserted claims 1-6 of U.S. Patent No. 6,345,779 are invalid under 35 U.S.C. §103 as obvious.
6. The asserted claims of U.S. Patent No. 7,115,331 are not invalid under 35 U.S.C. §102 as anticipated.
7. The asserted claims of U.S. Patent No. 7,115,331 are not invalid under 35 U.S.C. §103 as obvious.
8. The asserted claims of U.S. Patent No. 7,115,331 are not invalid under 35 U.S.C. §112 as indefinite.
9. The technical prong of the domestic industry requirement for U.S. Patent No. 6,345,779 has not been satisfied.
10. The technical prong of the domestic industry requirement for U.S. Patent No. 7,115,331 has been satisfied.
11. The economic prong of the domestic industry requirement has not been satisfied for U.S. Patents No. 6,345,779.
12. The economic prong of the domestic industry requirement has not been satisfied for U.S. Patent No. 7,115,331.

PUBLIC VERSION

**VIII. RECOMMENDED DETERMINATION ON REMEDY & BOND**

The Commission's Rules provide that the administrative law judge shall issue a recommended determination concerning the appropriate remedy in the event that the Commission finds a violation of section 337, and the amount of bond to be posted by respondents during Presidential review of the Commission action under section 337(j). *See* 19 C.F.R. § 210.42(a)(1)(ii).

**A. Limited Exclusion Order**

Under section 337(d), the Commission may issue a limited exclusion order ("LEO") directed to a respondent's infringing products. 19 U.S.C. §1337(d). A limited exclusion order instructs the U.S. Customs Service to exclude from entry all articles that are covered by the patent at issue that originate from a named respondent in the investigation. *See Fuji Photo Film Co. Ltd. v. Int'l Trade Comm'n*, 474 F.3d 1281, 1286 (2007).

Complainants argue that, "[b]ecause Fujifilm has violated Section 337 through their importation of infringing magnetic tape cartridges and components, the Commission should issue a limited exclusion order against any such product imported by or on behalf of Fujifilm and its affiliates, parents, subsidiaries, and/or other related business entities, or its successors or assigns.." (CIB at 154.) In particular, Complainants "request[ ] a permanent limited exclusion order and cease and desist order to prevent Fujifilm from, *inter alia*, importing into and selling in the United States the Accused LTO-4, LTO-5, and LTO-6 Products. The requested remedies will promote the public interest in the protection of intellectual property rights and are consistent with each of the statutorily-enumerated public interest factors." (*Id.* at 155.) Complainants do not seek a general exclusion order. (*Id.* at 154.)

## PUBLIC VERSION

Respondents do not dispute that, in the event a violation of section 337 is found, a LEO should issue if it is determined that a Section 337 violation has occurred. (RIB at 148.) However, Respondents argue that enforcement of any LEO “should be delayed by at least six months and be limited to (1) Fujifilm-branded LTO-4-6 products, (2) OEM-branded LTO-4-6 products manufactured by Fujifilm, excluding IBM-branded LTO-4-6 products, and (3) components thereof for use in non-IBM branded LTO-4-6 products. A delay would be consistent with Commission precedent.” (*Id.* at 148-149.) In addition, Respondents assert that a “LEO should not include IBM-branded LTO-4-6 products and their components [REDACTED]” (*Id.* at 149.)

Staff submits that “evidence supports recommending a limited exclusion order without a delay” because “[t]he evidence shows that there are other suppliers who could supply tapes.” (SIB at 126 and SRB at 32.)

In the event the Commission finds a violation, the undersigned recommends that a limited exclusion order issue prohibiting the importation of all the accused products found to infringe the asserted patents. In addition, although Respondents argue that a LEO should be delayed for six (6) months to delay potential disruptions to U.S. consumers, Respondents do not cite any evidence such a delay would likely or necessarily produce disruptions. As such, the undersigned does not recommend delaying entry of a LEO in the event the Commission finds that a violation of section 337 has occurred.

The undersigned further notes that Respondents’ have not requested an exception for products sold to or used by the U.S. Government as set forth in 19 U.S.C. § 1337(l), which provides that:

Any exclusion from entry or order under subsection (d), (e), (f), (g), or (i), in cases based on a proceeding involving a patent, copyright, mask work, or design under subsection (a)(1), shall not apply to any articles 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.

**PUBLIC VERSION**

19 U.S.C. § 1337(l). Recognizing that such a provision is typically present in the Commission's exclusion orders, the undersigned recommends inclusion of such a provision notwithstanding Respondents' failure to request the same. Finally, the undersigned recommends incorporating the Respondents' proposed exception for IBM-branded LTO-4, LTO-5 and LTO-6 products and their components that Respondents manufacture for IBM [REDACTED]

[REDACTED]. (See CX-0975C at Q/A at 76; see also CIB at 152 (Sony arguing in the context of public interest that "Fujifilm will be able to continue to supply LTO-4, LTO-5, and LTO-6 tape products on an OEM basis to licensees such as IBM."))

**B. Cease and Desist Order**

Under section 337(f)(1), the Commission may issue a cease and desist order ("CDO") in addition to, or instead of, an exclusion order. 19 U.S.C. § 1337(f)(1). The Commission generally issues a cease and desist order directed to a domestic respondent when there is a "commercially significant" amount of infringing, imported product in the United States that could be sold, thereby undercutting the remedy provided by an exclusion order. See *Certain Crystalline Cefadroxil Monohydrate*, Inv. No. 337-TA-293 USITC Pub. 2391, Comm'n Op. on Remedy, the Public Interest and Bonding at 37-42 (June 1991); *Certain Condensers, Parts Thereof and Prods. Containing Same, Including Air Conditioners for Automobiles*, Inv. No. 337-TA-334 (Remand), Comm'n Op. at 26-28, 1997 WL 817767, at \*11-12 (U.S.I.T.C. Sept. 10, 1997).

In the event a violation of Section 337 is found, Complainants argue that a CDO should issue. (CIB at 154 and CRB at 75.) Complainants submit that "Fujifilm's inventory of Accused Products is unquestionably commercially significant" because "as of May 31, 2017, Fujifilm maintained nearly [REDACTED] units of LTO-4, LTO-5 and LTO-6 tape products in inventory in the United States, at a value of nearly [REDACTED]" and that "[d]uring that same month (May 2017),

**PUBLIC VERSION**

Fujifilm sold approximately [REDACTED] of LTO-4, LTO-5 and LTO-6 tape products.” (CIB at 154 (citing CX-0971C.78; JX-0039C; RX-0011C at 61-62 and RX-0188C) and CRB at 75.)

Respondents contend that Complainants have failed to demonstrate that Respondent “maintain[ ] commercially significant inventory of infringing products in United States” (RIB at 149.) Respondents argue that the “[e]vidence reveals that as of May 2017, Fujifilm’s inventory of Accused Products totaled approximately [REDACTED] [REDACTED] (Id. (citing RX-0011C at Q/A at 222-223 and RX-0189C).)

Staff submits “that a cease and desist order is appropriate” because “[t]he evidence shows that Fujifilm has a commercially significant inventory of accused products in the United States as well as imported components that are used to manufacture the accused tapes.” (SIB at 127 and SRB at 33.)

Should the Commission find a violation of section 337, the undersigned recommends that a cease and desist order issue to Respondents from selling its accused products because they maintain a commercially significant inventory of the accused products in the United States. (See JX-0039C and CX-0971C at Q/A at 328-341.)

**C. Bond During Presidential Review**

Pursuant to section 337(j)(3), the Administrative Law Judge and the Commission must determine the amount of bond to be required of a respondent during the 60-day Presidential review period following the issuance of permanent relief, in the event that the Commission determines to issue a remedy. See 19 U.S.C. §1337(j)(3). The purpose of the bond is to protect the complainant from any injury. See 19 C.F.R. § 210.42(a)(1)(ii), § 210.50(a)(3).

When reliable price information is available, the Commission has often set the bond by eliminating the differential between the domestic product and the imported, infringing product. See *Microsphere Adhesives, Processes for Making Same, and Prods. Containing Same*,

## PUBLIC VERSION

*Including Self-Stick Repositionable Notes*, Inv. No. 337-TA-366, USITC Pub. 2949, Comm'n. Op. at 24 (Dec. 8, 1995). In other cases, the Commission has turned to alternative approaches, especially when the level of a reasonable royalty rate could be ascertained. *See, e.g., Certain Integrated Circuit Telecomm. Chips and Prods. Containing Same, Including Dialing Apparatus*, Inv. No. 337-TA-337, Comm'n. Op. at 41, 1993 WL 13033517, at \*24 (U.S.I.T.C. June 22, 1993). A 100 percent bond has been required when no effective alternative existed. *See, e.g., Certain Flash Memory Circuits and Prods. Containing Same*, Inv. No. 337-TA-382, USITC Pub. No. 3046, Comm'n. Op. at 26-27 (July 1997) (imposing a 100% bond when price comparison was not practical because the parties sold products at different levels of commerce, and the proposed royalty rate appeared to be *de minimus* and without adequate support in the record).

Complainants argue that a 100 percent bond is appropriate because “[the Commission typically sets a bond rate based on a price differential between the DI products and the accused products, where accurate pricing information is unavailable or unreliable.” (CIB at 155.) According to Complainants “consistent pricing information is not available,” thus determining “a sales price differential is impractical and reliable.” (*Id.* (citing CX-0971C.79-81).)

Respondents submit that Complainants have failed to carry their burden of establishing a bond value and in doing so has ignored its own pricing data. (RIB at 150 (citing RX-0441C, RX-0445C, RX-0446C, RX-0447C, RX-0448C, RX-0449C, RX-0450C, RX-0451C, RX-0452C, RX-0499C, RX-0500C, RX-0501C, RX-0502C, RX-0503C; *see also* RX-0011C at Q/A at 233-62).) According to Respondents, Complainants “do[ ] not challenge the reliability of its own internal pricing data or otherwise suggest that a price differential based on such documents would be unreliable, thus a bond of zero is appropriate if a violation is found.” (*Id.* (citing *Certain Automated Teller Machines*, Inv. No. 337-TA-989, Comm'n Op. at 34).)

**PUBLIC VERSION**

Despite Complainants' contention price fluctuations prevent a price comparison, Staff argues that Complainants "ha[ve] not carried [their] burden to prove that [they are] entitled to a 100% bond" given that "the parties exchanged pricing information and Fujifilm's economics expert was able to perform a price comparison." (SIB at 128 (citing RX-0011C at Q/A at 232-235).)

Should the Commission find a violation of section 337 by Respondents, the undersigned does not recommend imposition of a bond. Even though a 100% bond may be warranted where price comparison is not practical, Complainants have failed to establish that a price differential cannot be determined therefore warranting such a bond (especially given that Respondents were able to perform a price comparison). *See, e.g., Certain Flash Memory Circuits and Prods. Containing Same*, Inv. No. 337-TA-382, USITC Pub. No. 3046, Com'n. Op. at 26-27 (July 1997). Given the absence of any evidence (or even argument) by Complainants that an alternatively valued bond is appropriate, the undersigned finds that Complainants have failed to carry their burden that any bond is warranted. Accordingly, the undersigned does not recommend imposition of any bond during the Presidential review period.

**IX. PUBLIC INTEREST**

In connection with this Recommended Determination, and pursuant to Commission Rule 210.50(b)(1), 19 C.F.R. § 210.50(b)(1), the Commission ordered that the presiding administrative law judge:

[S]hall take evidence or other information and hear arguments from the parties or other interested persons with respect to the public interest in this investigation, as appropriate, and provide the Commission with findings of fact and a recommended determination on this issue, which shall be limited to the statutory public interest factors set forth in 19 U.S.C. §§ 1337(d)(1), (f)(1), (g)(1).

(81 Fed. Reg. 69,854 (Oct. 7, 2016).)

Before issuing a remedy for a violation of section 337, the Commission must consider the effect of the remedy on the following public interest factors: (1) the public health and welfare; (2)



## PUBLIC VERSION

competitive conditions in the U.S. economy; (3) the U.S. production of articles that are like or directly competitive with those that are the subject of the investigation; and (4) U.S. consumers. *See* 19 U.S.C. §§ 1337(d)(1), (f)(1). The Commission begins this analysis with the understanding that the public interest favors the protection of intellectual property rights by excluding infringing products. *See, e.g., Certain Two-Handle Centerset Faucets & Escutcheons & Components Thereof, Inc. No. 337-TA-422, Comm'n Op. at 9 (July 21, 2000).* It is rare for the Commission to determine that the public interest considerations outweigh the patent holder's rights. *See Spansion Inc. v. Int'l Trade Comm'n, 629 F.3d 1331, 1360 (Fed. Cir. 2010).* The Commission can, however, tailor the remedy to minimize the impact on the public interest. *See e.g., Certain Personal Data and Mobile Commc'ns Devices & Related Software, Inv. No. 337-TA-710, Comm'n Op. at 83 (delaying the effective date of an exclusion order based on competitive conditions in the U.S. economy).*

### A. Public Health and Welfare

Complainants submit that “[t]he exclusion of the Accused Products will not adversely affect the public health and welfare in the United States” because the accused “products do not implicate the concerns associated with risk to the public health or welfare.” (CIB at 155-156 (citing (CX-0971C.66); *see also* JX-0017C at 150 (indicating that “LTO-4, LTO-5, and LTO-6 tapes are not critical to the public health, safety and welfare in the United States”).)

Respondents do not expressly address the potential effects of an exclusion order to the public health and welfare in the United States.

Staff asserts that “[t]here is no allegation that an exclusion order in this investigation would affect the public health and welfare” and notes that “[i]nstead, Fujifilm argues that an exclusion order would affect competitive conditions in the United States, eliminate like or directly competitive articles, and harm consumers.” (SIB at 124-125 (citing Fujifilm PrHB at 240-242).)

## PUBLIC VERSION

The evidence shows that the availability of LTO storage tapes has no critical effect on the public health, safety and welfare in the United States. (See CX-0971C at Q/A at 280-284 and JX-0017C at 150:11-21.) Accordingly, the undersigned finds that there is no evidence that the public health and welfare will be adversely affected by an exclusion order in this Investigation and thus does not support foregoing or delaying issuance of an exclusion order.

### **B. Competitive Conditions in the U.S. Economy**

Complainants submit that “[i]ssuance of the requested relief will not diminish competition in the market for LTO tape products.” (CIB at 151 (citing CX.0971C at 68-71).) Complainants contend there would be little or no impact on the LTO from the requested relief because (i) “Fujifilm will be able to continue to supply LTO-4, LTO-5, and LTO-6 tape products on an OEM basis to [REDACTED] IBM” and (ii) because, consistent with the “trend in which a new generation of LTO tape products is initially outsold by prior generations of LTO tape products but gradually outstrips sales of prior generations,” a new generation of LTO tapes (*i.e.*, LTO-7) is available, has increasing sales and would not be effected by the requested relief. (*Id.* at 152-153 (citing CX-0971C at 67-73; CX-0967C at 44; CX-0968C; JX-0020C.48; RX-0003C; CX-0141C; RX-0190C).) Complainants also explain that Respondents’ “own projections [indicate] a remedial order issued in 2018 will impact less than [REDACTED]” and that Complainants can supply any shortfall. (*Id.* at 153 (citing RX-0190C).) Finally, Complainants argue that Respondents have engaged in anticompetitive actions intended to monopolize the LTO market, and that the requested relief will help counteract those efforts. (*Id.* at 153-156.)

Respondents argue that they are “the only domestic manufacturer of LTO tapes.” (RIB at 151 (citing RX-0007C at Q/A at 34-43).) Respondents accuse Complainants of attempting to monopolize LTO market in the United States, including sequentially attempting to license and

**PUBLIC VERSION**

then copying Respondents technology. (*Id.* at 151-152 (citing RX-0057C (SNY-ITC0922829) at 50-51; RX-0007C at Q/A at 48; RX-0008C at Q/A at 72; CX-0975C at Q/A at 21-22; RX-0083C (SNY-ITC1287237); RX-0086C (SNY-ITC0371806); RX-0095C (SNY-ITC0371671); RX-0462C (SNY-ITC1284021) and RX-0463C (SNY-ITC187237)).) Respondents contend that Complainants failed in the above efforts, and are now asserting its patents they purchase in an attempt “to virtually exclude Fujifilm from the LTO business....” (*Id.* at 152.)

Respondents argue that Complainants’ “exclusivity in the LTO business will have disastrous consequences for LTO manufacturing operations in the United States” given that in the past five years Respondents have manufactured more than ██████████ LTO-4, LTO-5 and LTO6 tapes in the United States while Complainants have manufactured none. (*Id.* at 152-153 (citing RX-0189C (FF-SONY-ITC2\_00317973); RX-0007C at Q/A at 40; Prowse, Tr. at 171:3-9; JX-0030C at 21:2-6; JX-0033C at 31:1-15; JX-0038C at 81:1-85:4; JX-0033C at 31:1-15).) Consequently, Respondents assert that entry of an exclusion order would likely cause Respondents to close certain of its domestic manufacturing facilities. (*See Id.* at 153 (citing RX-0003C at Q/A at 42-44).) Respondents also contend that an exclusion order would also likely “eliminate the domestic production of LTO-7—the latest generation of LTO products” and would represent an “existential threat” to Respondents’ ability to continue “domestic manufacturing of ██████████ products to IBM. (*See Id.* (citing RX-0003C at Q/A at 42-50).) As such, Respondents reason that entry of an exclusion order would “reward an outsourcer of manufacturing jobs and importer of foreign-goods is inconsistent with trade policy and not in the public interest.” (*Id.* at 154.) Respondents further assert that an exclusion order against Respondents’ LTO-4, LTO-5 and LTO-6 would “reduce competition” because it “would effectively make Sony the sole supplier of such products in the United States.” (*Id.* (citing RX-0007C at Q/A at 40, 48).)

## PUBLIC VERSION

Staff submits that “[t]he evidence does not show that an LEO would affect production of like or directly competitive articles” for three reasons (i) Respondents will not be inhibited in their ability to supply IBM, (ii) Complainants “will continue production and three other companies have authorization to sell and manufacture LTO-4, -5, and -6 tapes” and (iii) consumers and users will have the option of using LTO-7 and/or other storage media. (SIB at 125 (citing CX-0971C at Q/A at 244, 34 and 213 and CX-0976C at Q/A at 99-106).)

The evidence shows based on Respondents’ own calculations that a remedial order issued in 2018 as to LTO-4, LTO-5 and LTO-6 products would impact less than [REDACTED] [REDACTED] in view of the transition to newer generation LTO products. (See RX-0190C) Given that there is no basis to conclude that this trend will not continue, any immediate impact on Respondents with respect to LTO-4, LTO-5 and LTO-6 products should diminish. (See, e.g., CX-0976C at Q/A at 56; CX-0141C at Q/A at 16; RX-0190C.) This conclusion runs parallel with the fact that Respondents will still be able to permissibly manufacture and sell LTO-4, LTO-5 and LTO-6 products for IBM [REDACTED] and to manufacture and sell LTO-7 and future generation LTO products. (See CX.0971C at Q/A at 289; CX-0141C at Q/A at 32, 33; RX-0190C.) Given these projections, the undersigned is unconvinced by Respondents contentions of dire consequences (*i.e.*, “existential threat”) for their domestic manufacturing activities with respect to products manufactured for IBM and/or future generation LTO products.

As such, the undersigned finds that there is no evidence that the competitive conditions in the U.S. economy will be adversely affected by an exclusion order in this Investigation and thus does not support foregoing or delaying issuance of an exclusion order.

**PUBLIC VERSION**

**C. Production of Like or Directly Competitive Products in U.S.**

Complainants submit that if the requested relief is granted, “production of like or directly competitive articles with respect to Fujifilm-branded and unlicensed OEM LTO-4, LTO-5, and LTO-6 tape products will remain robust.” (CIB at 156 (citing CX-0971 at 66-68).) Complainants offer that not only will they continue to manufacture, but that Respondents will be able to do so also for IBM. (*Id.* at 156-157.) Complainants also note that other manufacturers could enter or re-enter the market as well. (*Id.* at 157 (citing CX.0976.61-62; CX-0971C.073; CX-0976C.46, 61-64; JX-0044C; JX-0045C; RX-0407C).)

Complainants further assert that consumers also have the option of utilizing non-LTO products as well as newer generation LTO products—including those manufactured and sold by Respondents—that would not be subject to an exclusion order and which are progressively replacing the LTO-4, LTO-5, and LTO-6 products. (*Id.* (citing CX-0141C at 14, 16; CX-0971C.71, 73; JX-0017C at 142-143; JX-0024C at 50-51; JX-0020C at 270-271; Vander Veen, Tr. at 588:14-20).) Finally Respondents submit that they have the ability and capacity to “increase its production of LTO-4, LTO-5, and LTO-6 to meet any shift in demand that results from the exclusion of the Accused Products.” (*Id.* at 158 (citing CX-0228C; CX-0971C.072-73; CX-0976C.49-51).) Complainants also note their preparations for expanding their LTO manufacturing operations as well as “a substantial reserve inventory of LTO-4, LTO-5, and LTO-6 tape products that it could tap to meet any sudden and sharp increase in demand.” (*Id.* at 159 (citing CX-0976C.49, 51; CX.0971C.72).)

Respondents address this factor in conjunction with the above factor despite the fact they are statutorily separate factors and should be addressed as such.<sup>34</sup> (RIB at 151-155.) Thus, the undersigned incorporates here the summary of Respondents’ contentions set forth above.

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<sup>34</sup> Respondents’ failure in this regard has contributed to the difficulty in identifying Respondents’ position on this factor.

## PUBLIC VERSION

Staff is of the view that “[t]he evidence does not show that an LEO would affect production of like or directly competitive articles.” (SIB at 125.) According to Staff there are several reasons for this conclusion: (i) “Fujifilm will still be able to supply IBM with LTO tapes;” (ii) “Sony, of course, will continue production and three other companies have authorization to sell and manufacture LTO-4, -5, and -6 tapes;” and (iii) “LTO tape users can also use LTO-7 tape products or even switch to other storage media.” (*Id.* (citing CX-0971C at Q/A at 244, 304 and 312; CX-0976C at Q/A at 99-106).)

As discussed above, the evidence shows that there will be a diminishing impact, if any, of an exclusion order with respect to Respondents’ LTO-4, LTO-5 and LTO-6 products owing to Complainants’ (and others’) ability to supply the same or similar products, including indirectly by Respondents by virtue of the products they manufacture for IBM [REDACTED] [REDACTED]. (*See, e.g.*, CX-0976C at Q/A at 56; CX-0141C at Q/A at 16, 32-34; CX.0971C at Q/A at 289; RX-0190C.) Moreover, the evidence demonstrates that any potential impact will diminish over time as newer generation LTO products—which would not be affected by the requested relief—are adopted. (*See, e.g.*, CX-0976C at Q/A at 56; CX-0141C at Q/A at 16; RX-0190C.)

In view of the forgoing, the undersigned finds that there is no evidence that an exclusion order would have an adverse effect on the production of likely or directly competitive products in the United States.

### **D. U.S. Consumers**

Complainants submit that a limited exclusion order will have minimal or no adverse effect on U.S. Consumers. (CIB at 159.) Rather, Complainants argue that “if anything, the requested remedies will benefit consumers by promoting innovation and increasing product quality and diversity through enforcement of intellectual property rights.” (*Id.* (citing CX-0971C.75-76).) Complainants further

## PUBLIC VERSION

assert that “if the requested relief is granted, the data storage market—and the LTO market in particular—will remain competitive, U.S. consumers will still enjoy ample supply of the same (and functionally interchangeable) specification-compliant Sony *and* Fujifilm-manufactured LTO-4, LTO-5, and LTO-6 tape products and like and directly competitive products, and the prices faced by consumers will likely not increase.” (*Id.* at 159-160 (citing CX-0971C.73-75).)

Respondents argue, citing testimony in “the 1012 Investigation” that Sony witnesses “have acknowledged the negative effects of an exclusion order that seeks to eliminate one of only two manufacturers of LTO cartridges” and have “testified that consumers of LTO media prefer a multi-vendor approach for procuring supplies of LTO tape cartridges” owing to concerns about pricing control. (RIB at 155 (citing RX-0410C at Q/A at 14 and 24).) Respondents also point to testimony that “an exclusion order would, according to Sony, likely result in the elimination of US companies and jobs, including ██████████ business.” (*Id.* (citing RX-0410C at Q/A at 29 and 30).)

Respondents further assert that a LEO “will also result in a shortage of LTO-4, -5, and -6 products in the United States” which will have a negative impact on U.S. consumers despite Respondents’ contentions that it could supply any such product shortfalls. (RIB at 155-156 (citing Complainants’ Responsive Statement of Public Interest Under Section 210.8(b), January 3, 2017, EDIS Doc ID 599959, at page 5 and CX-0976C at Q/A at 48).) Respondents argue that in actuality “Sony’s manufacturing capacity [is] only ██████████ units of LTO-4, -5 and -6 products annually” and that “Sony would need to increase its production capacity by more than ██████████ to ensure sufficient supply for U.S. consumers.” (RIB at 156.) As such, Respondents conclude that “[i]f an exclusion order is granted, a significant portion of U.S. consumers would be left without their desired LTO media, which would negatively affect a majority of the consumers here.” (*Id.* at 157.) In the alternative, Respondents offer that should an LEO be issue that “the effective date of the

**PUBLIC VERSION**

exclusion order should be delayed by at least six months to allow U.S. consumers sufficient time to switch to LTO-7, so that the negative impact on U.S. consumers is minimized.” (*Id.* at 157)

Staff submits that a “LEO will not negatively affect US consumers” because “there will still be choices available to consumers of LTO products.” (SIB at 125.)

The undersigned finds that the evidence of record demonstrates that U.S. consumers of LTO products will have ample alternative choices for LTO products, including LTO-4, LTO-5 and LTO-6 products manufactured by Respondents for IBM [REDACTED] [REDACTED]. (See, e.g., CX-0976C at Q/A at 56; CX-0141C at Q/A at 16, 32-34; CX.0971C at Q/A at 289; RX-0190C.) As such, the undersigned finds that there is no evidence U.S. consumers will be adversely affected by an exclusion order in this Investigation and thus does not support foregoing or delaying issuance of an exclusion order.

**X. INITIAL DETERMINATION**

Based on the foregoing, it is the Initial Determination of the undersigned that Respondents do not infringe any asserted claim of U.S. Patents No. 6,345,779 and 7,115,331. The undersigned further determines that asserted claims 1-6 of U.S. Patent No. 6,345,779 are invalid, that the asserted claims of U.S. Patent No. 7,115,331 are not invalid, and that the domestic industry requirement has not been satisfied for either of U.S Patent No. 6,345,779 or U.S. Patent No. 7,115,331.

The undersigned hereby CERTIFIES to the Commission this Initial Determination and the Recommended Determination. The parties’ briefs, which include the final exhibits lists, are not certified as they are already in the Commission’s possession in accordance with Commission rules. See 19 C.F.R. § 210.38(a).



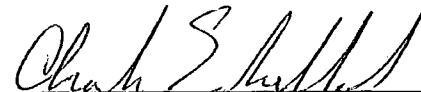
[REDACTED]

The Secretary shall serve the confidential version of this Initial Determination upon counsel who are signatories to the Protective Order (Order No. 1) issued in this Investigation. A public version will be served at a later date upon all parties of record.

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.

Within ten days of the date of this document, the parties shall submit to the Office of Administrative Law Judges a joint statement regarding whether or not they seek to have any portion of this document deleted from the public version. The parties' submission shall be made by hard copy and must include a copy of this Initial Determination with red brackets indicating any portion asserted to contain confidential business information to be deleted from the public version.<sup>35</sup> The parties' submission shall include an index identifying the pages of this document where proposed redactions are located. The parties' submission concerning the public version of this document need not be filed with the Commission Secretary.

**SO ORDERED.**

  
Charles E. Bullock  
Chief Administrative Law Judge

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<sup>35</sup> If the parties submit excessive redactions, they may be required to provide an additional written statement, supported by declarations from individuals with personal knowledge, justifying each proposed redaction and specifically explaining why the information sought to be redacted meets the definition for confidential business information set forth in Commission Rule 201.6(a). 19 C.F.R. § 201.6(a).

**CERTAIN MAGNETIC TAPE  
CARTRIDGES AND COMPONENTS  
THEREOF**

Inv. No. 337-TA-1036

**PUBLIC CERTIFICATE OF SERVICE**

I, Lisa R. Barton, hereby certify that the attached **Initial Determination on Violation of Section 337 and Recommended Determination on Remedy and Bond** has been served by hand upon the Commission Investigative Attorney, Andrew Beverina, Esq., and the following parties as indicated, on **February 14, 2018**.



Lisa R. Barton, Secretary  
U.S. International Trade Commission  
500 E Street, SW, Room 112  
Washington, DC 20436

**On Behalf of Complainants Sony Corporation, Sony Storage Media Solutions Corporation, Sony Storage Media Manufacturing Corporation, Sony DADC US Inc., and Sony Latin America Inc.:**

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**On Behalf of Respondents Fujifilm Holdings Corporation, Fujifilm Corporation, Fujifilm Holdings America Corporation, and Fujifilm Recording Media U.S.A., Inc.**

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