

**PUBLIC VERSION**

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

**In the Matter of**

**CERTAIN AUDIO PROCESSING  
HARDWARE, SOFTWARE, AND  
PRODUCTS CONTAINING THE SAME**

**Investigation No. 337-TA-1026**

**COMMISSION OPINION**

**I. INTRODUCTION**

On October 26, 2017, the presiding administrative law judge (“ALJ”) issued her final initial determination (“ID”) in this investigation, finding no violation of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337 (“section 337”) by the remaining respondent, Apple Inc. (“Apple”). Specifically, the ID finds that the Complainant, Andrea Electronics Corp. (“Andrea”), does not have standing; that the accused Apple products do not infringe U.S. Patent No. 6,363,345 (“the ‘345 patent”), the only remaining asserted patent; and that Andrea’s asserted domestic industry products do not practice the ‘345 patent.

For the reasons set forth below, the Commission reverses the ID’s finding on standing and finds that Andrea has standing to assert the ‘345 patent; affirms, with additional reasoning, the ID’s finding that the domestic industry products do not practice the ‘345 patent; and takes no position on the remaining issues under review, including infringement, invalidity, inequitable conduct, and the economic prong of the domestic industry requirement.

**II. PROCEDURAL HISTORY**

The Commission instituted this investigation on October 25, 2016, based on a complaint filed by Andrea of Bohemia, New York. 81 Fed. Reg. 73418 (Oct. 25, 2016). The complaint alleges violations of section 337 by reason of infringement of certain claims of U.S. Patent No.

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6,049,607 (“the ’607 patent”), the ’345 patent, and U.S. Patent No. 6,377,637 (“the ’637 patent”). The Commission’s notice of investigation named the following respondents: Apple of Cupertino, California; and Samsung Electronics Co., Ltd. of Gyeonggi-do, Korea, and Samsung Electronics America, Inc. of Ridgefield Park, New Jersey (collectively, “Samsung”). The Office of Unfair Import Investigations (“OUII”) is also a party in this investigation. The Notice of Investigation delegated public interest to the ALJ for recommended findings. On May 25, 2017, the Commission issued a notice terminating the investigation as to the ’637 patent based upon Andrea’s motion to withdraw that patent from the investigation. *See* Comm’n Notice (May 25, 2017).

On April 24, 2017, the respondents filed a motion for summary determination that claims 1-4 and 8-11 of the ’607 patent are indefinite. On June 1, 2017, the ALJ granted the motion-in-part as an ID. Order No. 35. The ALJ terminated the investigation as to the patent claims she found to be indefinite. *Id.* at 17.

On June 8, 2017, Andrea moved for partial termination of the investigation based upon the withdrawal of its allegations as to the ’607 patent. The respondents did not oppose the motion and OUII supported it. On June 13, 2017, the ALJ issued an ID granting the motion, but stating that only “[c]laim 1 remains pending before the Administrative Law Judge” for termination. Order No. 37 at 1 n.1. In fact, claims 5-7, 12 and 25-37 remained in the investigation, although Andrea chose not to pursue its allegations as to those claims.

No petitions for review of Order Nos. 35 or 37 were filed. On June 27, 2017, the Commission determined to extend the deadline for determining whether to review Order No. 35 to July 13, 2017, in order to coincide with the Commission’s deadline for review of Order No. 37. *See* Comm’n Notice (June 28, 2017).

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On June 30, 2017, the Commission determined to review Order No. 37, explaining that the notice of investigation encompasses claims 1-12 and 25-37 of the '607 patent, and that, although Andrea chose later not to pursue its allegations as to claims 5-7, 12, and 25-37, the investigation had not yet been terminated as to those claims. Comm'n Notice (June 30, 2018). The Commission granted Andrea's June 8, 2017 motion to terminate the investigation as to all allegations of infringement relating to the '607 patent, thereby terminating the investigation as to claims 1-12 and 25-37. *Id.* The Commission also found that in view of the Commission's determination to terminate the investigation as to the '607 patent, Order No. 35 was moot, and the Commission declined to reach it. *Id.*

Samsung was terminated from the investigation based on settlement and the Commission determined not to review the ID. Order No. 68; Comm'n Notice (Sept. 13, 2017).

A *Markman* hearing was held on April 11, 2017 and the *Markman* Order issued on June 1, 2017, construing certain claim terms. Order No. 34.

On June 12, 2017, Apple moved for summary determination of noninfringement of the asserted claims of the '345 patent. Andrea and OUII opposed the motion. On July 28, 2017, the ALJ granted the motion in part in Order No. 47. Order No. 47; *see* 19 C.F.R. § 210.42(c)(1). Order No. 47 found that Andrea could not rely on the doctrine of equivalents to prove infringement of the '345 patent because certain statements in the file history of the patent give rise to prosecution history estoppel. Order No. 47 at 6, 10-15. The ID thus granted summary determination of noninfringement under the doctrine of equivalents. *Id.* at 15. Order No. 47 denied summary determination as to literal infringement of the '345 patent. *Id.* at 7-10. No petitions for review of the ID were filed and the Commission did not review Order No. 47. Comm'n Notice (Aug. 29, 2017).

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A four-day evidentiary hearing was held August 21-24, 2017.

On October 26, 2017, the ALJ issued her final ID finding no violation of section 337. The ALJ's ID included her recommended determination on remedy, the public interest, and bonding. On November 8, 2017, Andrea and OUII filed petitions for review of the ID and Apple filed a contingent petition for review of the ID.<sup>1</sup> On November 16, 2017, OUII, Apple and Andrea each filed responses to the respective petitions for review.<sup>2</sup>

On January 11, 2018, the Commission determined to review the final ID in-part. 83 Fed. Reg. 2670-71 (Jan. 18, 2018). Specifically, the Commission determined to review the ID's findings on (1) standing, (2) infringement, (3) invalidity, (4) inequitable conduct, and (5) domestic industry. On January 25, 2018, Andrea, Apple, and OUII each filed a response to the Commission's notice of review.<sup>3</sup> On February 1, 2018, the parties each filed respective replies.<sup>4</sup>

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<sup>1</sup> Complainant Andrea Electronic Corporation's Petition for Review of the Initial Determination on Violation of Section 337 ("Andrea Pet."); Petition of the Office of Unfair Import Investigations for Review-in-Part of the Final Initial Determination ("OUII Pet."); and Respondent Apple Inc.'s Contingent Petition for Review ("Apple Pet.").

<sup>2</sup> Respondent Apple Inc.'s Combined Response to Complainant's and OUII's Petitions for Review ("Apple Rep."); Combined Response of the Office of Unfair Import Investigations Response The Private Parties' Petitions for Review of the Final Initial Determination on Violation ("OUII Rep."); Complainant Andrea Electronic Corporation's Opposition to Respondent Apple Inc.'s Contingent Petition for Review ("Andrea Rep.").

<sup>3</sup> Complainant Andrea Electronics Corporation's Initial Submission regarding Commission Review of the Initial Determination's Findings on Standing ("Andrea RBr."); Respondent Apple Inc.'s Submission Regarding Standing, Pursuant to the Commission Notice of January 11, 2018 ("Apple RBr."); and Brief of the Office of Unfair Import Investigations on the Issues under Review ("OUII RBr.").

<sup>4</sup> Complainant Andrea Electronics Corporation's Reply to Apple's and Staff's Initial Submissions regarding Commission's Request for Additional Briefing on Standing ("Andrea Reply RBr."); Respondent Apple Inc.'s Reply Regarding Standing, Pursuant to the Commission Notice of January 11, 2018 ("Apple Reply RBr."); Reply Brief of the Office of Unfair Import Investigations on the Issues under Review ("OUII Reply RBr.").

**III. PRODUCTS AT ISSUE**

**A. Accused Products**

The accused Apple products contain a “voice processor” software module capable of invoking noise suppression audio units. [REDACTED]

[REDACTED]

**B. Domestic Industry Products**

Andrea relies on its Segment 300 products to satisfy the domestic industry requirement and identified the specific products that implement versions of its PureAudio algorithm. ID at 81-82. The ID explains that Andrea divides the DI products into six categories and asserts that each category practices or embodies all or a subset of claims 4-11, 13, 14, 17, 21, 23, 25, 38-40, 43, 46, and 47 of the '345 patent. *Id.* at 82. The ID provides a table that identifies the categories of DI products and the corresponding claim they are asserted to practice. *Id.*

**IV. OVERVIEW OF THE '345 PATENT**

The '345 patent is entitled “System, Method and Apparatus for Cancelling Noise” and issued on March 26, 2002. The '345 patent identifies Joseph Marash and Baruch Berdugo as inventors.

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Claims 4-11, 13-16, 21, 23-25, 38-40, 43, and 46 are asserted against Apple. Claim 38 is independent. Claims 4-11, 13-16, 21, 23-25 depend, directly or indirectly, from unasserted independent claim 1, while claims 39-40, 43, and 46 depend, directly or indirectly, from independent claim 38. Independent claim 1, which is an apparatus claim, recites:

1. An apparatus for canceling noise, comprising:

an input for inputting an audio signal which includes a noise signal;

a frequency spectrum generator for generating the frequency spectrum of said audio signal thereby generating frequency bins of said audio signal; and

a threshold detector for setting a threshold for each frequency bin using a noise estimation process and for detecting for each frequency bin whether the magnitude of the frequency bin is less than the corresponding threshold, thereby detecting the position of noise elements for each frequency bin.

'345 patent at 9:35-46. Independent claim 38 recites a method for canceling noise similar in scope to independent claim 1, with the addition of subtracting noise elements from the audio signal. *See id.* at 12:4-23. Claim 38 recites:

38. A method for driving a computer processor for generating a noise canceling signal for canceling noise from an audio signal representing audible sound including a noise signal representing audible noise, said method comprising the steps of:

inputting said audio signal which includes said noise signal;

generating the frequency spectrum of said audio signal thereby generating frequency bins of said audio signal;

setting a threshold for each frequency bin using a noise estimation process;

detecting for each frequency bin whether the magnitude of the frequency bin is less than the corresponding threshold, thereby detecting the position of noise elements for each frequency bin; and

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subtracting said noise elements detected in said step of detecting from said audio signal to produce an audio signal representing said audible sound substantially without said audible noise.

The '345 patent discloses a method and apparatus for performing noise cancellation and reduction using spectral subtraction. '345 patent at 1:19-21. Ambient noise degrades the performance of speech processing algorithms, such as those used in dictation, voice activation, and voice compression systems. *Id.* at 1:24-28. While adaptive beamforming microphone arrays can cancel directional noise, they are unable to effectively cancel diffused noise. *Id.* at 1:38-49. Diffused noise can occur in environments that are highly reverberant. *Id.* One example of such an environment is a room that has walls that strongly reflect sounds, so that the reflected sounds reach the array from an infinite number of directions. *Id.* at 1:49-52. Another example is the cabin of an automobile, where noise radiates from the car chassis. *Id.* at 1:52-54.

“Spectral subtraction” is used to cancel diffused noise. *Id.* at 1:58-60. Spectral subtraction is a prior art method in which a voice switch is used to detect non-speech time intervals. *Id.* at 1:60-64. The magnitude of the spectral level of the noise is estimated by measuring the magnitude of the non-speech time intervals detected by a voice switch, and then the noise magnitude spectrum is subtracted from the signal. *Id.* The prior-art spectral subtraction method, however, creates artifacts that reduce the performance of speech algorithms. *Id.* at 2:1-5. The prior art method also incorrectly assumes that the voice switch can accurately detect the presence of speech and locate the non-speech time intervals. *Id.* at 2:5-10.

The invention of the '345 patent addresses the shortcomings of the prior art methods by setting adaptive thresholds for each frequency bin.<sup>5</sup> *Id.* at 5:10-14; 6:10-11. As a background,

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<sup>5</sup> The “frequency bins” are “frequency domain outputs extending between two limiting frequencies.” Order No. 34 at 34, 1-2.

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audio signals can be analyzed with respect to time (time-domain analysis) or frequency (frequency-domain analysis). The same audio signal can be represented in the frequency domain as frequencies of varying magnitudes. In the frequency domain, a graph of a digital audio signal can be depicted as a sequence of vertical lines wherein each line's location corresponds to a specific frequency and each line's height corresponds to "how much" of that frequency is present in the digital audio signal.

The '345 patent teaches that the magnitude of each frequency bin is compared to an adaptive threshold. If the magnitude is below the threshold, it is deemed to be noise and used to estimate the noise in the signal. *Id.* at 6:48-52. If the frequency bin's magnitude is above the threshold, it is deemed not to be noise and is not used to estimate the noise. *Id.* at 6:52-53. After the system determines the magnitude of the estimated noise, it can be subtracted from the current frequency bin's magnitude. *Id.* at 6:58-61.

### V. ISSUES UNDER REVIEW

#### A. Standing

The question presented to the Commission is whether Andrea, the patent title owner and licensor of the '345 patent, has standing to enforce the patent in light of an agreement it entered into with third party AND34 Funding LLC ("AND34"). In a prior investigation involving Andrea, the Commission determined that the agreement was nothing more than a non-exclusive license. As explained below, the Commission determines, based on the record of this investigation, that Andrea does have standing to enforce the '345 patent.

#### 1. Legal Requirements of Standing

Commission Rule 210.12 requires that intellectual property-based complaints filed by a private complainant "include a showing that at least one complainant is the owner or exclusive



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licensee of the subject intellectual property.” 19 C.F.R. § 210.12(a)(7). In determining whether this requirement is met, the Commission has applied the standing requirement established by courts in patent infringement cases. *See, e.g., Certain Catalyst Components and Catalysts for the Polymerization of Olefins*, Inv. No. 337-TA-307, Comm’n Op. at 13 (June 18, 1990) (“*Catalyst Components*”) (“[W]e see little basis for inferring a different standing requirement under section 337 than the courts have established in patent infringement cases.”); *Certain Optical Disc Drives, Components thereof, and Products Containing the Same*, Inv. No. 337-TA-897, Comm’n Op. (Jan. 7, 2015) (“*Optical Drives*”). Patentees bringing an action for patent infringement must satisfy constitutional standing and statutory cause of action requirements. *See Vaillancourt v. Becton Dickinson & Co.*, 749 F.3d 1368 (Fed. Cir. 2014) (applying Supreme Court decision in *Lexmark Int’l, Inc. v. Static Control Components, Inc.*, 134 S. Ct. 1377, 1386-88 (2014)); *Catalyst Components* at 13.

Constitutional standing stems from Article III of the Constitution and serves as a limit on judicial power. *See Lexmark*, 134 S. Ct. at 1386. It requires that a plaintiff (1) suffer an injury in fact, (2) show a proximate causal connection between the injury and the defendant’s conduct, and (3) show that the injury would be redressable by a favorable court decision. *See id.* (citing *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560 (1992)).<sup>6</sup> In causes of action involving patent infringement, the Patent Act is the source of these legally protected interests. *See Textile Prod., Inc. v. Mead Corp.*, 134 F.3d 1481, 1483-84 (Fed. Cir. 1998). This is because the Patent Act creates exclusionary rights with respect to the patented invention, gives rise to the right to sue

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<sup>6</sup> Although the Commission is not a part of the judicial branch, as noted above the Commission has applied the standing requirement established by courts in patent infringement cases in determining compliance with Commission Rule 210.12(a)(7).

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others for patent infringement, defines the nature of patent infringement, and determines the party that is entitled to judicial relief. *Sicom Sys., Ltd. v. Agilent Tech., Inc.*, 427 F.3d 971, 975-76 (Fed. Cir. 2005). Thus, questions of constitutional standing must be guided by the language of the Patent Act.<sup>7</sup> *See Vaillancourt*, 749 F.3d at 1368-70.

The Patent Act creates the legal right to exclude. *Arachnid, Inc. v. Merit Indus., Inc.*, 939 F.3d 1574, 1578-79 (Fed. Cir. 1991). Specifically, the Patent Act bestows the legal right to exclude others from making, using, selling, or offering to sell the patented invention in the United States, or importing the invention. 35 U.S.C. § 154. “Constitutional injury in fact occurs when a party performs at least one prohibited action with respect to the patented invention that violates these exclusionary rights.” *Morrow v. Microsoft Corp.*, 499 F.3d 1332, 1339 (Fed. Cir. 2007). Accordingly, constitutional standing in a patent infringement suit depends on whether a party can establish that it has an exclusionary right in a patent that, if violated by another, would cause the party holding the exclusionary right to suffer legal injury. *See Sicom Sys.*, 427 F.3d at 976 (“A nonexclusive license confers no constitutional standing on the licensee

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<sup>7</sup> Historically, courts also evaluated patent ownership under the rubric of “prudential standing” and required it in addition to constitutional standing for patent infringement claims. In the *Lexmark* decision, however, the Supreme Court held that prudential standing cannot limit Congressional intent and essentially discarded the concept of prudential standing in federal statutory cases. *Lexmark*, 134 S. Ct. at 1387-88. The Supreme Court clarified that the proper analysis is to consider whether the purported plaintiff falls within the “zone of interest” contemplated by the statutory language of the given statute, here the Patent Act. *Id.* at 1387. As such, after *Lexmark* the focus of a standing analysis remains centered on patent ownership in light of the language of the Patent Act. The Federal Circuit applied this standard in *Vaillancourt* and determined that, in light of *Lexmark*, standing for patent claims requires a statutory cause of action. *See Vaillancourt*, 749 F.3d at 1368-70 (citing *Lexmark*, 135 S. Ct. at 1386-88). A statutory cause of action is evaluated by looking to the language of the statute. *Id.* at 1369-1370 (determining that the statutory language answered standing issues related to a claim brought under 35 U.S.C. § 141 because the statute solely included patent owners, not former owners).

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to bring suit or even to join a suit with the patentee because a nonexclusive licensee suffers no legal injury from infringement.”).

The Patent Act also identifies *who* is entitled to judicial relief for patent infringement. The statute provides that the “patentee” is entitled to bring a “civil action for infringement of his patent.” 35 U.S.C. § 281. The “patentee” includes the entity to whom the patent was issued and the “successors in title to the patentee.” 35 U.S.C. § 100(d). Therefore, the patentee – the title holder – at the time suit is filed will generally have constitutional standing as well as satisfy the applicable statutory cause of action requirements. *See Crown Die & Tool v. Nye Tool & Mack Works*, 261 U.S. 24, 40-41 (1923). Thus, “[t]he essential issue regarding the right to sue on a patent is who owns the patent.” *Aspex Eyewear, Inc. v. Miracle Optics, Inc.*, 434 F.3d 1336, 1341 (Fed. Cir. 2006). Given that a patent is in effect a bundle of rights which may be divided and assigned, in evaluating patent ownership courts typically determine whether “a sufficiently large portion of [the] bundle of rights is held by one individual.” *Alfred E. Mann Found. For Scientific Research v. Cochlear Corp.*, 604 F.3d 1354, 1360 (Fed. Cir. 2010). That individual is considered the patent owner, and permitted to sue for infringement in his own name. *Id.*

Typically, Federal Circuit decisions on standing concern whether an exclusive licensee under a license agreement has standing to enforce a patent. When analyzing whether a licensee has standing to sue on its own for patent infringement, the Federal Circuit considers whether the patent owner transferred “all substantial rights” to the licensee. If “the patentee has transferred all substantial rights in the patent to an exclusive licensee . . . the licensee is treated as the assignee” and as an assignee can sue in its own name such that the patent owner “need not be joined in any action brought on the patent.” *Delano Farms Co. v. Cal. Table Grape Comm’n*, 655 F.3d 1337, 1342 (2011) (emphasis added); *Mann*, 604 F.3d at 1359 (“[W]here an exclusive

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license transfers less than ‘all substantial rights’ in the patents to the exclusive licensee, the exclusive licensee may still be permitted to bring suit against infringers, but the patent owner is an indispensable party who must be joined.”).

The Federal Circuit has explained that plaintiffs can be categorized into one of three general groups for purposes of standing in patent infringement cases: (1) those who can sue in their own name; (2) those who can sue, if they join the patent owner; and (3) those who cannot even participate as a party in an infringement suit. *Morrow*, 499 F.3d at 1339-40.

In determining the category in which a party falls, courts look to “the substance of the rights conferred onto that party, not to the characterization of those rights as exclusive licenses or otherwise.” *Id.* at 1340 n. 7 (citing *Vaupel Textilmaschinen v. Meccania Euro Italia S.P.A.*, 944 F.2d 870, 874-875 (Fed. Cir. 1991) (“*Vaupe*”).). Therefore, in evaluating the substance of the right, a court may find that an exclusive licensee was not afforded sufficient rights to confer standing; that an assignee transferred away too many rights, thus divesting it of its right to sue; or that an assignee never received sufficient rights to sue alone.

To determine whether a licensor has transferred “all substantial rights” to the licensee, courts consider a non-exhaustive list of rights, including: “(1) the nature and scope of the right to bring suit; (2) the exclusive right to make, use, and sell products or services under the patent; (3) the scope of the licensee’s right to sublicense; (4) the reversionary rights to the licensor following termination or expiration of the license; (5) the right of the licensor to receive a portion of the proceeds from litigating or licensing the patent; (6) the duration of the license rights; (7) the ability of the licensor to supervise and control the licensee’s activities; (8) the obligation of the licensor to continue paying maintenance fees; and (9) any limits on the licensee’s right to assign its interests in the patent.” *Azure Networks, LLC v. CSR PLC*, 771 F.3d 1336, 1343 (Fed.

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Cir. 2014) (citing *Mann*, 604 F.3d at 1360-61), *judgment vacated on other grounds*, *CSR PLC et.al. v. Azure Networks*, 135 S. Ct. 1846, 2015 W1 582818 (Apr. 20, 2015) (“*Azure*”). These are referred to as the *Azure* factors.

Contrary to the typical issue addressed in the case law, the investigation before the Commission presents the converse scenario in which the patent title owner/licensor, Andrea, seeks to bring suit. In this situation, if the licensee has at best a non-exclusive license, it is unclear whether the Commission must apply the “all substantial rights” test and the related *Azure* factors to Andrea. However, as explained below, we conclude that Andrea does have standing regardless of whether we apply the *Azure* “all substantial rights” test to Andrea.

### 2. Overview of The Agreements at Issue

Andrea determined to enforce its patents against entities it believed were infringing competitors and sought funding for its patent enforcement actions. In early 2014, Andrea executed a Revenue Sharing and Note Purchase Agreement with AND34 Funding LLC (“AND34”), a special-purpose entity created by Fortress Investment Group LLC (“FIG”), to help fund Andrea’s patent enforcement activities. RX-0310C. [REDACTED]

[REDACTED]  
[REDACTED] The parties also executed a Common Interest and Nondisclosure Agreement (“Common Interest Agreement”). RX-319C.

FIG/AND34 and Andrea renegotiated the terms of the original agreement and executed an amended Revenue Sharing and Note Purchase Agreement on December 24, 2014, which is retroactively effective as of February 14, 2014. RX-0181C (“RSNPA”). The parties also executed a rider with a new line of credit for this section 337 investigation. RX-0146C (Rider). The RSNPA requires Andrea to monetize the specified patents, including the ‘345 patent, [REDACTED]

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[REDACTED]. In amending the original Revenue Sharing and Note Purchase Agreement, the parties rendered null and void the Common Interest Agreement and Business Plan. RX-0181C.0004 at §§ 2.03, 2.02; RX-0181C.15 (noting that the amendment agreement replaces and supersedes the original agreement); *see also* RX-0319C.1 at “WHEREAS” clause (noting that the Common Interest Agreement applies to the “Revenue Sharing and Note Purchase Agreement” that was entered into on February 14, 2014 between Andrea and AND34).

### 3. The Commission’s Decision in Investigation No. 949

Prior to the current investigation, in Commission Inv. No. 337-TA-949 (“Inv. 949”), a different ALJ considered whether Andrea had standing to assert the ’345 patent and found that Andrea did have standing. *See Certain Audio Processing Hardware and Software and Products Containing Same*, Inv. No. 337-TA-949, Order No. 8: Init. Det. Finding Complainant Andrea Electronics Has Standing to Assert in This Investigation U.S. Patent Nos. 5,825,898; 6,483,923; 6,049,607; 6,363,345; and 6,377,637 (Jun. 11, 2015). Specifically, the ALJ in Inv. 949 addressed standing from the perspective of the rights received by AND34. The ALJ considered the agreements between the parties and the record evidence to determine that AND34 was nothing more than a non-exclusive licensee under the RSNPA. The ALJ concluded that Andrea, as the owner of the patent, retained standing to assert the ’345 patent. The Commission did not review this determination. *See* Comm’n Notice (Jul. 13, 2015); 19 C.F.R. § 210.42(h).

### 4. The ID

The ID currently under review finds that the standing issue involves determining which entity is the owner of all substantial rights in the patent, and thus addresses standing from the perspective of rights retained by Andrea *i.e.*, whether Andrea retains “*all substantial rights.*”

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ID at 7-8. The ID concludes that Andrea lacks standing to bring this suit without joining AND34. *Id.* at 7, 12. The ID explains that Commission Rule 210.12 requires that intellectual property based complaints must “include a showing that at least one complainant is the owner or exclusive licensee of the subject intellectual property.” *Id.* at 7. The ID observes that the Commission applies the standing law established by courts in patent infringement cases to determine whether this requirement is met and notes that the complainant has the burden to prove standing. *Id.* In reaching its decision, the ID states:

In this case, there is no dispute that Andrea holds title to the patent. Merely holding title is not dispositive, however. The courts and the Commission look beyond title to determine whether the plaintiff/complainant possess all substantial rights. . . A plaintiff or complainant who lacks all substantial rights cannot sue without joining the party or parties who share the rights in the patent, and when those parties cannot be joined, the case will be dismissed.

*Id.* at 8-10. The ID further explains that “[t]he doctrine that a plaintiff or complainant must possess all substantial rights to sue on its own applies not only where there is a license agreement or other formal transfer of rights, but in other circumstances where patent rights have been divided or diminished by contractual obligations.” *Id.* at 10.

The ID explains that in 2014, Andrea entered into the RSNPA under which Andrea received substantial funds from financial institutions using AND34 as the collateral agent. *Id.* at 12 (citing RX-0181C). The ID considered the factors set forth in *Azure* to determine whether Andrea transferred substantial rights in the patent. The ID explains that the RSNPA on its face meets *Azure* factor number 5, concerning AND34’s right to receive a portion of the proceeds from litigating or licensing the patent. *Id.* The ID further explains that Andrea is required to monetize the ’345 patent by seeking to enforce it [REDACTED]. *Id.* The ID contends that these provisions significantly diminish Andrea’s exclusive right as a

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patentee to sue infringers and license the patent. *Id.* The ID also finds that the agreement prevents Andrea from developing a product using the patent and that Andrea is severely restricted in its ability to dispose of or convey rights in the '345 patent. *Id.* at 13.

The ID also finds that Andrea and AND34 share control over litigation strategy in the Common Interest Agreement. *Id.* at 14. The ID explains that this Common Interest Agreement, RX-319C, refutes Andrea's assertion that AND34 does not control Andrea's patent assertion activities. *Id.* at 14-15. The ID instead finds that the Common Interest Agreement confirms that the relationship between Andrea and AND34 is not that of a creditor/lender but is a joint venture to monetize the '345 patent. *Id.* at 15. The ID asserts that under the Federal Circuit's most recent formulation of the standing criteria, the key factors are the exclusive right to make, use, and sell, license, and sue accused infringers and Andrea has ceded substantial rights in each of these vital areas to AND34. *Id.* at 16.

The ID next addresses Andrea's arguments and finds them unavailing. *Id.* Thus, while Andrea argued that it has standing because AND34 does not have all substantial rights in the patent, the ID found that this argument improperly focuses on the wrong party. *Id.* The ID explains the question is whether Andrea, and not AND34, has standing. *Id.* The ID declares that constitutional standing is not at issue and the appropriate question here is whether Andrea satisfies the criteria for standing by possessing all substantial rights in the patent. *Id.* at 16-17.

The ID also finds that Andrea and OUII's reliance on the findings in Inv. 949 is misplaced since that decision dwelt on the question of whether AND34 has an exclusive or nonexclusive license to the asserted patents. *Id.* at 17-18. The ID rejects Andrea's assertion that the Commission's determination in Inv. 949 is dispositive, and notes that the 949 decision does not address the question of whether Andrea has all substantial rights in the patent, factors the ID



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stated were deemed critical to standing by the Federal Circuit and the Commission. The ID states that certain facts, for example the Common Interest Agreement between Andrea and AND34, were not considered in Inv. 949. *Id.* at 18. The ID also finds that the Inv. 949 decision does not have any preclusive effect and does not address statutory standing. *Id.* at 19.

### 5. Petitions for Review and Response

#### (a) Andrea's Petition

Andrea argues that the ID improperly ignored the Commission's prior determination that Andrea has standing to assert the '345 patent as the sole complainant in Inv. 949. Andrea Pet. at 1-2. Andrea explains that in Inv. 949, the Commission considered Andrea and/or AND34's standing to assert the '345 patent pursuant to the RSNPA between Andrea and AND34. *Id.* at 2. As is it did before the ALJ, Andrea argues that the decision in Inv. 949 is binding precedent in this investigation. *Id.* at 2-3.

Andrea asserts that despite the ID's findings, the only example of "new" evidence cited in the ID is the Common Interest Agreement between Andrea and AND34, and contends that the ALJ in Inv. 949 was aware of this evidence, but denied its admission into the record because he found it irrelevant to the standing issue. *Id.* at 3-4 (discussing the Common Interest Agreement). Specifically, the Inv. 949 ALJ reviewed the evidence and found that it was irrelevant or so tangentially relevant and lacking in probative value that the potential prejudice in admitting the evidence outweighed the benefit of admitting such evidence. *Id.* Andrea agrees with the Inv. 949 ALJ's findings on this issue. Andrea explains that while the ID faults the ALJ and the Commission for only considering constitutional standing in Inv. 949, it is in fact the ID in this investigation that committed legal error by failing to address constitutional standing and instead skipping to analyzing "all substantial rights." *Id.* at 10. According to Andrea, the ID makes no

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findings regarding exclusivity or non-exclusivity and merely declares that constitutional standing is not in dispute in this case. *Id.* Andrea asserts that the RSNPA and “associated documents” grant AND34, at most, a non-exclusive license to the ’345 patent. *Id.* Andrea explains that because AND34 is a non-exclusive licensee that is not injured by infringement, it lacks constitutional standing to bring or join this investigation. *Id.* at 10-11. Andrea notes that the ID acknowledges that AND34 is not an exclusive licensee, unlike the plaintiffs in the cases upon which the ID relies. *Id.* at 14. Andrea argues that neither the ID nor Apple cites a single case where there is an analysis of “all substantial rights” when a patent owner and a non-exclusive licensee are involved. *Id.* at 14-15. Andrea argues that even if all substantial rights are considered, it has not transferred any substantial rights to AND34. *Id.* at 15-23.

### (b) OUII’s Petition

OUII argues that the Commission should review and reverse the ID’s holding that Andrea lacks standing to assert the ’345 patent. OUII Pet. at 4. OUII argues that it is undisputed that Andrea holds title to the ’345 patent and no other party holds exclusionary rights in the ’345 patent. *Id.* OUII explains that this issue was considered in Inv. 949, where the Commission properly concluded that AND34 is nothing more than a bare licensee. *Id.* at 5.

OUII notes that courts consider the nine *Azure* factors to determine whether a licensee has received “all substantial rights.” *Id.* at 5-6. However, OUII explains that Apple does not allege that Andrea has transferred all substantial rights in the patent to AND34, and therefore these factors have no bearing as to whether Andrea is the patentee. *Id.* at 6. OUII asserts that Apple has not shown and appears not to contend that AND34 is the owner or exclusive licensee of the ’345 patent. *Id.* OUII points out that a non-exclusive licensee has no standing to assert a

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patent. *Id.* at 7 (citing *Azure*, 771 F.3d at 1344). Therefore, OUII concludes that Andrea is the only party that has been shown to have standing. *Id.*

**(c) Apple's Response**

Apple argues that the ID properly determined that Andrea lacks standing to assert the '345 patent because Andrea transferred substantial rights to AND34. Apple Rep. at 3. Apple asserts that Andrea avoids the issue whether Andrea has transferred away too many rights to the '345 patent to AND34. *Id.* at 12. Apple argues that the Federal Circuit has explained that the standing analysis must focus on the substance of the rights conferred, not the characterization of those rights. *Id.* at 16. Apple contends that the RSNPA is a complicated business agreement that deprives Andrea of substantial rights and places ultimate control over the patents somewhere between Andrea and AND34. *Id.* Apple argues that Andrea's agreements with FIG and AND34 dramatically restrict Andrea's rights in the '345 patent and grant AND34 substantial rights. *Id.* at 17. Apple argues that the ID correctly concludes that Andrea has ceded substantial rights among other things. *Id.* Apple explains that the ID determined that: (a) Andrea "is required to monetize the '345 patent by [REDACTED] and therefore does not have an "unfettered right to choose whom to sue and license;" (c) Andrea cannot collaborate with [REDACTED]; (d) "Andrea is severely restricted in its ability to dispose of or convey rights in the '345 patent;" and (e) "Andrea and AND34 share control over litigation strategy." *Id.* at 18. Apple explains that the purported assignment from Andrea to AND34 states unequivocally: "Assignor hereby irrevocably sells, assigns, transfers and sets over to Assignee the entire right, title and interest in and to the ['345 Patent] . . . for Assignee's own use and enjoyment[.]" *Id.* Apple argues that even though AND34 has not "accepted" the

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assignment by countersigning the document, there is no legal requirement that a patent assignment be executed by both the assignor and the assignee. *Id.* Finally, Apple also argues that Andrea actually assigned the '345 patent to AND34. *Id.* (citing RX-2328C.0001). Apple addresses the various *Azure* factors to conclude that Andrea does not have all substantial rights in the '345 patent in view of the RSNPA and Common Interest Agreement. *Id.* at 17-28

**6. The Parties' Responses to the Commission's Briefing Question**

The Commission determined to review the ID's findings on standing and asked the parties to brief the following question:

Is a determination on whether a licensee is subject to an exclusive license necessary to reach the "all substantial rights" analysis? Are the factors set forth in *Azure Networks, LLC v. CSR PLC*, 771 F.3d 1336 (Fed. Cir. 2014), *judgment vacated on other grounds, CSR PLC et.al. v. Azure Networks*, 135 S. Ct. 1846, 2015 W1 582818 (Apr. 20, 2015), relevant to the question of standing raised in this investigation?

83 Fed. Reg. 2670-71 (Jan. 18, 2018).

**(a) Andrea's Position**

Andrea argues that the Federal Circuit has laid out a two-tier approach in analyzing patent standing:

*The first step* is to determine whether the license is exclusive or nonexclusive, because...the licensee[] would have no right to sue, even by joining [patent owner], under a nonexclusive license agreement. A finding that the license was exclusive is necessary, but not in itself sufficient, to find that the licensee has standing to sue....

*Having found that [patent owner] granted [licensee] an exclusive license, we next need to determine* the scope of that license grant in order to decide which party to the agreement was the owner of the patents-in-suit. If [patent owner] remained the owner, then it had standing to sue for infringement. If [patent owner] transferred sufficient rights to [licensee] to render [licensee] the owner, then [patent owner] was not permitted to sue for infringement, and the district court properly dismissed the case for lack of standing.

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Andrea RBr. at 1 (quoting *Mann*, 604 F.3d at 1360 (emphasis added by Andrea)). Andrea asserts that if the license is non-exclusive under the first step, the court should never reach the “all substantial rights” step, and thus the *Azure* factors are not relevant to the question of standing. *Id.* Andrea notes that the factors set forth in *Azure* come directly from *Mann*, which confirms that the application of *Azure* factors is determined within the two-step framework discussed above. *Id.*

Andrea explains that a court needs to reach the all substantial rights analysis only when more than one party has constitutional standing. Andrea Reply RBr. at 9. Andrea asserts that this principle is confirmed by *Morrow*, 499 F.3d at 1340, on which Apple relies to support its argument. *Id.* at 9-10.

### (b) OUII’s Position

OUII contends that the “all substantial rights” analysis is used to determine whether an exclusive licensee has standing to assert a patent alone without joining the patentee. OUII RBr. at 2. OUII argues that this analysis is only applicable to exclusive licensees because it is well settled that a non-exclusive licensee has no standing to assert a patent, either with or without the patentee. *Id.* Therefore, OUII asserts that a determination on whether a licensee is subject to an exclusive license is necessary to reach the “all substantial rights” analysis. *Id.* OUII contends that because AND34 is at best a non-exclusive licensee, the *Azure* factors are not relevant to the question of standing raised in this investigation. *Id.*

OUII argues that the “all substantial rights’ analysis is used to determine whether an exclusive license is tantamount to an assignment, thus allowing the licensee to stand in the shoes of the patent owner.” *Id.* at 3 (citing *Mann*, 604 F.3d at 1358 (“A patent owner may transfer all substantial rights in the patents-in-suit, in which case the transfer is tantamount to an assignment

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of those patents to the exclusive licensee, conferring standing to sue solely on the licensee.”), citing *Vaupel*, 944 F.2d at 873-74). OUII contends that it is undisputed that Andrea holds title to the '345 patent. *Id.* at 4. OUII asserts that the Commission found in the Inv. 949, on essentially the same record for the very same patent, that no other party holds exclusionary rights in the '345 patent. *Id.* Therefore, OUII argues that Andrea alone has standing to assert the '345 patent. *Id.*

OUII argues that “Apple does not cite to a single case where a court found that the owner of a patent who has transferred some, but not all, substantial rights lacked standing. This is not surprising because it is beyond reasonable dispute that a patentee retains ownership if it grants less than all substantial rights.” OUII Reply RBr. at 3. OUII asserts that the cases relied upon by Apple relate to “the question of licensee standing in the absence of the patent owner” and are therefore not relevant to whether the patent owner has standing. *Id.*

### (c) Apple’s Position

Apple asserts that a determination on whether a licensee is subject to an exclusive license is not necessary and the *Azure* factors are relevant to this investigation. Apple RBr. at 1.

Apple argues that the “all substantial rights” analysis cannot be avoided by characterizing Andrea’s agreement with AND34 as a non-exclusive license for three reasons. *Id.* First, Apple asserts that black-letter law holds that the all substantial rights inquiry is a proxy for the statutory requirement that a party bringing an infringement suit have the interests of a patentee. *Id.* (quoting *Morrow*, 499 F.3d at 1340 n.6). According to Apple, this statutory requirement must always be satisfied regardless of how the plaintiff characterizes a transfer of rights to a third party. *Id.* Second, Apple asserts that the chief authority upon which Andrea relies, *Mann*, expressly defers and expresses no opinion on the key question presented here, namely whether a party has standing to be the sole complainant, and therefore does not provide a shortcut for

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avoiding the “all substantial rights” analysis that Judge Lord properly conducted. *Id.* at 1-2.

Third, Apple argues that whether a licensee is subject to an exclusive license is merely one factor in the “all substantial rights analysis,” rather than being a prerequisite to the analysis. *Id.* at 2.

Apple argues that the *Azure* factors are relevant to the question of standing in this investigation because the factors are the Federal Circuit’s “toolkit” for evaluating the rights possessed by the party asserting the patent. *Id.* at 9. Apple further asserts that the “all substantial rights” analysis is necessary regardless of whether the patentee or licensee files suit. *Id.* (citing and discussing *Mann*, 604 F.3d at 1357-58). Apple then addresses the *Azure* factors to argue that Andrea lacks standing acting alone. *Id.* at 11-16.

### 7. Analysis

In the Inv. 949 ID, the Commission did not review the ALJ’s determination that Andrea had standing to assert the ‘345 patent. That ID addressed the agreements between the parties and the record evidence and determined that AND34 was at most a non-exclusive licensee, and therefore Andrea had standing to sue alone. That ID did not carry out an “all substantial rights” analysis. However, the ID did consider the agreements at length, including many of the factors considered in the “all substantial rights” analysis, to conclude that AND34 was at most a non-exclusive licensee. The instant ID takes the position that the 949 Investigation did not consider all of the evidence and that the ID in Inv. 949 did not address statutory standing, despite the record containing essentially the same evidence.<sup>8</sup> The instant ID does not address whether

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<sup>8</sup> The record evidence related to standing in the two investigations appears to be substantially the same, with the exception being the presence of the Common Interest Agreement in the current investigation. *See* ID at 18 (“There is no mention [in the ALJ’s ID in Inv. 949], for example, of the common interest agreement between Andrea and AND34.”). However, as mentioned above, the RSNPA nullified the Common Interest Agreement. RX-0181C.0004 at §§ 2.03; RX-0181C.15 (noting that the amendment agreement replaces and supersedes the original

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AND34 is an exclusive or non-exclusive licensee, as the Inv. 949 did, and instead considers whether Andrea retained “all substantial rights” in the ’345 patent.

The main point of dispute between the parties is whether Andrea has standing alone or whether AND34 must be joined as a co-complainant. As part of this dispute, the parties disagree on whether the Commission should reach an “all substantial rights analysis.” In order to determine whether Andrea alone has standing, without joining AND34, it must be determined what entities had various interests in the patent.

The Federal Circuit has explained that the following types of plaintiffs have standing with respect to patent infringement suits: (1) “plaintiffs that hold all legal rights to the patent as the patentee or assignee of all patent rights” and (2) exclusive licensees who “hold exclusionary rights and interests created by the patent statutes[.]” *Morrow*, 499 F.3d at 1339-40. The Federal Circuit further explained that, whether the *exclusive* licensee has received “all substantial rights to the patent” determines whether the original patent owner or assignee must be joined in the suit. *Id.* at 1340; *Delano*, 655 F.3d at 1342. Notably, the Federal Circuit explicitly excluded plaintiffs that “hold less than all substantial rights to the patent and lack exclusionary rights under the patent statutes” as having standing, and found that this “standing deficiency cannot be cured by adding the patent title owner to the suit.” *Morrow*, 499 F.3d at 1340-41.

When determining standing, courts look to “the substance of the rights conferred . . . not [] the characterization of those rights as exclusive licenses or otherwise.” *Morrow*, 499 F.3d at 1340 n.7; *Vaupel*, 944 F.2d at 874 75. The critical inquiry is whether the complaining party has enough rights to be considered the patent owner. *Mann*, 604 F.3d at 1360. The Federal Circuit

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agreement); *see also* RX-0319C.1 at “WHEREAS” clause (noting that the Common Interest Agreement applies to the “Revenue Sharing and Note Purchase Agreement” that was entered into on February 14, 2014 between Andrea and AND34).



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explained that, in determining whether a party has received sufficient rights to be considered the owner of a patent, “the nature and scope of the exclusive licensee’s purported right to bring suit, together with the nature and scope of any right to sue purportedly retained by the licensor, is the most important consideration.” *Id.* at 1360-61; *Azure*, 771 F.3d at 1343. “Constitutional injury in fact occurs when a party performs at least one prohibited action with respect to the patented invention that violates these exclusionary rights.” *Morrow*, 499 F.3d at 1332, 1339.

Accordingly, constitutional standing in a patent infringement suit depends on whether a party can establish that it has an exclusionary right in a patent that, if violated by another, would cause the party holding the exclusionary right to suffer legal injury. *See Sicom Sys.*, 427 F.3d at 976 (“A nonexclusive license confers no constitutional standing on the licensee to bring suit or even to join a suit with the patentee because a nonexclusive licensee suffers no legal injury from infringement.”).

There is a legal question as to whether an “all substantial rights” analysis is required in the present situation if the patent owner granted at most a non-exclusive license. The Commission is not aware of, nor has any party cited, any instance in which the Federal Circuit or the Commission has applied the *Azure* “all substantial rights” test to a patent owner/licensor to determine whether it retains standing to sue after it has granted a non-exclusive license.<sup>9</sup> We therefore cannot conclude that we are required to do so in this particular investigation. However, even if we apply the *Azure* “all substantial rights” analysis, we conclude that Andrea retained “all substantial rights” in the patent and has standing, and that AND34 is not a required party.

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<sup>9</sup> In *Optical Drives*, the Commission addressed whether the licensee had standing to enforce the asserted patents. *Optical Drives*, Comm’n Op. at 10-25.

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### (a) AND34 is Granted at Most a Non-Exclusive License

Based on a close review and analysis of the agreements between Andrea and AND34, we find that Andrea has exclusive rights under the RSNPA and has standing to assert the '345 patent in this investigation. We also find that AND34 is granted at most a non-exclusive license, and that Andrea was therefore not required to join AND34 as a complainant in this investigation to have standing.

Section 2.6 of the RSNPA states:

2.6. Patent License. Effective as of the Closing Date, the Company shall grant to the Collateral Agent, for the benefit of the Secured Parties, a *non-exclusive, royalty free, license* (including the right to grant sublicenses) with respect to the Patents, which shall be evidenced by, and reflected in, the Patent License Agreement. The Collateral Agent and the Secured Parties agree that the Collateral Agent shall only use such license following either a Change of Control or an Event of Default arising on account of the Company's failure to comply with Section 6.2; *provided*, that no sub license granted by the Collateral Agent pursuant to the Patent License Agreement shall be revocable by the Company, including on the basis that such Change of Control or Event of Default has been cured.

RX-0181C at §2.6; *see also* § 4.5 ("Company is the . . . record owner of all right, title and interest to all of the Patents"). Section 2.6 refers to a license agreement between Andrea and AND34, but this license agreement is effective only upon a Change of Control or an Event of Default due to Andrea's failure to comply with Section 6.2 of the RSNPA. Moreover, this license agreement provides AND34 only with a non-exclusive, royalty free license granting AND34 the rights to make, have made, market, use, sell, offer for sale, import, export, and distribute the inventions disclosed in the '345 patent. *Id.*; RX-1158C.2 at § 2.1. Nothing else in the record contradicts this provision, which does not grant AND34 exclusive rights to make, use, offer for sale, import, export or distribute the inventions. An exclusive licensee must hold some exclusionary right in the patent in order for there to be legal injury from the act of infringement

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and therefore to have standing to sue for infringement. *WiAV Solutions LLC v. Motorola, Inc.*, 631 F.3d 1257, 1264 (Fed. Cir. 2010); *Mamm*, 604 F.3d at 1361; *Morrow*, 499 F.3d at 1343.

Under this same provision, AND34 is given the right to grant sublicenses of the '345 patent, but again AND34 cannot exercise this right unless there is a Change of Control or an Event of Default. RX-0181C at §2.6. This provision does not give AND34 the right to license or sublicense the '345 patent at this time.

Under section 6.5.2 of the RSNPA, Andrea also retains control over any infringement suit. The RSNPA provides “under no circumstances shall the Purchasers or the Collateral Agent have any right to direct or control the Company’s monetization efforts.” RX-0181C at § 6.5.2. Thus, AND34 cannot “direct or control” any of Andrea’s patent monetization efforts, including any litigation. The RSNPA further states in § 9.9: “This Agreement and Documents constitute the entire understanding of the parties with respect to the subject matter hereof and thereof and supersede all prior and contemporaneous understandings and agreements, whether written or oral.” RX-0181C at §9.9. The Common Interest Agreement cannot change these provisions because the parties expressly noted, when executing the RSNPA, that the Common Interest Agreement is not applicable. RX-0181C at §2.03.

Based on the above discussion, we conclude that (1) AND34 has no exclusionary rights in the asserted patents; (2) AND34 has only a nonexclusive right to make, use, sell, or import products protected by the asserted patents in the event of a Change of Control or Event of Default; (3) Andrea has retained, under the RSNPA, the exclusionary right to the asserted patents; (4) Andrea is the owner of the asserted patents; and (5) as such, Andrea has standing to assert the '345 patent in this investigation. Because we find that AND34 is granted at most a non-exclusive license, Andrea was not required to join AND34 as a complainant in this

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investigation to have standing. *See Sicom Sys.*, 427 F.3d at 976 (“A nonexclusive license confers no constitutional standing on the licensee to bring suit or even to join a suit with the patentee because a nonexclusive licensee suffers no legal injury from infringement.”).

(b) Andrea Retains All Substantial Rights

As discussed above, it is unclear whether, in this situation, an “all substantial rights analysis” is required. However, if it is, consideration of the *Azure* factors shows that Andrea retains all substantial rights.

**Factor 1: Nature and Scope of the Right to Bring Suit**

Section 6.2 of the RSNPA requires that Andrea use its best efforts to diligently pursue monetization of its patents against the [REDACTED] RX-0118C.0026 at § 6.2;

RX-309C. [REDACTED]

[REDACTED] Hr. Tr. at 113:21-114:6.

Section 6.2 of the RSNPA does not require Andrea to sue or threaten to sue the [REDACTED]

[REDACTED] but allows Andrea to satisfy its agreement with attempts to license the patents through discussion, negotiations, or litigation. Hr. Tr. at 123:16-124:13. In addition, the

RSNPA does not require Andrea to monetize the patent against *each* of the [REDACTED]

[REDACTED] and there is nothing that prevents Andrea from pursuing additional infringers that are

[REDACTED] *See generally* RX-0181C; RX-309C; RX-1158C.3 § 4

(even if AND34 brings infringement to Andrea’s attention, Andrea has “the sole right, at its expense, to bring any action on account of any such infringement”); CX-1890C at 196:19-21

(“Q: Can Fortress or AND34 direct Andrea to file a suit against any particular party or infringer?

A: No.”).

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Andrea alone is in control of its litigation strategy. Under the RSNPA, Andrea is given the power to make choices about its monetization efforts. RX-0181C.0028 § 6.5 (“For the avoidance of doubt, under no circumstances shall the Purchasers or the Collateral Agent have any right to direct or control the Company’s monetization efforts.”). The RSNPA further states in § 9.9: “This Agreement and Documents constitute the entire understanding of the parties with respect to the subject matter hereof and thereof and supersede all prior and contemporaneous understandings and agreements, whether written or oral.” RX-0181C at §9.9. The Common Interest Agreement, which is no longer incorporated into the RSNPA, does not change these facts. “Where the licensor retains a right to sue accused infringers, that right often precludes a finding that all substantial rights were transferred to the licensee.” *Mann*, 604 F.3d at 1361.

In *Diamond Coating Technologies, LLC v. Hyundai Motor America*, 823 F.3d 615 (Fed. Cir. 2016), the Federal Circuit found a lack of standing where the licensor retained significant control over the enforcement and litigation activities. *Diamond Coating*, 823 F.3d at 621. Here, while Andrea is required to pursue monetization of its patents, Andrea identified the potential targets, Andrea is not limited in how it pursues its monetization efforts, including whether it approaches targets not on the [REDACTED]. Andrea directs and controls its own litigation activities. Accordingly, on this factor Andrea has only ceded a few limited rights in exchange for monetization funding.

### **Factor 2: Exclusive Right to Make, Use, and Sell Products or Services Under the Patent**

The ID finds that Andrea does not have the right to make, use, and sell products or services under the patent based on the RSNPA. ID at 13. However, we find that the RSNPA does not strip Andrea of its exclusive right to make, use, and sell products and services and does not give AND34 any exclusive right to make, use, or sell products or services.

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Under the RSNPA and Andrea's existing non-exclusive licenses, Andrea retains the exclusive right to make, use, and sell products under the '345 patent. *See, e.g.*, RX-0181C.0019 at § 2.6, RX-0181C.0032 at § 6.13; RX-1158C.2 at § 2.1. While § 6.13 limits Andrea from entering "into any agreement to manufacture and sell any new physical hardware products covered by the Patents to a [REDACTED] or to sell any made-to-specification software covered by the Patents to a [REDACTED] in each case without prior written consent of the Majority Purchasers," Andrea can continue to sell its existing products to anyone and can sell new hardware to entities other than the [REDACTED]. RX-0181C.0032 at § 6.13; Hr. Tr. at 115:5-116:4. Andrea explains that it has earned, and continues to earn, substantial revenue from the [REDACTED] and others via sales and licensing of its existing products. *See, e.g.*, CX-0002C at Q/A 93-137 (detailing some of Andrea's sales and licensing of DI Products and software, including PureAudio, to companies including [REDACTED]); RX-0309C. Andrea further explains that while the [REDACTED] companies (*see* RX-0309C), Andrea's current sales are primarily in the markets for ATM/VTMs, information kiosks, mass transit and automotive communications, home automation, the internet of things, TV set top boxes, audio and video recording and video surveillance, and robotics. *See, e.g.*, JX-0070.8-10. Andrea is unrestricted in selling current or new hardware or software products in these markets. Indeed, the ID finds that the purpose of § 6.13 is simply to protect AND34's share of the revenue stream, and not to provide AND34 with any rights in the '345 patent. ID at 13-14, n.8.

AND34 has no present right to practice the '345 patent or grant sublicenses. *See, e.g.*, RX-0181C.0019 at § 2.6; JX-0019C at 532:8-533:22, 538:1-544:5; JX-0020C at 553:15-16,

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553:19-20,554:1-12, 554:15-17, 554:19-555:2, 555:5-14, 555:17-556:3, 556:5-6, 556:10-11, 569:13-14, 569:17-20, 569:22-570:8, 570:11-15, 570:18-571:7. In the event of a Change of Control of Andrea or Event of Default for Andrea's failure to comply with § 6.2, AND34 may execute a non-exclusive license agreement, but no such event has occurred. RX-0181C.0019 at § 2.6, RX-0181C.0026 at § 6.2. In *Morrow*, the Federal Circuit explains that in order for a party to join as a co-plaintiff, the party must have the right to exclude others from making, using, or selling the invention in the United States and that future interests in a patent were insufficient to find an exclusionary interest exists. *Morrow*, 499 F.3d at 1343.

Thus, Andrea maintains its exclusive right to make, use, and sell the invention of the '345 patent and is restricted only with respect to making, using, or selling in the same business area as the [REDACTED] in order to protect AND34's revenue stream.

### **Factor 3: The Scope of the Licensee's Right to Sublicense**

Andrea holds the sole right to license the '345 patent. Section 2.6 of the RSNPA gives AND34 a non-exclusive license and the right to "sub-license" *only* if there is a Change of Control or in the Event of Default. RX-0181C.0002 at §2.6, RX-0181C.0019 at § 6.2. In the event that there is a Change of Control or Default, the license agreement requires that AND34 obtain written approval from Andrea before entering into any sublicense agreement imposing financial obligations or restrictions on Andrea and it must provide 15 days written notice before entering into such a sublicense agreement. RX-1158at § 2.2. Accordingly, until there is a Change of Control or an Event of Default, AND34 has no right to license the '345 patent at all, let alone sublicense the patent.

The ID finds that § 6.9.1 prohibits Andrea from sublicensing the '345 patent to any

[REDACTED]. ID at 14. However, this finding is in direct conflict with § 6.9.1 of

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the RSNPA and appears to be a misinterpretation of the RSNPA. Section 6.9.1 provides Andrea with the ability to grant settlements and *non exclusive* licenses to a [REDACTED] or others. RX-0181C.0029-30 at §6.9.1. AND34 has no right under the RSNPA to be informed of the negotiations or terms until after execution and cannot control, much less to object to, the negotiations or terms. *See, e.g. id.* In addition, if Andrea desires to sell the patent, AND34 has a right of first refusal and must provide written consent to the sale. *Id.* Otherwise, Andrea may sell the patent and receive the consideration it bargains for, from either AND34 or someone else. *Id.*

Apple argues that Andrea has already assigned the '345 patent to AND34. Apple Rep. Br. at 18 (citing RX-2328C.001). This is not correct because AND34 may only execute this assignment after a Change of Control or Event of Default based on Andrea's failure to comply with §6.2 of the RSNPA. RX-0181C.0035-36 at §7.3. No Change of Control or Event of Default under §6.2 of the RSNPA has occurred, and therefore no rights have yet transferred to AND34 under this provision. *See, e.g.,* JX-0020C at 552:12-556:11; Hr. Tr. at 124:14-16, 125:7-126:11.

### **Factor 4: Reversionary Rights to the Licensor Following Termination or Expiration of the License**

No party addressed this right, and it does not appear to be an issue.

### **Factor 5: Right of the Licensor to receive a portion of the proceeds from litigation or Licensing the Patent**

Under the RSNPA, Andrea and AND34 share the proceeds from licensing or litigating the '345 patent pursuant to the terms of the agreement. *See, e.g.,* RX-0181C.0016-16 at § 2.1 and RX-0181C.0049, .0054-57 definitions of "Revenue Stream," "Monetization Revenues," "Permitted Adjustments," and "Applicable Percentage"; *see* ID at 12. There is no question that



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the right to receive a portion of the proceeds from litigation or licensing was transferred to AND34 in consideration for funding. However, one party's economic interest in proceeds of litigation/licensing alone does not indicate that it holds substantial rights when the other factors weigh in favor of ownership by the other party. *See, e.g., Azure*, 771 F.3d at 1344; *Vaupel*, 944 F.2d at 875 (right to receive infringement damages was merely a means of compensation under the agreement).

### **Factor 6: The Duration of the License Right**

No party addressed this right, and it does not appear to be an issue.

### **Factor 7: Ability to Supervise or Control Licensee's Activities**

The ID states that “[w]hether or not AND34 actually controls Andrea’s use of the patent, it has the right to do so” because “[f]ailure to abide by paragraph 6.2 may result in a default” and “[u]pon the occurrence of a default, Andrea may be required to relinquish the patents to AND34.” ID at 14, n.9. The ID’s findings are based on speculation of what will occur if Andrea defaults, an event that has not occurred.

Under § 6.2 of the RSNPA, AND34 is required to inform Andrea if it believes that Andrea is not complying with its obligations to monetize the patents. JX-0020C at 569:19-570:13; RX-0181C.0026 at §6.2. However, corporate representatives from both Andrea and AND34 testified that AND34 has no right to control Andrea through this or any other provision, and in fact AND34 has not exercised and states that it has no intention to exercise such control. *See, e.g., Hr. Tr.* at 124:14-125:6. Further, § 6.5.2 of the RSNPA expressly states that “under no circumstances shall [AND34] have any right to direct or control [Andrea’s] monetization efforts.” RX-0181C.28 at § 6.5.2.

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The ID relies on the Common Interest Agreement to refute the express language of the RSNPA. ID at 14-15. However, the Common Interest Agreement does not apply to the RSNPA. *See generally* RX-0181C. The Common Interest Agreement states that it applies to the “Revenue Sharing and Note Purchase Agreement” entered into in February 14, 2014. RX-0319C.1 (first “WHEREAS” clause). However, Andrea and AND34 later superseded that Agreement via the RSNPA on December 24, 2014, *see* RX-0181C, which the ID acknowledges is currently operative. ID at 12. The RSNPA §9.9 states “[t]his Agreement and the Documents constitute the entire understanding of the parties with respect to the subject matter hereof and thereof and supersede all prior and contemporaneous understandings and agreements, whether written or oral.” RX-0181C.0042 at §9.9. The Common Interest Agreement is not among the “Documents” that pertain to the ’345 patent under the RSNPA.

The ID argues that the Common Interest Agreement “refutes conclusively Andrea’s assertion that AND34 does not control Andrea’s patent assertion activities.” *See* ID at 15. However, on that same page, the ID acknowledges that the RSNPA explicitly states that “under no circumstances shall AND34 have any right to direct or control [Andrea’s] monetization efforts. *Id.* Under the plain language of the RSNPA and in view of the documents and testimony in the record, it is clear that AND34 does not have any right to direct or control Andrea’s monetization efforts. In addition, AND34 has limited rights to receive information from Andrea concerning its monetization efforts and expenses. *See, e.g.*, RX-0181C.0026-28 at §§ 6.5-6.6; JX-0019C at 532:8-533:22, 538:1-544:5; JX-0020C, 558:22-564:8.

### **Factor 8: Obligation of Licensor to Continue Paying Maintenance Fees**

Pursuant to § 6.9.2 of the RSNPA, Andrea retains the obligation to pay maintenance fees on the ’345 patent. *See, e.g.*, RX-0181C at § 6.9.2 (“the Company shall, at its own expense, take

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all reasonable steps to pursue the registration and maintenance of each Patent and shall take all reasonably necessary steps to preserve and protect each Patent”).

### Factor 9: Any Limits on the Licensee’s Right to Assign its Interests in the Patent

While the ID concludes that Andrea cannot grant sublicenses to any [REDACTED] (ID at 14), the ID does not actually address this right. As mentioned above, however, § 6.9.1 provides Andrea with the ability to grant settlements and *non-exclusive* licenses to a [REDACTED] or others. RX-0181C.0030 at §6.9.1. AND34 has no right under the RSNPA to be informed of the negotiations or terms until after execution and cannot control, much less to object to, the negotiations or terms. *See, e.g. id.* If Andrea desires to sell the patent, AND34 has a right of first refusal and must provide written consent to the sale. Otherwise, Andrea may sell the patent and receive the consideration it bargains for, from either AND34 or someone else. *Id.*

Under §6.2 and §2.6 of the RSNPA, AND34 would be granted a non-exclusive license only after a Change of Control or an Event of Default under § 6.2 of the RSNPA, and at that point may sublicense. RX-0181C.0026, .0019 at §§6.2, 2.6. However, no Change of Control or Event of Default has occurred and thus AND34 currently has no right to sublicense the ’345 patent.

In summary, while the RSNPA agreement does have some limited impact on Andrea’s rights, we find that Andrea has retained all substantial rights in the ’345 patent. Considering the factors above, Andrea (1) has the sole right to bring and control any infringement actions, (2) must maintain the ’345 patent; (3) has control over licensing and litigation decisions, with the exception that Andrea cannot grant an exclusive license without AND34’s permission; (4) has the right to make, use, and sell products using the invention of the ’345 patent as long as it does

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not sell new products to the [REDACTED] and (5) will eventually receive profits from its monetization efforts. Conversely, AND34 only (1) has the right to a non-exclusive license in the event of a Change of Control or an Event of Default; (2) has the right to execute a patent assignment in the event of a Change of Control or an Event of Default; (3) has the right to receive information on Andrea's monetization efforts; (4) has the right to receive revenue from Andrea's monetization efforts; and (5) has the first right of purchase of the '345 patent. Based on a consideration of these rights, the evidence establishes that Andrea retains all substantial rights in the '345 patent. Accordingly, even applying the "all substantial rights" analysis, Andrea has standing to bring this investigation.<sup>10</sup>

### **B. Infringement of The '345 Patent**

The Commission determined to review the ID's findings on infringement. On review, the Commission takes no position on infringement.

### **C. Domestic Industry**

#### **1. Technical Prong**

Section 337 declares unlawful the importation, the sale for importation or the sale in the United States after importation of articles that infringe a valid and enforceable U.S. patent "only

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<sup>10</sup> The parties also raise a number of other considerations that purportedly should be taken into account in assessing standing, such as preventing multiple lawsuits on the same patent against the same accused infringer. *See* Andrea Pet. at 23-25; Apple Rep. at 28-31. Here, Andrea is the sole owner of the '345 patent. Unless there is a Change of Control or an Event of Default under § 6.2 of the RSNPA, AND34 cannot bring suit against Apple. While AND34 does have an interest in revenue from Andrea's monetization of the '345 patent, as well as other insubstantial rights, AND34 could not bring an action alone against Apple. Therefore, there is not currently a possibility of multiple lawsuits on the same patent against the same accused infringer. Second, while AND34 is entitled to a revenue stream from any monetization of the patents, AND34 explicitly relinquished control of Andrea's monetization efforts unless Andrea fails to use its "best efforts" to monetize the patent. Accordingly, we do not find that these considerations warrant requiring AND34 to have joined this investigation as a co-complainant.

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if an industry in the United States, relating to articles protected by the patent . . . concerned, exists or is in the process of being established.” 19 U.S.C. § 1337 (a)(2); *Certain Ammonium Octamolybdate Isomers*, Inv. No. 337-TA-477, Comm’n op. at 55 (Jan. 2004). Under Commission precedent, this “domestic industry requirement” of section 337 consists of an economic prong (*i.e.*, the activities of, or investment in, a domestic industry) and a technical prong (*i.e.*, whether complainant’s articles are protected by the asserted intellectual property rights). *Certain Stringed Musical Instruments and Components Thereof*, Inv. No. 337-TA-586, Comm’n Op. at 12-14, 2009 WL 5134139 (Dec. 2009). The burden is on the complainant to show by a preponderance of the evidence that the domestic industry requirement is satisfied. *Certain Multimedia Display and Navigation Devices and Systems, Components Thereof and Products Containing Same*, Inv. No. 337-TA-694, Comm’n Op. at 5 (July 22, 2011).

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); *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 (Jan. 16, 1996). “In order to satisfy the technical prong of the domestic industry requirement, it is sufficient to show that the domestic industry practices any claim of that patent, not necessarily an asserted claim of that patent.” *Certain Ammonium Octamolybdate Isomers*, Inv. No. 337-TA-477, Comm’n Op. at 55 (Jan. 2004).

The test for claim coverage for the purposes of the technical prong of the domestic industry requirement is the same as that for infringement. *Certain Doxorubicin and Preparations Containing Same*, Inv. No. 337-TA-300, Initial Determination at 109, 1990 WL

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710463 (May 21, 1990), *aff'd*, Views of the Commission at 22 (October 31, 1990); *Alloc. Inv. 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. The technical prong of the domestic industry can be satisfied either literally or under the doctrine of equivalents. *See Certain Refrigerators and Components Thereof*, Inv. No. 337 TA 632, Comm'n Op. on Remand at 66-67 (Mar. 11, 2010) (public ver.) (affirming Final ID's finding that technical prong was satisfied under the doctrine of equivalents).

### (a) The ID

Andrea relied on its Segment 300 products to satisfy the domestic industry requirement and identified the specific products that implement versions of its PureAudio algorithm. ID at 81-82. The ID provides a table that identifies the categories of DI products and the corresponding claim they are asserted to practice. *Id.* at 82.

The ID addresses independent claims 1 and 38, and determines that the limitations “a frequency spectrum generator for generating the frequency spectrum of said audio signal thereby generating frequency bins of said audio signal” (claim 1) and “generating the frequency spectrum of said audio signal thereby generating frequency bins of said audio signal” (claim 38) are not met by the DI products. *Id.* at 83-91. The ID finds that the other limitations of the independent claims are met. *Id.* at 83, 91.

The ID finds that the asserted claims require a means or a step of generating the frequency spectrum of a signal so as to generate “frequency bins.” *Id.* at 83. The ID explains that the parties agreed that the claimed “frequency bins” are “frequency domain outputs extending between two limiting frequencies.” *Id.* (citing Order No. 34 at 1-2). The ID notes that Apple and OUII argue that the DI products do not satisfy the “frequency bin” limitation because

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the DI products split the audio signal into sub-bands that are in the time domain, not the frequency domain. *Id.*

The ID explains that it is undisputed that the DI products [REDACTED]  
[REDACTED]  
[REDACTED]. *Id.* at 83-84 (citing Andrea's Opposition to Respondents' Motion for Summary Determination of No Domestic Industry (June 22, 2017), Response to Respondents' Undisputed Material Fact No. 12; Hr. Tr. (Delaco) at 320:18-22). The ID notes that the '637 patent was filed more than a year after the '345 patent and explicitly discusses the application that issued as the '345 patent. *Id.* at 84. The ID states:

The specification of the '637 patent explicitly discusses the application that issued as the '345 patent, noting that the method described in the '345 patent "require[s] complex and computationally intense FFT calculations in order to operate on the data while in the frequency domain." One of the objects of the '637 patent is to avoid such complex calculations in favor of "a simple, yet efficient mechanism, to estimate and subtract noise." To attain its objectives, the '637 patent discloses a method that includes "a band splitter for dividing the digital input signal into a number of frequency-limited time-domain signal sub-bands."

*Id.* (citations omitted). The ID asserts that the sub-bands taught in the '637 patent are consistently described as in the time domain. *Id.* at 84-85. Indeed, the ID explains that the invention of the '637 patent claims has an advantage over the prior art that operates in the "frequency domain." *Id.* at 85. The ID finds that the specification of the '637 patent clearly describes an algorithm that splits the signal into time domain sub-bands, not frequency domain outputs. *Id.* at 86. The ID further finds that the DI products split the signals into time domain bands, not frequency bands as described in the '637 patent. *Id.*

The ID notes that Andrea [REDACTED]  
[REDACTED]. But the ID finds that this step, as

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described by the '637 patent, is an intermediate step that does not convert an input signal to its frequency representation. *Id.* at 87. The ID relies on teachings in the '637 patent and testimony regarding the same from Dr. Spencer, Apple's expert, and others. *Id.* at 87-89. The ID also finds that Mr. DeJaco's identification [REDACTED] does not show that the DI products practice the frequency spectrum limitation of the '345 patent. *Id.* at 89. The ID rejects Mr. DeJaco's testimony that the DI products represent a hybrid "time-frequency domain analysis" concluding that there is no such hybrid analysis in either the '345 or '637 patents. *Id.* at 89-90. The ID also rejects Andrea's suggestion that the '345 and '637 patents operate in some kind of hybrid time-frequency domain as attorney argument, backed only by unsupported expert testimony. *Id.* at 90. The ID finds:

The record evidence points to the clear conclusion that the Andrea DI products, using the algorithm described in the '637 patent, generate frequency-limited time domain sub-bands. And these time domain sub-bands do not meet the frequency spectrum generator limitations of the '345 patent that require a frequency spectrum consisting of frequency bins of the audio signal.

*Id.* The ID concludes that because the DI products do not satisfy the "frequency spectrum generator" limitation of claim 1 or claim 38, the DI products do not practice any asserted claim of the '345 patent. *Id.* at 91.

### (b) The Parties' Positions

Andrea asserts that the ID erred in finding that the DI products do not meet the parties' agreed-upon construction of "frequency bins" because the ID finds that the DI products allegedly do not generate frequency domain outputs, but rather time domain outputs. Andrea Pet. at 44. Andrea explains that the sole issue for review is whether the DI products operate in the frequency domain. *Id.* at 45. Andrea asserts that the ID's failure to interpret and apply "frequency domain" as it is used in the parties' agreed upon construction of "frequency bins" is



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clear error. *Id.* at 48. Andrea further argues that the ID erred in finding that the DI products operate exclusively in the time domain and that the ID's reliance on its finding that the '637 patent does not describe operation in the "frequency domain" is contrary to the record evidence. *Id.* at 48-49. Andrea further asserts that the record establishes that the DI products generate frequency-limited signals without the time component. *Id.* Finally, Andrea argues that the actual evidence establishes that the DI products operate in both the time domain and the frequency domain. *Id.* at 50-51.

OUII contends that the ID correctly finds that Andrea did not meet its burden to show that its DI products satisfy the "frequency bin" limitations of the '345 patent because its products do not produce frequency domain outputs, but instead split audio signals into time domain sub-bands. OUII Rep. at 8-9. OUII asserts that Andrea has admitted that its DI products split audio signals into time-domain sub-bands using the technique described in the '637 patent, which describes splitting an audio input signal to generate time domain samples, as opposed to frequency domain samples. *Id.* at 9. OUII argues that Andrea's contention that the technique described in the '637 patent produces frequency domain outputs appears to be inconsistent with the statements made in the '637 patent distinguishing its time domain techniques from those performed in the frequency domain. *Id.* at 10. Therefore, OUII asserts that the ID's findings that the technical prong is not met is correct. *Id.*

Apple argues that the ID properly considered the evidence, in light of the parties' agreement that "frequency bins" means "frequency domain output extending between two limiting frequencies," to find that the DI products do not practice any claim of the '345 patent. Apple Rep. at 53. Apple explains that Andrea's challenge is directed solely to whether the ID properly weighed the evidence to find that Andrea's products create time domain sub-band

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signals and not frequency domain outputs. *Id.* Apple asserts that “[t]he evidence showed that the terms ‘frequency domain’ and ‘time domain’ are technical terms that refer to different mathematical representations of an audio signal.” *Id.* at 54. Apple explains that the testimony from Dr. Spencer and Dr. Kyriakakis supports the ID’s finding that the time domain sub-band signals created by a [REDACTED] [REDACTED] in the DI products are not “frequency bins.” *Id.* at 54-56. Apple also argues that Andrea’s definition of “frequency domain” is not supported by the record. *Id.* at 56-58. Apple explains that Andrea and Mr. DeJaco admitted that the DI products [REDACTED] [REDACTED] and, thus, it was proper for the ID to consider Andrea’s own description of that [REDACTED] when weighing the evidence. *Id.* at 59. Finally, Apple explains that Andrea’s argument that its products create a hybrid “time-frequency domain” suffers from numerous problems. *Id.* at 60-62.

### (c) Analysis

The Commission determined to review the ID’s findings on the technical prong of the domestic industry requirement. The parties’ dispute centers on whether the DI products generate “frequency bins” found in the limitations “a frequency spectrum generator for generating the frequency spectrum of said audio signal thereby generating frequency bins ‘of said audio signal’ (claim 1)/“generating the frequency spectrum of said audio signal thereby generating frequency bins of said audio signal” (claim 38). The parties agreed that the term “frequency bins” means “frequency domain outputs extending between two limiting frequencies.” *See e.g.*, Andrea Pet. at 45; ID at 30. Under the parties’ agreed-upon construction of “frequency bins,” these claim limitations require the generation of “a frequency spectrum” which thereby generates “frequency domain outputs extending between two limiting frequencies.”

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An audio signal is an electrical signal that represents a physical sound wave. RX-0005C (Spencer) at Q/A 15-18 (discussing RDX-0005C.0002-3). Because the audio signal represents how a sound wave changes over time, Dr. Spencer testified that such a signal is considered to be in the “time domain.” *Id.* at Q/A 16. In contrast, a “frequency domain” representation of an audio signal provides a summary of the frequency content of a frame of the signal, depicting the amplitude of each frequency that is present in the frame but not the oscillation of that frequency over time. *Id.* at Q/A 24-26, 72; Hr. Tr. 746:24-747:9, 753:20-754:3.

Andrea now tries to assert that the experts agreed that a signal is in the “frequency domain” if “it can be analyzed or processed as a function of its frequency.” Andrea Pet. at 46. However, Dr. Spencer and Dr. Kyriakakis rejected this interpretation and Andrea takes certain statements of their testimony out of context. Dr. Kyriakakis testified that the term did not refer to splitting a signal into frequency components. RX-0003C (Kyriakakis) at Q/A 21, 17. Dr. Spencer explained that it is possible to split a signal into frequency components without converting it into the frequency domain but such actions do not generate frequency bins. RX-0005C at Q/A 43; *see also id.* at Q/A 71-74, 42, 44-55, 64. The testimony from Apple’s experts does not support Andrea’s position and the Commission does not adopt the position advanced by Andrea.

Andrea requested that the Commission review the ID’s findings in part based on the ID’s reliance on the descriptions of “frequency domain” and “time domain” in the ’637 patent, which is owned by Andrea and also shares a named inventor with the ’345 patent. Andrea Pet. 47-51. While we agree that usually a comparison of the DI products to an unasserted patent is not appropriate, the ID relied on admissions from Andrea and its expert, Mr. DeJaco, that the DI products

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██████████ as outputting time domain sub-band signals. ID at 83-84; Hr. Tr. 320:18-22, 342:5-7; ██████████ see *id.* 21:14-16, 321:10-22; Andrea's Opposition to Respondents' Motion for Summary Determination of No Domestic Industry (June 22, 2017), Response to Respondents' Undisputed Material Fact No. 12. The '637 patent states that the outputs of the filter bank are time domain outputs. RX-0051 at 4:66-5:12, 4:49-51; RX-0005C at Q/A 39-44, 50-51. The ID's reliance on such admissions from Andrea was proper. Andrea also asserts that the ID improperly discounted Mr. DeJaco's testimony. However, the ID properly weighed the evidence to reach its findings and the ALJ was entitled to find some evidence more credible. In addition to comparing the DI products to the '637 patent, the ID relied on testimony from Apple's experts who examined the DI product's software code to conclude it operates in the time domain.

The relevant evidence supports the ID's conclusion that the DI products operate in the time domain. Dr. Spencer describes at least two processes for splitting an audio signal into frequency components. The first process uses an FFT, as described in the '345 patent, to convert an audio signal to the frequency domain by generating frequency bins. RX-0005C (Spencer) at Q/A 42-44, 59. Another process, the DFT-SSB filter bank, separates the audio signal into frequency-limited sub-bands that are time domain signals. *Id.* at Q/A 42-47, 50-52. While time domain sub-bands can be played over a speaker, frequency bins cannot. *See e.g., id.* at Q/A 27-28, 54. The frequency components created by each of these processes are different and have different properties. *Id.* at Q/A 59, 51, 52, 57, 59. Dr. Spencer also explained that the two approaches are mutually exclusive, and therefore, if a splitting function outputs time domain sub-band signals it cannot also generate frequency domain outputs. *Id.*

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Dr. Spencer analyzed Andrea's source code and concluded that the DI products [REDACTED] split a signal into time domain sub-band signals, consistent with the algorithm that is described in the '637 patent and the Crochiere textbook. *See e.g., id.* at Q/A 63-64, 66. Dr. Spencer [REDACTED] [REDACTED] RX-0005C at Q/A 89-92. As Dr. Spencer explained [REDACTED] [REDACTED] RX-0005C at Q/A 91-92; *see also* Compl. Ex. 25 at 13 (Andrea admitting [REDACTED] [REDACTED]).

Therefore, Dr. Spencer testified that the DI products do not generate frequency bins, which are "frequency domain outputs extending between two limiting frequencies." RX-0005C at Q/A 89-94; *see also id.* at Q/A 87-88, 95-100.

Andrea takes issue with the ID's findings that the splitter output is not in the frequency domain. Andrea Pet. at 47-48. As the ID found, Benjamin Faber, an Andrea engineer, [REDACTED] [REDACTED] JX-0023C at 129:36; ID at 86. Dr. Spencer analyzed [REDACTED] [REDACTED] *See* RX-0005C at Q/A 62-70, 72-79, 81, 85-139. Dr. Spencer explained that splitting signals into sub-bands is a common operation in signal processing, which "generate[s] time domain sub-band signals instead of frequency bins." *Id.* at Q/A 43. Similarly, Dr. Kyriakakis testified: "It is common in signal processing to divide a broadband signal into a set of frequency-limited signals that remain in the time domain. . . . But the signals are not in the frequency domain, because each signal can

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<sup>11</sup> The operation of the DA-250 product is exemplary of the other DI products. Hr. Tr. 318:17-319:22 (Mr. DeJaco agreeing [REDACTED]).

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still be played over loudspeakers.” RX-0003C at Q/A 21. [REDACTED]

in the DI products “does not operate [REDACTED]

[REDACTED]

[REDACTED] RX-0005C at Q/A 93; *see also id.* at Q/A 92, 94. [REDACTED]

[REDACTED]

[REDACTED]. *Id.* Moreover, Mr. DeJaco admitted that he did not

consider [REDACTED] when

he offered his direct testimony, explaining that those processing steps [REDACTED]

[REDACTED] Hr. Tr.

337:19-338:3; *see also id.* at 337:10-338:5. Thus, Mr. DeJaco overlooked that [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]. RX-0011 (Cohen) at Q/A 99. Later, Mr. DeJaco reluctantly agreed that his opinion was that the FFT alone creates the frequency bins. Hr. Tr. 333:8-335:4.

Andrea also admitted prior to the hearing that [REDACTED]

[REDACTED] create time domain sub-band signals: (i) through the testimony of its corporate

representative Ben Faber; (ii) in response to Respondents’ Statement of Material Facts

submitted with Respondents’ Motion for Summary Determination; and (iii) in its Complaint

when it contended [REDACTED] that output time domain

sub-bands. *See* Andrea’s Opposition to Respondents’ Motion for Summary Determination of No

Domestic Industry (June 22, 2017), Response to Respondents’ Undisputed Material Fact No. 12-

15; Compl. Ex. 25 at 12-13 [REDACTED]

[REDACTED]

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[REDACTED]). For example, Mr. Faber [REDACTED]

[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]

JX-0023C (Faber Dep.) 141:3-6 (emphases added). Mr. Faber explained [REDACTED]

[REDACTED]

[REDACTED]  
[REDACTED]

JX-0023C 129:4-6 (emphases added); *see also id.* at 180:16-22, 140:17-141:2, 147:13-18, 184:9-17, 258:13-16.

Because Andrea's domestic industry products [REDACTED]

[REDACTED], those products do not generate or operate on "frequency bins," which must be "*frequency domain outputs extending between two limiting frequencies.*" The evidence establishes that both the

[REDACTED]. Thus, Andrea's

products do not practice any of the asserted claims of the '345 patent. Accordingly, the Commission affirms the ID's findings on these limitations with **additional reasoning**. However, the Commission does not take a position on whether the limitations of "a threshold detector for setting a threshold for each frequency bin . . . and for detecting for each frequency bin whether the magnitude of the frequency bin is less than the corresponding threshold" (claim 1)/"setting a threshold for each frequency bin using a noise estimation process" and "detecting for each frequency bin whether the magnitude of the frequency bin is less than the corresponding threshold" (claim 38) are met by the DI products.

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**2. Economic Prong**

The ID's findings on domestic industry were limited to finding no domestic industry because the technical prong was not met. The Commission determined to review the ID's findings on the economic prong of the domestic industry requirement. The Commission takes no position on the economic prong of domestic industry.

**D. Invalidity**

The Commission determined to review the ID's invalidity findings. The Commission takes no position on invalidity.

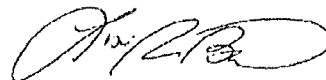
**E. Inequitable Conduct**

The Commission determined to review the ID's findings on inequitable conduct. The Commission takes no position on inequitable conduct.

**VI. CONCLUSION**

For the forgoing reasons, the Commission finds that no violation of section 337 has occurred. The Commission reverses the ID's finding on standing and finds that Andrea has standing to assert the '345 patent; affirms, with additional reasoning, the ID's finding that the technical prong of the domestic industry requirement was not met; and takes no position on the remaining issues under review, including infringement, invalidity, inequitable conduct and the economic prong of the domestic industry requirement.

By order of the Commission.



Lisa R. Barton  
Secretary to the Commission

Issued: April 18, 2018



**CERTAIN AUDIO PROCESSING HARDWARE,  
SOFTWARE, AND PRODUCTS CONTAINING THE SAME**

Inv. No. 337-TA-1026

**PUBLIC CERTIFICATE OF SERVICE**

I, Lisa R. Barton, hereby certify that the attached **Commission Opinion** has been served by hand upon the Commission Investigative Attorney, Whitney Winston, Esq., and the following parties as indicated, on 4/18/2018



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