

UNITED STATES INTERNATIONAL TRADE COMMISSION  
WASHINGTON, D.C.

Before The Honorable \_\_\_\_\_  
Administrative Law Judge

In the Matter of )  
)  
CERTAIN AUDIO PROCESSING ) Investigation No. 337-TA-\_\_\_\_  
HARDWARE AND SOFTWARE AND )  
PRODUCTS CONTAINING SAME )  
)

**VERIFIED COMPLAINT UNDER SECTION 337  
OF THE TARIFF ACT OF 1930, AS AMENDED**

**COMPLAINANT:**

Andrea Electronics Corp.  
65 Orville Drive, Suite One  
Bohemia, NY 11716  
U.S.A.  
Tel: 631-719-1800

**COUNSEL FOR COMPLAINANT:**

Goutam Patnaik  
Tuhin Ganguly  
David J. Shaw  
Kelly E. Rose  
Pepper Hamilton LLP  
Hamilton Square  
600 Fourteenth Street, N.W.  
Washington, DC 20005-2004  
Tel: 202-220-1200  
Fax: 202-220-1665

William D. Belanger  
Frank D. Liu  
Suparna Datta  
Gwendolyn E. Tawresey  
Pepper Hamilton LLP  
19th Floor, High Street Tower  
125 High Street  
Boston, MA 02110-2736  
Tel: 617-204-5100  
Fax: 617-204-5150

**RESPONDENTS:**

Acer Inc.  
8F, 88, Sec. 1, Xintai 5<sup>th</sup> Rd. Xixhi,  
New Taipei City 221, Taiwan  
Tel: 866-2-2696-1234

Acer America Corp.  
333 West San Carlos Street, Suite 1500  
San Jose, CA 95110  
Tel: 508-533-7700

ASUSTeK Computer Inc.  
No. 15, Li-Te Rd., Beitou District,  
Taipei 112, Taiwan  
Tel: 866-2-2894-3447

ASUS Computer International  
800 Corporate Way  
Fremont, CA 94539  
Tel: 510-739-3777

Dell Inc.  
One Dell Way  
Round Rock, TX 78682  
Tel: 512-338-4400

Hewlett Packard Co.  
3000 Hanover Street  
Palo Alto, CA 94304-1185  
Tel: 650-857-1501

Lenovo Group Ltd.  
Shangdi Information Industry Base  
No 6 Chuang Ye Road, Haidan District  
100085 Beijing, China  
Tel: 86-10-5886-8888

Lenovo Holding Co., Inc.  
1009 Think Place  
Morrisville, NC 27650  
Tel: 855-253-6686

Lenovo (United States) Inc.  
1009 Think Place  
Morrisville, NC 27650  
Tel: 855-253-6686

Toshiba Corp.  
1-1, Shibaura 1-chome,  
Toshiba Building,  
Minato-Ku,  
Tokyo 105-8001, Japan  
Tel: 81-3-3457-4511

Toshiba America, Inc.  
1251 Avenue of the Americas  
Suite 4110  
New York, NY 10020  
Tel: 212-596-0600

Toshiba America Information Systems, Inc.  
9740 Irvine Boulevard  
Irvine, CA 92618  
Tel: 949-461-4321

Realtek Semiconductor Corp.  
No. 2, Innovation Road II,  
Hsinchu Science Park,  
Hsinchu 300, Taiwan  
Tel: 886-3-578-0211

## TABLE OF CONTENTS

I.	INTRODUCTION .....	1
II.	THE PARTIES.....	3
	A. Complainant.....	3
	B. Respondents .....	7
	1. Acer Inc.....	7
	2. Acer America Corp. ....	7
	3. ASUSTeK Computer Inc. ....	8
	4. ASUS Computer International .....	8
	5. Dell Inc.....	8
	6. Hewlett Packard Co. ....	9
	7. Lenovo Group Ltd.....	9
	8. Lenovo Holding Co., Inc. ....	9
	9. Lenovo (United States) Inc. ....	10
	10. Toshiba Corp.....	10
	11. Toshiba America, Inc.....	11
	12. Toshiba America Information Systems, Inc. ....	11
	13. Realtek Semiconductor Corp. ....	12
III.	THE ASSERTED PATENTS .....	12
	A. The '898 Patent .....	13
	1. Foreign Counterparts to the '898 Patent .....	13
	B. The '923 Patent .....	14
	1. Foreign Counterparts to the '923 Patent .....	15
	C. The '607 Patent .....	15
	1. Foreign Counterparts to the '607 Patent .....	16
	D. The '345 Patent .....	17
	1. Foreign Counterparts to the '345 Patent .....	17
	E. The '637 Patent .....	18
	1. Foreign Counterparts to the '637 Patent .....	19
	F. Licensees to the Asserted Patents .....	19
IV.	NON-TECHNICAL DESCRIPTION OF THE PATENTED TECHNOLOGY .....	19
	A. The '898 and '923 Patents – System and Method for Adaptive Interference Cancelling .....	20
	B. The '607 Patent – Interference Canceling Method and Apparatus.....	21
	C. The '345 Patent – System, Method and Apparatus for Cancelling Noise .....	21
	D. The '637 Patent – Sub-Band Exponential Smoothing Noise Canceling System.....	22
V.	UNFAIR ACTS OF THE RESPONDENTS .....	22
	A. Infringement.....	23
	1. The '898 Patent .....	23
	a. Acer.....	23
	b. Asus.....	26

	c.	Dell.....	28
	d.	HP .....	31
	e.	Lenovo .....	34
	f.	Toshiba.....	36
	g.	Realtek .....	39
2.		The '923 Patent.....	42
	a.	Acer.....	42
	b.	Asus.....	45
	c.	Dell.....	47
	d.	HP .....	50
	e.	Lenovo .....	52
	f.	Toshiba.....	55
	g.	Realtek .....	58
3.		The '607 Patent.....	61
	a.	Acer.....	61
	b.	Asus.....	63
	c.	Dell.....	66
	d.	HP .....	69
	e.	Lenovo .....	72
	f.	Toshiba.....	74
	g.	Realtek .....	77
4.		The '345 Patent.....	80
	a.	Acer.....	80
	b.	Asus.....	83
	c.	Dell.....	85
	d.	HP .....	88
	e.	Lenovo .....	91
	f.	Toshiba.....	94
	g.	Realtek .....	96
5.		The '637 Patent.....	99
	a.	Acer.....	99
	b.	Asus.....	102
	c.	Dell.....	104
	d.	HP .....	107
	e.	Lenovo .....	110
	f.	Toshiba.....	113
	g.	Realtek .....	115
B.		Specific Instance of Sale and Importation .....	118
	1.	Acer.....	118
	2.	Asus.....	118
	3.	Dell.....	119
	4.	HP .....	119
	5.	Lenovo .....	120
	6.	Toshiba.....	120
	7.	Realtek .....	121

VI.	HARMONIZED TARIFF SCHEDULE INFORMATION .....	121
-----	--	-----

VII. RELATED LITIGATION ..... 122

VIII. DOMESTIC INDUSTRY RELATING TO THE ASSERTED PATENTS ..... 124

    A. Andrea’s Significant Investment in Plant and Equipment ..... 124

    B. Andrea’s Significant Employment of Labor and Capital ..... 125

    C. Andrea’s Substantial Investment in the Exploitation of the Asserted  
        Patents ..... 125

    D. Andrea’s Practice of the Asserted Patents ..... 125

IX. RELIEF ..... 126

## I. INTRODUCTION

1. Complainant Andrea Electronics Corporation (“Andrea”) files this complaint pursuant to Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337 (“Section 337”). Andrea respectfully requests that the United States International Trade Commission (the “Commission”) institute an investigation relating to the unlawful importation into the United States, the sale for importation into the United States, and/or the sale within the United States after importation, of certain audio processing hardware and software and products containing the same.

2. The Respondents are Acer Inc., Acer America Corp., ASUSTeK Computer Inc., ASUS Computer International, Dell Inc., Hewlett Packard Co., Lenovo Group Ltd., Lenovo Holding Co., Inc., Lenovo (United States) Inc., Toshiba Corp., Toshiba America, Inc., Toshiba America Information Systems, Inc., and Realtek Semiconductor Corp. (collectively, “Respondents”).

3. Respondents have violated and continue to violate Section 337 through the importation, sale for importation, and/or the sale within the United States after importation of certain audio processing hardware and software and products containing the same that directly infringe, literally or under the doctrine of equivalents, Andrea’s United States Patent No. 5,825,898 (the “898 Patent”), United States Patent No. 6,483,923 (the “923 Patent”), United States Patent No. 6,049,607 (the “607 Patent”), United States Patent No. 6,363,345 (the “345 Patent”), and United States Patent No. 6,377,637 (the “637 Patent”) (collectively, “Asserted Patents”) to the detriment of Andrea’s industry that exists in the United States relating to the Asserted Patents.

4. In addition to their direct infringement, Respondents have also violated and continue to violate Section 337 through the importation, sale for importation, and/or the sale.

within the United States after importation, of certain audio processing hardware and software and products containing the same that indirectly infringe, literally or under the doctrine of equivalents, by induced or contributory infringement, Andrea's Asserted Patents to the detriment of Andrea's industry that exists in the United States relating to the Asserted Patents.

Respondents have knowledge of the Asserted Patents and infringement allegations at least as of the filing of Andrea's earlier-filed complaints against each Respondent in the United States District Court for the Eastern District of New York (*see infra*, Section VII. "Related Litigation") and have continued to provide their audio processing hardware and software and products containing the same to the marketplace in a manner that indirectly infringes Andrea's Asserted Patents.

5. Andrea asserts that each Respondent infringes the following claims:

Asserted Patent	Asserted Claims
'898	1-28
'923	1-16
'607	1-12 and 25-37
'345	1-25, 38-40, and 42-47
'637	1-14

6. To remedy Respondents' continuing and unlawful violation of Section 337, Andrea seeks as permanent relief a limited exclusion order, pursuant to 19 U.S.C. § 1337(d), barring from entry into the United States all Respondents' audio processing hardware and software and products containing the same that infringe one or more of the claims of the Asserted Patents. Andrea also seeks cease and desist orders pursuant to 19 U.S.C. § 1337(f) prohibiting each domestic Respondent from engaging in the importation into the United States and/or the sale within the United States after importation of audio processing hardware and

software and products containing the same that infringe one or more claims of the Asserted Patents. Further, Andrea requests that the Commission impose a bond upon Respondents' importation of infringing audio processing hardware and software and products containing the same during the 60-day Presidential review period, pursuant to 19 U.S.C. § 1337(j), to prevent further injury to Andrea's domestic industry relating to the Asserted Patents.

## **II. THE PARTIES**

### **A. Complainant**

7. Complainant Andrea is a publicly-held company with its corporate headquarters located in Bohemia, New York. Andrea engages in substantial research and development related to audio technology and has developed microphone hardware and software that provides solutions to current sound fidelity challenges.

8. Andrea is a leading industry developer of product solutions which optimize the performance of voice user interfaces and has a decorated history. Its technology has been applied to products related to, among other things, VoIP telephony, VoIP teleconferencing, video conferencing, speech recognition, computer gaming, in-car computing, and 3D audio recording.

9. The leadership of Andrea has spanned three familial generations over 80 years. Andrea's products are featured in the Henry Ford Museum and Smithsonian National Museum of American History.

10. In the early 1900s, Frank Andrea, an Italian immigrant, started his business career. He began as an electroplater for I.P. Frink manufacturing company and studied at night as a tool maker and machinist at the Mechanic's Institute in New York City. In 1913 he joined the Frederick Pierce Company and, after the outbreak of World War I, worked to design tools to manufacture parts for a new aircraft radio receiver that he had built. Mr. Andrea soon thereafter started his own company, FADA.



11. As founder of FADA, Mr. Andrea employed his family members, including his 16 year-old brother, John. FADA picked up momentum when Mr. Andrea convinced Marconi, the predecessor of RCA, to place an order for radio parts. FADA began manufacturing parts for crystal sets and "Do It Yourself" kits. FADA also soon began manufacturing parts such as sockets and rheostats for tube type radios.

12. After selling his controlling interest in FADA, Mr. Andrea founded the Andrea Radio Corporation ("Andrea Radio"). Andrea Radio's offerings evolved over time. In 1939, Andrea Radio developed and produced one of the first television sets, which was displayed at the World's Fair in Queens, New York. Andrea Radio sold TV kits and the first television console models that also housed a radio and phonograph. In 1954, Andrea Radio began developing a color television and introduced a set in 1957.

13. During the Second World War, the firm engaged in the production of military electronics. In 1942, Andrea Radio was presented with the prestigious high honors Navy E Award for manufacturing excellence and providing military audio communications equipment. In the early 1960s, Andrea Radio developed and produced several types of high reliability intercommunication systems for installation in various military and commercial aircraft. Indeed, Andrea Radio produced the audio intercom system for Project Mercury's first manned spacecraft.

14. Mr. Andrea passed away in 1965, leaving his son, Frank Jr., to continue the Andrea business.

15. In the 1970s and 1980s, Andrea Radio became a premier supplier of high performance avionic intercom equipment for defense industry manufacturers like Bell Helicopter, Boeing, Sikorsky, and Lockheed, prompting Andrea Radio to change its name to

Andrea Electronics Corporation. Andrea produced microphone audio pre-amplifiers for Navy aviators' oxygen mask helmet systems. The experience gained from producing audio intercom systems for high noise environments paved the way for Andrea's emphasis on active noise cancellation.

16. Product development continued in the 1990s with Andrea producing the first Active Noise Canceling ("ANC") boom microphone computer headset for deployment with computer speech recognition. Andrea shipped millions of headsets and microphone products to software OEMs. In 1998, Andrea developed and produced the first digital array microphone for commercial use, providing hands-free voice command and control functionality. In 1999, Andrea developed and produced the first USB headset as well as the first desktop digital array microphone.

17. In the 2000s, Andrea broadened the application of its product offerings. In 2001, it developed and produced digital noise canceling array microphones for speech control systems in police cruisers. In 2002, Andrea revolutionized PC audio input by introducing the first stereo array microphone interface for integrated audio codecs. By the late 2000s, Andrea had shipped over one million SuperBeam stereo array microphones, and millions of DSDA stereo array microphone and EchoStop speakerphone products.

18. Andrea has continued its innovation and offers microphone and earphone technologies designed to enhance sound quality. Andrea, now led by Frank Andrea's grandson, Douglas Andrea, successfully transformed itself from a manufacturer of industrial and military intercommunication systems into a creator of cutting-edge audio technologies. Andrea incorporates its new patented technologies to enable natural language interfaces and enhance the performance of voice-related applications. Today, Andrea offers a variety of products

incorporating its technologies such as headsets and headphones, microphones, software algorithms, USB audio solutions and related accessories. Since its inception, Andrea has gone through a remarkable evolution as an audio technology leader, meeting the ever-changing needs of a demanding audio communications marketplace.

19. As a result of the convergence between computers and communication devices, a new generation of connected mobile devices is becoming pervasive. Andrea has developed and continues developing new products incorporating its technologies to enhance the user experience of mainstream applications such as speech recognition, voice over internet protocol (“VoIP”)/video conferencing, distance learning, enterprise collaboration, game chat, and live digital audio recordings.

20. In addition to its own significant engineering, research, and development into audio processing technologies, Andrea also worked extensively with Lamar Signal Processing (“Lamar”) in developing audio processing software in the mid-to-late 1990’s. Andrea eventually acquired substantially all of the assets of Lamar in 1998.

21. Andrea’s and Lamar’s efforts have resulted in seventeen (17) issued United States patents currently owned by Andrea, including the Asserted Patents. Andrea’s development efforts also include at least one (1) currently pending U.S. patent application directed to Andrea’s audio processing technology.

22. Andrea has made concerted efforts to deliver its patented technology and products to a number of customers and has made significant contributions towards developing its technology for use across a broad spectrum of industries. Andrea’s continued success and investments in advancing its proprietary audio processing technology depends, in part, on its

ability to establish, maintain, and protect its proprietary technology through enforcement of its patent rights.

**B. Respondents**

23. With regard to the Respondents, Andrea alleges the following upon information and belief:

**1. Acer Inc.**

24. Acer Inc. is a foreign corporation organized and existing under the laws of Taiwan, with its principal place of business at 8F, 88, Sec. 1, Xintai 5<sup>th</sup> Rd. Xixhi, New Taipei City 221, Taiwan. Acer Inc. is in the business of developing, making, offering for sale, selling, importing, and supporting products containing audio processing hardware and software including, without limitation, desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, that are manufactured outside of the United States. Acer Inc. is the parent corporation of Respondent Acer America Corp.

**2. Acer America Corp.**

25. Acer America Corp. is a corporation organized and existing under the laws of the state of California, with its principal place of business located at 333 West San Carlos Street, Suite 1500, San Jose, California 95110. Acer America Corp. is a subsidiary of or otherwise controlled by Acer Inc. Acer America Corp. is in the business of developing, making, offering for sale, selling, importing, and supporting products containing audio processing hardware and software including, without limitation, desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in the United States, that are manufactured outside of the United States. Acer America Corp. is responsible for all of Acer Inc.'s activities taking place in the United States, including the importation of goods into the United States from foreign countries. Acer Inc. and Acer America Corp. are referred to collectively as "Acer."

**3. ASUSTeK Computer Inc.**

26. ASUSTeK Computer, Inc. is a foreign corporation organized and existing under the laws of Taiwan, with its principal place of business at No. 15, Li-Te Rd., Beitou District, Taipei 112, Taiwan. ASUSTeK Computer, Inc. is in the business of developing, making, offering for sale, selling, importing, and supporting products containing audio processing hardware and software including, without limitation, desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, that are manufactured outside of the United States. ASUSTeK Computer, Inc. is the parent corporation of Respondent ASUS Computer International.

**4. ASUS Computer International**

27. ASUS Computer International is a corporation organized and existing under the laws of the state of California, with its principal place of business located at 800 Corporate Way, Fremont, California 94539. Respondent ASUS Computer International is a subsidiary of or otherwise controlled by Respondent ASUSTeK Computer Inc. ASUS Computer International is in the business of developing, making, offering for sale, selling, importing, and supporting products containing audio processing hardware and software including, without limitation, desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in the United States, that are manufactured outside of the United States. ASUS Computer International manages the North American operations, which includes operations within the United States, of Respondent ASUSTeK Computer Inc. ASUSTeK Computer Inc. and ASUS Computer International are referred to collectively as "ASUS."

**5. Dell Inc.**

28. Dell Inc. is a corporation organized and existing under the laws of the state of Delaware, with its principal place of business located at One Dell Way, Round Rock, Texas

78682. Dell Inc. is in the business of developing, making, offering for sale, selling, importing, and supporting products containing audio processing hardware and software including, without limitation, desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in the United States, that are manufactured outside of the United States. Dell Inc. is referred to as “Dell.”

**6. Hewlett Packard Co.**

29. Hewlett Packard Co. is a corporation organized and existing under the laws of the state of Delaware, with its principal place of business located at 3000 Hanover Street, Palo Alto, California 94304-1185. Hewlett Packard Co. is in the business of developing, making, offering for sale, selling, importing, and supporting products containing audio processing hardware and software including, without limitation, desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in the United States, that are manufactured outside of the United States. Hewlett Packard Co. is referred to as “HP.”

**7. Lenovo Group Ltd.**

30. Lenovo Group Ltd. is a foreign corporation organized and existing under the laws of China, with its principal place of business at Shangdi Information Industry Base, No 6 Chuang Ye Road, Haidan District, 100085 Beijing, China. Lenovo Group Ltd. is in the business of developing, making, offering for sale, selling, importing, and supporting products containing audio processing hardware and software including, without limitation, desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, that are manufactured outside of the United States. Lenovo Group Ltd. is the parent corporation of Respondent Lenovo Holding Co., Inc.

**8. Lenovo Holding Co., Inc.**

31. Lenovo Holding Co., Inc. is a corporation organized and existing under the laws of the state of Delaware, with its principal place of business at 1009 Think Place, Morrisville, North Carolina 27650. Respondent Lenovo Holding Co., Inc. is a subsidiary of or otherwise controlled by Respondent Lenovo Group Ltd. Lenovo Holding Co., Inc. is in the business of developing, making, offering for sale, selling, importing, and supporting products containing audio processing hardware and software including, without limitation, desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in the United States, that are manufactured outside of the United States. Lenovo Holding Co., Inc. is the parent corporation of Respondent Lenovo (United States) Inc.

**9. Lenovo (United States) Inc.**

32. Lenovo (United States) Inc. is a corporation organized and existing under the laws of the state of Delaware, with its principal place of business located at 1009 Think Place, Morrisville, North Carolina 27650. Respondent Lenovo (United States) Inc. is a subsidiary of or otherwise controlled by Respondent Lenovo Holding Co., Inc. Lenovo (United States) Inc. is in the business of developing, making, offering for sale, selling, importing, and supporting products containing audio processing hardware and software including, without limitation, desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in the United States, that are manufactured outside of the United States. Lenovo Group Ltd., Lenovo Holding Co., Inc., and Lenovo (United States) Inc. are referred to collectively as “Lenovo.”

**10. Toshiba Corp.**

33. Toshiba Corp. is a foreign corporation organized and existing under the laws of Japan, with its principal place of business at 1-1-1 Shibaura, Toshiba Building, 105-0023 Minato-Ku, 105-0023 Tokyo, Japan. Toshiba Corp. is in the business of developing, making, offering for sale, selling, importing, and supporting products containing audio processing

hardware and software including, without limitation, desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, that are manufactured outside of the United States. Toshiba Corp. is the parent corporation of Respondents Toshiba America, Inc. and Toshiba America Information Systems, Inc.

**11. Toshiba America, Inc.**

34. Toshiba America, Inc. is a corporation organized and existing under the laws of the state of Delaware with its principal place of business at 1251 Avenue of the Americas, Suite 4110, New York, NY 10020. Respondent Toshiba America, Inc. is a subsidiary of or otherwise controlled by Respondent Toshiba Corp. Toshiba America, Inc. describes itself as the holding company for one of the nation's leading group of high technology companies and oversees several operating companies that together span a diversified range of modern electronics, some conducting research and development, manufacturing, sales and service in its field of expertise. Toshiba America, Inc. is in the business of developing, making, offering for sale, selling, importing, and supporting products containing audio processing hardware and software including, without limitation, desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in the United States, that are manufactured outside of the United States.

**12. Toshiba America Information Systems, Inc.**

35. Toshiba America Information Systems, Inc. is a corporation organized and existing under the laws of the state of Delaware, with its principal place of business at 9740 Irvine Boulevard, Irvine California 92618. Respondent Toshiba America Information Systems, Inc. is a subsidiary of or otherwise controlled by Respondents Toshiba Corp. and Toshiba America, Inc. Toshiba America Information Systems, Inc. is in the business of developing, making, offering for sale, selling, importing, and supporting products containing audio processing hardware and software including, without limitation, desktops, notebooks, laptops,



all-in-ones, Chromebooks, and computer tablets in the United States, that are manufactured outside of the United States. Toshiba Corp., Toshiba America, Inc., and Toshiba America Information Systems, Inc. are referred to collectively as “Toshiba.”

**13. Realtek Semiconductor Corp.**

36. Realtek Semiconductor Corp. is a foreign corporation organized and existing under the laws of Taiwan, with its principal place of business located at No. 2, Innovation Road II, Hsinchu Science Park, Hsinchu 300, Taiwan. Realtek Semiconductor Corp. is in the business of developing, making, offering for sale, selling, importing, and supporting audio coder/decoder (“codec”) chips and/or audio processing software including, without limitation, to a number of the other Respondents. Realtek Semiconductor Corp. is referred to as “Realtek.”

**III. THE ASSERTED PATENTS**

37. The ‘898 and ‘923 Patents are related – the ‘923 Patent issued from a continuation of the application that matured into the ‘898 Patent. The ‘898 Patent is properly assigned to Andrea as shown in the certified copy of the assignment record, attached as Exhibit 6. By virtue of the ‘898 Patent assignment, the ‘923 Patent is also properly assigned to Andrea, as shown in Exhibit 6.

38. The ‘607 Patent is properly assigned to Andrea, as shown in the certified copy of the assignment record, attached as Exhibit 7.

39. The ‘345 Patent is properly assigned to Andrea, as shown in the certified copy of the assignment record, attached as Exhibit 8.

40. The ‘637 Patent is properly assigned to Andrea, as shown in the certified copy of the assignment record, attached as Exhibit 9.

**A. The '898 Patent**

41. Andrea holds all right, title, and interest to U.S. Patent No. 5,825,898. Pursuant to Commission Rules 210.12(a)(9)(i)-(ii), a certified copy of the '898 Patent and a certified copy of the assignment record for the '898 Patent are attached hereto as Exhibits 1 and 6, respectively. Appendix A, pursuant to Commission Rule 210.12(c)(1), contains one certified copy of the U.S. Patent and Trademark Office prosecution history for the '898 Patent plus three additional copies thereof. Appendix B, pursuant to Commission Rule 210.12(c)(2), contains four copies of each patent and the applicable pages of each technical reference mentioned in the prosecution history of the '898 Patent.

42. The '898 Patent was filed on June 27, 1996, and issued on October 20, 1998.

43. The '898 Patent has twenty-eight (28) claims, including four (4) independent claims (claims 1, 5, 9, and 21) and twenty-four (24) dependent claims. Andrea is asserting claims 1-28 of the '898 Patent:

U.S. Patent No. 5,825,898	
Respondent	Asserted Claims
Acer	1-28
Asus	1-28
Dell	1-28
HP	1-28
Lenovo	1-28
Toshiba	1-28
Realtek	1-28

**1. Foreign Counterparts to the '898 Patent**

44. Andrea, pursuant to Commission Rule 210.12(a)(9)(v), identifies the following foreign patents and patent applications related to the asserted '898 Patent:

AT208103 (T), AU719006 (B2), AU3105597 (A), BR9710014 (A), CA2259256 (A1), CA2259256 (C), CN1130840 (C), CN1228889 (A), DE69707877 (T2), DK0908018 (T3), EP0908018 (B1), EP0908018 (A2), ES2168640 (T3), JP2000513161 (A), KR20000022241 (A), NZ333544 (A), WO9750186 (A2), WO9750186 (A3).

45. In accordance with Commission Rule 210.12(a)(9)(v), Andrea states that it is aware of no other foreign counterparts issued, filed, denied, abandoned, or withdrawn, relating to the asserted '898 Patent.

**B. The '923 Patent**

46. Andrea holds all right, title, and interest to U.S. Patent No. 6,483,923. Pursuant to Commission Rules 210.12(a)(9)(i)-(ii), a certified copy of the '923 Patent and a certified copy of the assignment record for the '923 Patent are attached hereto as Exhibits 2 and 6, respectively. Appendix C, pursuant to Commission Rule 210.12(c)(1), contains one certified copy of the U.S. Patent and Trademark Office prosecution history for the '923 Patent plus three additional copies thereof. Appendix D, pursuant to Commission Rule 210.12(c)(2), contains four copies of each patent and the applicable pages of each technical reference mentioned in the prosecution history of the '923 Patent.

47. The '923 Patent was filed on August 6, 1998 and issued on November 19, 2002. The '923 Patent claims priority to United States Patent Application No. 08/672,899, which matured into the '898 Patent and was filed June 27, 1996.

48. The '923 Patent has sixteen (16) claims, including four (4) independent claims (claims 1, 4, 9, and 12), and twelve (12) dependent claims. Andrea is asserting claims 1-16 of the '923 Patent:

U.S. Patent No. 6,483,923	
Respondent	Asserted Claims
Acer	1-16
Asus	1-16
Dell	1-16
HP	1-16
Lenovo	1-16
Toshiba	1-16
Realtek	1-16

**1. Foreign Counterparts to the '923 Patent**

49. Andrea, pursuant to Commission Rule 210.12(a)(9)(v), identifies the following foreign patents and patent applications related to the asserted '923 Patent:

AT208103 (T), AU719006 (B2), AU3105597 (A), BR9710014 (A), CA2259256 (A1), CA2259256 (C), CN1130840 (C), CN1228889 (A), DE69707877 (T2), DK0908018 (T3), EP0908018 (B1), EP0908018 (A2), ES2168640 (T3), JP2000513161 (A), KR20000022241 (A), NZ333544 (A), WO9750186 (A2), WO9750186 (A3).

50. In accordance with Commission Rule 210.12(a)(9)(v), Andrea states that it is aware of no other foreign counterparts issued, filed, denied, abandoned, or withdrawn, relating to the asserted '923 Patent.

**C. The '607 Patent**

51. Andrea holds all right, title, and interest to U.S. Patent No. 6,049,607. Pursuant to Commission Rules 210.12(a)(9)(i)-(ii), a certified copy of the '607 Patent and a certified copy of the assignment record for the '607 Patent are attached hereto as Exhibits 3 and 7, respectively. Appendix E, pursuant to Commission Rule 210.12(c)(1), contains one certified copy of the U.S. Patent and Trademark Office prosecution history for the '607 Patent plus three additional copies

thereof. Appendix F, pursuant to Commission Rule 210.12(c)(2), contains four copies of each patent and the applicable pages of each technical reference mentioned in the prosecution history of the '607 Patent.

52. The '607 Patent was filed on September 18, 1998 and issued on April 11, 2000.

53. The '607 Patent has thirty-seven (37) claims, including three (3) independent claims (claims 1, 13, and 25) and thirty-four (34) dependent claims. Andrea is asserting claims 1-12 and 25-37 of the '607 Patent:

U.S. Patent No. 6,049,607	
Respondent	Asserted Claims
Acer	1-12 and 25-37
Asus	1-12 and 25-37
Dell	1-12 and 25-37
HP	1-12 and 25-37
Lenovo	1-12 and 25-37
Toshiba	1-12 and 25-37
Realtek	1-12 and 25-37

**1. Foreign Counterparts to the '607 Patent**

54. Andrea, pursuant to Commission Rule 210.12(a)(9)(v), identifies the following foreign patents and patent applications related to the asserted '607 Patent:

AU5924799 (A), CA2344480 (A1), EP1166544 (A1), EP1166544 (A4), JP2002525982 (A), WO0018099 (A1).

55. In accordance with Commission Rule 210.12(a)(9)(v), Andrea states that it is aware of no other foreign counterparts issued, filed, denied, abandoned, or withdrawn, relating to the asserted '607 Patent.

**D. The '345 Patent**

56. Andrea holds all right, title, and interest to U.S. Patent No. 6,363,345. Pursuant to Commission Rules 210.12(a)(9)(i)-(ii), a certified copy of the '345 Patent and a certified copy of the assignment record for the '345 Patent are attached hereto as Exhibits 4 and 8, respectively. Appendix G, pursuant to Commission Rule 210.12(c)(1), contains one certified copy of the U.S. Patent and Trademark Office prosecution history for the '345 Patent plus three additional copies thereof. Appendix H, pursuant to Commission Rule 210.12(c)(2), contains four copies of each patent and the applicable pages of each technical reference mentioned in the prosecution history of the '345 Patent.

57. The '345 Patent was filed on February 18, 1999 and issued on March 26, 2002.

58. The '345 Patent has forty-seven (47) claims, including three (3) independent claims (claims 1, 26, and 38), and forty-four (44) dependent claims. Andrea is asserting claims 1-25, 38-40, and 42-47 of the '345 Patent:

U.S. Patent No. 6,363,345	
Respondent	Asserted Claims
Acer	1-25, 38-40, and 42-47
Asus	1-25, 38-40, and 42-47
Dell	1-25, 38-40, and 42-47
HP	1-25, 38-40, and 42-47
Lenovo	1-25, 38-40, and 42-47
Toshiba	1-25, 38-40, and 42-47
Realtek	1-25, 38-40, and 42-47

**1. Foreign Counterparts to the '345 Patent**

59. Andrea, pursuant to Commission Rule 210.12(a)(9)(v), identifies the following foreign patents and patent applications related to the asserted '345 Patent:

CA2358710 (A1); CN1348583 (A); EP1157376 (A1);  
JP2002537586 (A); WO0049602 (A1).

60. In accordance with Commission Rule 210.12(a)(9)(v), Andrea states that it is aware of no other foreign counterparts issued, filed, denied, abandoned, or withdrawn, relating to the asserted '345 Patent.

**E. The '637 Patent**

61. Andrea holds all right, title, and interest to U.S. Patent No. 6,377,637. Pursuant to Commission Rules 210.12(a)(9)(i)-(ii), a certified copy of the '637 Patent and a certified copy of the assignment record for the '637 Patent are attached hereto as Exhibits 5 and 9, respectively. Appendix I, pursuant to Commission Rule 210.12(c)(1), contains one certified copy of the U.S. Patent and Trademark Office prosecution history for the '637 Patent plus three additional copies thereof. Appendix J, pursuant to Commission Rule 210.12(c)(2), contains four copies of each patent and the applicable pages of each technical reference mentioned in the prosecution history of the '637 Patent.

62. The '637 Patent was filed on July 12, 2000 and issued on April 23, 2002.

63. The '637 Patent has fourteen (14) claims, including two (2) independent claims (claims 1 and 8), and twelve (12) dependent claims. Andrea is asserting claims 1-14 of the '637 Patent:

U.S. Patent No. 6,377,637	
Respondent	Asserted Claims
Acer	1-14
Asus	1-14
Dell	1-14
HP	1-14
Lenovo	1-14
Toshiba	1-14
Realtek	1-14

**1. Foreign Counterparts to the '637 Patent**

64. Andrea, pursuant to Commission Rule 210.12(a)(9)(v), identifies the following foreign patents and patent applications related to the asserted '637 Patent:

AU6988901 (A), CA2416128 (A1), CN1460323 (A), EP1316088 (A2), JP2004502977 (A), WO0205262 (A2), WO0205262 (A3),

65. In accordance with Commission Rule 210.12(a)(9)(v), Andrea states that it is aware of no other foreign counterparts issued, filed, denied, abandoned, or withdrawn, relating to the asserted '637 Patent.

**F. Licensees to the Asserted Patents**

66. The current, former, and known potential future licensees to the Asserted Patents are identified in the Declaration of Corisa Guiffre, attached as Confidential Exhibit 81.

**IV. NON-TECHNICAL DESCRIPTION OF THE PATENTED TECHNOLOGY**

67. Andrea's patented technology generally relates to the field of audio processing, with a particular focus on processing audio signals to remove noise and interference. Andrea's patented technology enables communication between electronic devices with enhanced clarity – even if that communication takes place in a noisy environment.



68. Andrea's patented technology has a broad range of applications. For example, Andrea's patented technology has been implemented in laptop and desktop computers, enabling noise-free communication through computers, even in a noisy environment such as a coffee shop. In another example, Andrea's patented technology has been implemented in automobiles, allowing hands-free communication through a vehicle's audio system while reducing engine and road noises typically present when operating a vehicle.

**A. The '898 and '923 Patents – System and Method for Adaptive Interference Cancelling**

69. Andrea's '898 and '923 Patents describe a system and method for filtering out interference signals (*e.g.*, noise) using an array of sensors (*e.g.*, microphones). The array of sensors receives signals and filters them in a manner to extract a main signal that corresponds to the signals received in a direction of a desired signal (*e.g.*, the direction of a person that is speaking) and a reference signal received in directions other than the direction of the main signal. While the main signal includes the desired signals, they also include interference signals. The reference signal is processed through an adaptive filter to generate a canceling signal which estimates the interference signal present in the main signal. This canceling signal is then used to remove the interference signal from the main signal.

70. Andrea's '898 and '923 Patents further address the phenomena of "signal leakage." Signal leakage occurs when the desired signal also appears in the reference signal. As a result, the canceling signal includes the desired signal, causing distortions in the final processed signal. To prevent this distortion, Andrea's '898 and '923 Patents further use adaptive filters that truncate filter weight values when the filter weight values exceed a threshold value. This prevents the adaptive filter from filtering out and distorting the desired signal.

**B. The '607 Patent – Interference Canceling Method and Apparatus**

71. Andrea's '607 Patent describes a method and apparatus for cancelling an interference signal from a target signal. The interference signal is used as a reference to estimate the interference present in the target signal, thereby allowing the interference to be adaptively filtered out of the target signal. The apparatus and method described in Andrea's '607 Patent also includes a beam-splitter that splits the target and interference signals into a number of frequency bands. The beam-splitter allows adaptive filters to be optimized for each frequency band, thus allowing the filters to more easily converge and quickly eliminate the interference signal.

72. One practical application of Andrea's '607 Patent is the ability to effectively cancel or eliminate echoes during full-duplex teleconferences. Echoes are generated during full-duplex teleconferences because the microphone on a near-end system will pick up any signals generated from a far-end signal broadcast on the near-end system (*e.g.* when the far-end speaker's voice is being played through the speakers on the near-end system). As a result, the far-end signals broadcast on the near-end system will be sent back to the far-end, resulting in an echo. The method and apparatus described in the '607 Patent not only eliminates the echo by using the far-end signal as a reference signal but does so in an efficient manner by beam-splitting the target signal (*e.g.* signal from the microphone) and the far-end reference signal.

**C. The '345 Patent – System, Method and Apparatus for Cancelling Noise**

73. Andrea's '345 Patent describes a method and apparatus for detecting and canceling noise from an audio signal. To detect the noise in an audio signal, the method and apparatus of the '345 Patent generate a frequency spectrum of the audio signal, including generating frequency bins of the audio signal. Noise in the audio signal is then detected by comparing the magnitude of each frequency bin against a threshold set for each frequency bin. If

the magnitude of a frequency bin is below the threshold of that frequency bin, then the noise in that frequency bin has been detected. In a preferred embodiment of the '345 Patent, the threshold for each frequency bin is set by identifying a minimum value of the magnitude of the frequency bin over a period of time (e.g., 5 seconds). In this way, the '345 Patent reduces complexity in the noise estimation process and prevents the erroneous cancellation of desired voice or audio signals.

**D. The '637 Patent – Sub-Band Exponential Smoothing Noise Canceling System**

74. Andrea's '637 Patent describes a noise canceling method and apparatus for canceling noise by time domain processing sub-bands of a digital input signal. The input signal is divided into a number of frequency-limited time-domain sub-bands. Each sub-band is then processed by a noise processor to reduce the noise signal in each sub-band while maintaining the source (*i.e.* voice) signal. The noise processed bands are then recombined into a digital output signal. The noise processing approach described and claimed in the '637 Patent reduces computational complexity, thus avoiding latency problems that can cause difficulties in real-time applications.

**V. UNFAIR ACTS OF THE RESPONDENTS**

75. Respondents are engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain audio processing hardware and software and products containing the same including, without limitation, personal computers such as desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, and audio codec chips and audio processing software, which infringe at least one claim of each of the Asserted Patents.

**A. Infringement**

76. Exhibits 10-39 are claim charts demonstrating how the asserted independent claims of the Asserted Patents apply to one exemplary product of each Respondent. In addition to the specific audio codec and audio processing software contained in these exemplary Respondent products, Andrea also believes that Respondents incorporate audio codec chips and/or software from other companies, including, for example, Cirrus Logic, Conexant Systems, Inc., DTS, Inc., Fortemedia, Inc., Integrated Device Technologies, Inc., Realtek, and Tempo Semiconductor, Inc., into their desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in a manner that similarly infringes the Asserted Patents. In addition, Andrea also believes that Realtek distributes software from some or all of these companies. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against Respondents' importation, sale for importation, and/or sale after importation of these products as well.

**1. The '898 Patent**

**a. Acer**

77. Respondent Acer is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain products containing audio processing hardware and software that infringe at least the Asserted Claims of the '898 Patent.

78. Andrea has obtained products containing audio processing hardware and software that Acer imported, sold for importation, and/or sold within the United States after importation, and that infringe, directly or indirectly, at least the Asserted Claims of the '898 Patent.

79. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibit 10 includes a chart comparing the asserted independent claims of the '898 Patent to Acer's Aspire M5-583P Product. Exhibit 10 shows that the Aspire M5-583P Product is covered by at least the asserted

independent claims of the '898 Patent. Additionally, pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 10 contains photographs of the Aspire M5-583P Product. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only “a representative involved article” of Respondent Acer that violates Section 337. Andrea believes that Acer devices in addition to the Aspire M5-583P Product, including desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, are covered by at least one of the Asserted Claims of the '898 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent Acer.

80. In addition to incorporating an audio codec chip from Respondent Realtek and software from Fortemedia, Inc. in a manner that directly infringes the Asserted Claims of the '898 Patent, as shown in Exhibit 10, Andrea also believes that Acer incorporates audio codec chips and/or software from other companies into its desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in a manner that similarly infringes the Asserted Claims of the '898 Patent. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against Acer's importation, sale for importation, and/or sale after importation of these products as well.

81. Additionally, Acer has indirectly infringed at least one claim of the '898 Patent by inducing infringement.

82. Acer has been aware of the '898 Patent and of Andrea's allegations of infringement since at least being sent the July 25, 2014 Complaint in *Andrea Electronics Corp. v. Acer Inc. et al*, Case No. 2:14-cv-04488-KAM-GRB, currently pending before the U.S. District Court for the Eastern District of New York.

83. Despite Acer's awareness of the '898 Patent and Andrea's allegations, Acer has knowingly and actively induced others to infringe the '898 Patent by selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing audio processing hardware and software which induce the direct infringement of at least one of the claims of the '898 Patent by end-users – for example, customers. Upon information and belief, at least one customer has directly infringed one or more claims of Andrea's '898 Patent.

84. Acer has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '898 Patent. For example, Acer has advertised and continues to advertise its "Purified Voice."<sup>1</sup> (See, e.g., Exhibits 42-44.) As shown for the exemplary Aspire M5-583P Product (Exhibit 10), Acer's audio processing implementation reduces or eliminates interference in a received signal in a manner that infringes the claims of the '898 Patent. At least by advertising such functionality, Acer has induced and is actively inducing use of that functionality and infringement of at least one claim of Andrea's '898 Patent.

85. Finally, Acer has indirectly infringed at least one of the claims of the '898 Patent by contributing to infringement.

86. The hardware (e.g., microphone(s) and/or microphone input(s)) and/or software (e.g., audio processing software) in Acer's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets are made solely for the purpose of reducing or eliminating interference from voice and/or other audio signals in a manner that infringes at least one claim of the '898 Patent. Further, this hardware and software is especially made and/or especially

---

<sup>1</sup> For avoidance of doubt, Andrea provides Acer's "Purified Voice" as an exemplary way by which Acer induces infringement of the '898 Patent. None of Andrea's infringement allegations are limited to Acer's Purified Voice.

adapted for use in the infringement of Andrea's '898 Patent, is not a staple commodity of commerce, and is not suitable for substantial non-infringing use. By selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing this hardware and software, Acer has contributed to the infringement of the '898 Patent by end-users – for example, customers.

**b. Asus**

87. Respondent Asus is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain products containing audio processing hardware and software that infringe at least the Asserted Claims of the '898 Patent.

88. Andrea has obtained products containing audio processing hardware and software that Asus imported, sold for importation, and/or sold within the United States after importation, and that infringe, directly or indirectly, at least the Asserted Claims of the '898 Patent.

89. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibit 11 includes a chart comparing the asserted independent claims of the '898 Patent to Asus' Vivobook Q302L Product. Exhibit 11 shows that the Vivobook Q302L Product is covered by at least the asserted independent claims of the '898 Patent. Additionally, pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 11 contains photographs of the Vivobook Q302L Product. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only "a representative involved article" of Respondent Asus that violates Section 337. Andrea believes that Asus devices in addition to the Vivobook Q302L Product, including desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, are covered by at least one of the Asserted Claims of the '898 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent Asus.

90. In addition to incorporating an audio codec chip from Respondent Realtek and software from Respondent Realtek in a manner that directly infringes the Asserted Claims of the '898 Patent, as shown in Exhibit 11, Andrea also believes that Asus incorporates audio codec chips and/or software from other companies into its desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in a manner that similarly infringes the Asserted Claims of the '898 Patent. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against Asus' importation, sale for importation, and/or sale after importation of these products as well.

91. Additionally, Asus has indirectly infringed at least one claim of the '898 Patent by inducing infringement.

92. Asus has been aware of the '898 Patent and of Andrea's allegations of infringement since at least being sent the January 14, 2015 Complaint in *Andrea Electronics Corp. v. ASUSTeK Computer Inc., et al*, Case No. 2:15-cv-00214, currently pending before the U.S. District Court for the Eastern District of New York.

93. Despite Asus' awareness of the '898 Patent and Andrea's allegations, Asus has knowingly and actively induced others to infringe the '898 Patent by selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing audio processing hardware and software which induce the direct infringement of at least one of the claims of the '898 Patent by end-users – for example, customers. Upon information and belief, at least one customer has directly infringed one or more claims of Andrea's '898 Patent.

94. Asus has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '898 Patent. For example, Asus



has advertised and continues to advertise its “Sonic Master.”<sup>2</sup> (*See, e.g.*, Exhibits 47-50.) As shown for the exemplary Vivobook Q302L Product (Exhibit 11), Asus’ audio processing implementation reduces or eliminates interference in a received signal in a manner that infringes the claims of the ‘898 Patent. At least by advertising such functionality, Asus has induced and is actively inducing use of that functionality and infringement of at least one claim of Andrea’s ‘898 Patent.

95. Finally, Asus has indirectly infringed at least one of the claims of the ‘898 Patent by contributing to infringement.

96. The hardware (*e.g.*, microphone(s) and/or microphone input(s)) and/or software (*e.g.*, audio processing software) in Asus’ desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets are made solely for the purpose of reducing or eliminating interference from voice and/or other audio signals in a manner that infringes at least one claim of the ‘898 Patent. Further, this hardware and software is especially made and/or especially adapted for use in the infringement of Andrea’s ‘898 Patent, is not a staple commodity of commerce, and is not suitable for substantial non-infringing use. By selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing this hardware and software, Asus has contributed to the infringement of the ‘898 Patent by end-users – for example, customers.

**c. Dell**

---

<sup>2</sup> For avoidance of doubt, Andrea provides Asus’ “Sonic Master” as an exemplary way by which Asus induces infringement of the ‘898 Patent. None of Andrea’s infringement allegations are limited to Asus’ Sonic Master.

97. Respondent Dell is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain products containing audio processing hardware and software that infringe at least the Asserted Claims of the '898 Patent.

98. Andrea has obtained products containing audio processing hardware and software that Dell imported, sold for importation, and/or sold within the United States after importation, and that infringe, directly or indirectly, at least the Asserted Claims of the '898 Patent.

99. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibit 12 includes a chart comparing the asserted independent claims of the '898 Patent to Dell's Inspiron 13 7347 Product. Exhibit 12 shows that the Inspiron 13 7347 Product is covered by at least the asserted independent claims of the '898 Patent. Additionally, pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 12 contains photographs of the Inspiron 13 7347 Product. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only "a representative involved article" of Respondent Dell that violates Section 337. Andrea believes that Dell devices in addition to the Inspiron 13 7347 Product, including desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, are covered by at least one of the Asserted Claims of the '898 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent Dell.

100. In addition to incorporating an audio codec chip from Respondent Realtek and software from Respondent Realtek in a manner that directly infringes the Asserted Claims of the '898 Patent, as shown in Exhibit 12, Andrea also believes that Dell incorporates audio codec chips and/or software from other companies into its desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in a manner that similarly infringes the Asserted Claims of the '898 Patent. Andrea intends to and does accuse such products of infringement and seeks

remedial orders and a bond against Dell's importation, sale for importation, and/or sale after importation of these products as well.

101. Additionally, Dell has indirectly infringed at least one claim of the '898 Patent by inducing infringement.

102. Dell has been aware of the '898 Patent and of Andrea's allegations of infringement since at least being sent the January 14, 2015 Complaint in *Andrea Electronics Corp. v. Dell Inc.*, Case No. 2:15-cv-00209, currently pending before the U.S. District Court for the Eastern District of New York.

103. Despite Dell's awareness of the '898 Patent and Andrea's allegations, Dell has knowingly and actively induced others to infringe the '898 Patent by selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing audio processing hardware and software which induce the direct infringement of at least one of the claims of the '898 Patent by end-users – for example, customers. Upon information and belief, at least one customer has directly infringed one or more claims of Andrea's '898 Patent.

104. Dell has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '898 Patent. For example, Dell has advertised and continues to advertise its microphone focus.<sup>3</sup> (*See, e.g.*, Exhibits 57-61.) As shown for the exemplary Inspiron 13 7347 Product (Exhibit 12), Dell's audio processing implementation reduces or eliminates interference in a received signal in a manner that infringes the claims of the '898 Patent. At least by advertising such functionality, Dell has induced and is

---

<sup>3</sup> For avoidance of doubt, Andrea provides these examples as exemplary ways by which Dell induces infringement of the '923 Patent. None of Andrea's infringement allegations are limited to these examples.

actively inducing use of that functionality and infringement of at least one claim of Andrea's '898 Patent.

105. Finally, Dell has indirectly infringed at least one of the claims of the '898 Patent by contributing to infringement.

106. The hardware (*e.g.*, microphone(s) and/or microphone input(s)) and/or software (*e.g.*, audio processing software) in Dell's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets are made solely for the purpose of reducing or eliminating interference from voice and/or other audio signals in a manner that infringes at least one claim of the '898 Patent. Further, this hardware and software is especially made and/or especially adapted for use in the infringement of Andrea's '898 Patent, is not a staple commodity of commerce, and is not suitable for substantial non-infringing use. By selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing this hardware and software, Dell has contributed to the infringement of the '898 Patent by end-users – for example, customers.

**d. HP**

107. Respondent HP is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain products containing audio processing hardware and software that infringe at least the Asserted Claims of the '898 Patent.

108. Andrea has obtained products containing audio processing hardware and software that HP imported, sold for importation, and/or sold within the United States after importation, and that infringe, directly or indirectly, at least the Asserted Claims of the '898 Patent.

109. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibit 13 includes a chart comparing the asserted independent claims of the '898 Patent to HP's Elitebook 820 G1 Product. Exhibit 13 shows that the Elitebook 820 G1 Product is covered by at least the asserted

independent claims of the '898 Patent. Additionally, pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 13 contains photographs of the Elitebook 820 G1 Product. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only "a representative involved article" of Respondent HP that violates Section 337. Andrea believes that HP devices in addition to the Elitebook 820 G1 Product, including desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, are covered by at least one of the Asserted Claims of the '898 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent HP.

110. In addition to incorporating an audio codec chip and software from Integrated Device Technologies, Inc. (now sold and supported by Tempo Semiconductor, Inc.) in a manner that directly infringes the Asserted Claims of the '898 Patent, as shown in Exhibit 13, Andrea also believes that HP incorporates audio codec chips and/or software from other companies into its desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in a manner that similarly infringes the Asserted Claims of the '898 Patent. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against HP's importation, sale for importation, and/or sale after importation of these products as well.

111. Additionally, HP has indirectly infringed at least one claim of the '898 Patent by inducing infringement.

112. HP has been aware of the '898 Patent and of Andrea's allegations of infringement since at least being sent the January 14, 2015 Complaint in *Andrea Electronics Corp. v. Hewlett Packard Co.*, Case No. 2:15-cv-00208, currently pending before the U.S. District Court for the Eastern District of New York.

113. Despite HP's awareness of the '898 Patent and Andrea's allegations, HP has knowingly and actively induced others to infringe the '898 Patent by selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing audio processing hardware and software which induce the direct infringement of at least one of the claims of the '898 Patent by end-users – for example, customers. Upon information and belief, at least one customer has directly infringed one or more claims of Andrea's '898 Patent.

114. HP has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '898 Patent. For example, HP has advertised and continues to advertise its dual array microphones with beam forming.<sup>4</sup> (*See, e.g., Exhibits 68-70.*) As shown for the exemplary Elitebook 820 G1 Product (Exhibit 13), HP's audio processing implementation reduces or eliminates interference in a received signal in a manner that infringes the claims of the '898 Patent. At least by advertising such functionality, HP has induced and is actively inducing use of that functionality and infringement of at least one claim of Andrea's '898 Patent.

115. Finally, HP has indirectly infringed at least one of the claims of the '898 Patent by contributing to infringement.

116. The hardware (*e.g., microphone(s) and/or microphone input(s)*) and/or software (*e.g., audio processing software*) in HP's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets are made solely for the purpose of reducing or eliminating interference from voice and/or other audio signals in a manner that infringes at least one claim of the '898 Patent. Further, this hardware and software is especially made and/or especially

---

<sup>4</sup> For avoidance of doubt, Andrea provides these examples as exemplary ways by which HP induces infringement of the '898 Patent. None of Andrea's infringement allegations are limited to these examples.

adapted for use in the infringement of Andrea's '898 Patent, is not a staple commodity of commerce, and is not suitable for substantial non-infringing use. By selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing this hardware and software, HP has contributed to the infringement of the '898 Patent by end-users – for example, customers.

**e. Lenovo**

117. Respondent Lenovo is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain products containing audio processing hardware and software that infringe at least the Asserted Claims of the '898 Patent.

118. Andrea has obtained products containing audio processing hardware and software that Lenovo imported, sold for importation, and/or sold within the United States after importation, and that infringe, directly or indirectly, at least the Asserted Claims of the '898 Patent.

119. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibit 14 includes a chart comparing the asserted independent claims of the '898 Patent to Lenovo's ThinkPad T440 Product. Exhibit 14 shows that the ThinkPad T440 Product is covered by at least the asserted independent claims of the '898 Patent. Additionally, pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 14 contains photographs of the ThinkPad T440 Product. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only "a representative involved article" of Respondent Lenovo that violates Section 337. Andrea believes that Lenovo devices in addition to the ThinkPad T440 Product, including desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, are covered by at least one of the Asserted Claims of the '898 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent Lenovo.

120. In addition to incorporating an audio codec chip from Respondent Realtek and software from Fortemedia, Inc. in a manner that directly infringes the Asserted Claims of the '898 Patent, as shown in Exhibit 14, Andrea also believes that Lenovo incorporates audio codec chips and/or software from other companies into its desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in a manner that similarly infringes the Asserted Claims of the '898 Patent. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against Lenovo's importation, sale for importation, and/or sale after importation of these products as well.

121. Additionally, Lenovo has indirectly infringed at least one claim of the '898 Patent by inducing infringement.

122. Lenovo has been aware of the '898 Patent and of Andrea's allegations of infringement since at least being sent the July 25, 2014 Complaint in *Andrea Electronics Corp. v. Lenovo Group Ltd. et al*, Case No. 2:14-cv-04489-KAM-GRB, currently pending before the U.S. District Court for the Eastern District of New York.

123. Despite Lenovo's awareness of the '898 Patent and Andrea's allegations, Lenovo has knowingly and actively induced others to infringe the '898 Patent by selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing audio processing hardware and software which induce the direct infringement of at least one of the claims of the '898 Patent by end-users -- for example, customers. Upon information and belief, at least one customer has directly infringed one or more claims of Andrea's '898 Patent.

124. Lenovo has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '898 Patent. For example, Lenovo has advertised and continues to advertise its dual array microphones for noise



cancellation.<sup>5</sup> (See, e.g., Exhibits 73-74.) As shown for the exemplary ThinkPad T440 Product (Exhibit 14), Lenovo's audio processing implementation reduces or eliminates interference in a received signal in a manner that infringes the claims of the '898 Patent. At least by advertising such functionality, Lenovo has induced and is actively inducing use of that functionality and infringement of at least one claim of Andrea's '898 Patent.

125. Finally, Lenovo has indirectly infringed at least one of the claims of the '898 Patent by contributing to infringement.

126. The hardware (e.g., microphone(s) and/or microphone input(s)) and/or software (e.g., audio processing software) in Lenovo's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets are made solely for the purpose of reducing or eliminating interference from voice and/or other audio signals in a manner that infringes at least one claim of the '898 Patent. Further, this hardware and software is especially made and/or especially adapted for use in the infringement of Andrea's '898 Patent, is not a staple commodity of commerce, and is not suitable for substantial non-infringing use. By selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing this hardware and software, Lenovo has contributed to the infringement of the '898 Patent by end-users – for example, customers.

**f. Toshiba**

127. Respondent Toshiba is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain products containing audio processing hardware and software that infringe at least the Asserted Claims of the '898 Patent.

---

<sup>5</sup> For avoidance of doubt, Andrea provides these examples as exemplary ways by which Lenovo induces infringement of the '898 Patent. None of Andrea's infringement allegations are limited to these examples.

128. Andrea has obtained products containing audio processing hardware and software that Toshiba imported, sold for importation, and/or sold within the United States after importation, and that infringe, directly or indirectly, at least the Asserted Claims of the '898 Patent.

129. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibit 15 includes a chart comparing the asserted independent claims of the '898 Patent to Toshiba's Satellite E45t-B4300 Product. Exhibit 15 shows that the Satellite E45t-B4300 Product is covered by at least the asserted independent claims of the '898 Patent. Additionally, pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 15 contains photographs of the Satellite E45t-B4300 Product. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only "a representative involved article" of Respondent Toshiba that violates Section 337. Andrea believes that Toshiba devices in addition to the Satellite E45t-B4300 Product, including desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, are covered by at least one of the Asserted Claims of the '898 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent Toshiba.

130. In addition to incorporating an audio codec chip from Respondent Realtek and software from Respondent Realtek in a manner that directly infringes the Asserted Claims of the '898 Patent, as shown in Exhibit 15, Andrea also believes that Toshiba incorporates audio codec chips and/or software from other companies into its desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in a manner that similarly infringes the Asserted Claims of the '898 Patent. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against Toshiba's importation, sale for importation, and/or sale after importation of these products as well.

131. Additionally, Toshiba has indirectly infringed at least one claim of the '898 Patent by inducing infringement.

132. Toshiba has been aware of the '898 Patent and of Andrea's allegations of infringement since at least being sent the July 25, 2014 Complaint in *Andrea Electronics Corp. v. Toshiba Corp. et al*, Case No. 2:14-cv-04492-KAM-GRB, currently pending before the U.S. District Court for the Eastern District of New York.

133. Despite Toshiba's awareness of the '898 Patent and Andrea's allegations, Toshiba has knowingly and actively induced others to infringe the '898 Patent by selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing audio processing hardware and software which induce the direct infringement of at least one of the claims of the '898 Patent by end-users – for example, customers. Upon information and belief, at least one customer has directly infringed one or more claims of Andrea's '898 Patent.

134. Toshiba has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '898 Patent. For example, Toshiba has advertised and continues to advertise its dual array microphones with beam forming for noise reduction and greater sound clarity.<sup>6</sup> (*See, e.g.*, Exhibit 77.) As shown for the exemplary Satellite E45t-B4300 Product (Exhibit 15), Toshiba's audio processing implementation reduces or eliminates interference in a received signal in a manner that infringes the claims of the '898 Patent. At least by advertising such functionality, Toshiba has induced and is actively inducing use of that functionality and infringement of at least one claim of Andrea's '898 Patent.

---

<sup>6</sup> For avoidance of doubt, Andrea provides these examples as exemplary ways by which Toshiba induces infringement of the '898 Patent. None of Andrea's infringement allegations are limited to these examples.

135. Finally, Toshiba has indirectly infringed at least one of the claims of the '898 Patent by contributing to infringement.

136. The hardware (*e.g.*, microphone(s) and/or microphone input(s)) and/or software (*e.g.*, audio processing software) in Toshiba's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets are made solely for the purpose of reducing or eliminating interference from voice and/or other audio signals in a manner that infringes at least one claim of the '898 Patent. Further, this hardware and software is especially made and/or especially adapted for use in the infringement of Andrea's '898 Patent, is not a staple commodity of commerce, and is not suitable for substantial non-infringing use. By selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing this hardware and software, Toshiba has contributed to the infringement of the '898 Patent by end-users – for example, customers.

**g. Realtek**

137. Respondent Realtek is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain audio codec chips and/or audio processing software contained in other Respondent products that infringe at least the Asserted Claims of the '898 Patent.

138. Andrea has obtained products containing audio codec chips and/or audio processing software that Realtek imported, sold for importation, and/or sold within the United States after importation, and that indirectly infringe at least the Asserted Claims of the '898 Patent.

139. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibits 10-12, 14, and 15 include charts comparing the asserted independent claims of the '898 Patent to products containing Realtek's audio codec chips and/or audio processing software. Exhibits 10-12, 14,

and 15 show that products containing Realtek's audio codec chips and/or audio processing software are covered by at least the asserted independent claims of the '898 Patent. Additionally, pursuant to Commission Rule 210.12(a)(9)(x), Exhibits 10-12, 14, and 15 contain photographs of products containing Realtek's audio codec chips and/or audio processing software. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only "a representative involved article" of Respondent Realtek that violates Section 337. Andrea believes that Realtek audio codec chips and/or audio processing software in addition to the audio codec chips and/or audio processing software contained in the products charted in Exhibits 10-12, 14, and 15 are covered by at least one of the Asserted Claims of the '898 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent Realtek.

140. Realtek has indirectly infringed at least one claim of the '898 Patent by inducing infringement.

141. Realtek has been aware of the '898 Patent and of Andrea's allegations of infringement since at least being sent the January 14, 2015 Complaint in *Andrea Electronics Corp. v. Realtek Semiconductor Corp., et al*, Case No. 2:15-cv-00215, currently pending before the U.S. District Court for the Eastern District of New York.

142. Despite Realtek's awareness of the '898 Patent and Andrea's allegations, Realtek has knowingly and actively induced others to infringe the '898 Patent by selling audio codec chips and/or audio processing software which induce the direct infringement of at least one of the claims of the '898 Patent by Realtek's customers and/or users. Upon information and belief, at least one customer and/or user has directly infringed one or more claims of Andrea's '898 Patent.

143. Realtek has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '898 Patent. For example, Realtek has advertised and continues to advertise its beam forming.<sup>7</sup> (*See, e.g.*, Exhibits 78-80.) As shown for the exemplary Aspire M5-583P Product (Exhibit 10), Vivobook Q302L Product (Exhibit 11), Inspiron 13 7347 Product (Exhibit 12), ThinkPad T440 Product (Exhibit 14), and Satellite E45t-B4300 Product (Exhibit 15), Realtek's audio codec chips and/or audio processing software reduce or eliminate interference in a received signal in a manner that infringes the claims of the '898 Patent. At least by advertising such functionality, Realtek has induced and is actively inducing incorporation of its audio processing hardware and/or software and use of that functionality and infringement of at least one claim of Andrea's '898 Patent.

144. Finally, Realtek has indirectly infringed at least one of the claims of the '898 Patent by contributing to infringement.

145. Realtek's audio codec chips and/or audio processing software are made solely for the purpose of reducing or eliminating interference from voice and/or other audio signals in a manner that infringes at least one claim of the '898 Patent. Further, these audio codec chips and/or audio processing software are especially made and/or especially adapted for use in the infringement of Andrea's '898 Patent, are not a staple commodity of commerce, and are not suitable for substantial non-infringing use. By selling or licensing these audio codec chips and/or audio processing software, Realtek has contributed to the infringement of the '898 Patent by users of said audio codec chips and/or audio processing software.

---

<sup>7</sup>For avoidance of doubt, Andrea provides these examples as an exemplary way by which Realtek induces infringement of the '898 Patent. None of Andrea's infringement allegations are limited to these examples.

146. In addition to selling its infringing audio codec chips and/or audio processing software to the other Respondents for importation, Andrea also believes that Realtek sells infringing audio codec chips and/or audio processing software to third parties for importation. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against Realtek's importation, sale for importation, and/or sale after importation of these products as well.

**2. The '923 Patent**

**a. Acer**

147. Respondent Acer is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain products containing audio processing hardware and software that are used to infringe at least the Asserted Claims of the '923 Patent.

148. Andrea has obtained products containing audio processing hardware and software that Acer imported, sold for importation, and/or sold within the United States after importation, and that infringe, directly or indirectly, at least the Asserted Claims of the '923 Patent.

149. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibit 16 includes a chart comparing the asserted independent claims of the '923 Patent to Acer's Aspire M5-583P Product. Exhibit 16 shows that use of the Aspire M5-583P Product is covered by at least the asserted independent claims of the '923 Patent. Additionally, pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 16 contains photographs of the Aspire M5-583P Product. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only "a representative involved article" of Respondent Acer that violates Section 337. Andrea believes that the use of Acer devices in addition to the Aspire M5-583P Product, including desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, are covered by at least one of the Asserted

Claims of the '923 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent Acer.

150. In addition to incorporating an audio codec chip from Respondent Realtek and software from Fortemedia, Inc. in a manner such that use of the product directly infringes the Asserted Claims of the '923 Patent, as shown in Exhibit 16, Andrea also believes that Acer incorporates audio codec chips and/or software from other companies into its desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in a manner that similarly infringes the Asserted Claims of the '923 Patent. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against Acer's importation, sale for importation, and/or sale after importation of these products as well.

151. Additionally, Acer has indirectly infringed at least one claim of the '923 Patent by inducing infringement.

152. Acer has been aware of the '923 Patent and of Andrea's allegations of infringement since at least being sent the July 25, 2014 Complaint in *Andrea Electronics Corp. v. Acer Inc. et al*, Case No. 2:14-cv-04488-KAM-GRB, currently pending before the U.S. District Court for the Eastern District of New York.

153. Despite Acer's awareness of the '923 Patent and Andrea's allegations, Acer has knowingly and actively induced others to infringe the '923 Patent by selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing audio processing hardware and software which induce the direct infringement of at least one of the claims of the '923 Patent by end-users – for example, customers. Upon information and belief, at least one customer has directly infringed one or more claims of Andrea's '923 Patent.



154. Acer has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '923 Patent. For example, Acer has advertised and continues to advertise its "Purified Voice."<sup>8</sup> (See, e.g., Exhibits 42-44.) As shown for the exemplary Aspire M5-583P Product (Exhibit 16), Acer's audio processing implementation reduces or eliminates interference in a received signal in a manner that infringes the claims of the '923 Patent. At least by advertising such functionality, Acer has induced and is actively inducing use of that functionality and infringement of at least one claim of Andrea's '923 Patent.

155. Finally, Acer has indirectly infringed at least one of the claims of the '923 Patent by contributing to infringement.

156. The hardware (e.g., microphone(s) and/or microphone input(s)) and/or software (e.g., audio processing software) in Acer's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets are made solely for the purpose of reducing or eliminating interference from voice and/or other audio signals in a manner that infringes at least one claim of the '923 Patent. Further, this hardware and software is especially made and/or especially adapted for use in the infringement of Andrea's '923 Patent, is not a staple commodity of commerce, and is not suitable for substantial non-infringing use. By selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing this hardware and software, Acer has contributed to the infringement of the '923 Patent by end-users – for example, customers – who use said hardware and software provided in Acer's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets.

---

<sup>8</sup> For avoidance of doubt, Andrea provides Acer's "Purified Voice" as an exemplary way by which Acer induces infringement of the '923 Patent. None of Andrea's infringement allegations are limited to Acer's Purified Voice.

**b. Asus**

157. Respondent Asus is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain products containing audio processing hardware and software that are used to infringe at least the Asserted Claims of the '923 Patent.

158. Andrea has obtained products containing audio processing hardware and software that Asus imported, sold for importation, and/or sold within the United States after importation, and that infringe, directly or indirectly, at least the Asserted Claims of the '923 Patent.

159. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibit 17 includes a chart comparing the asserted independent claims of the '923 Patent to Asus' Vivobook Q302L Product. Exhibit 17 shows that use of the Vivobook Q302L Product is covered by at least the asserted independent claims of the '923 Patent. Additionally, pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 17 contains photographs of the Vivobook Q302L Product. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only "a representative involved article" of Respondent Asus that violates Section 337. Andrea believes that the use of Asus devices in addition to the Vivobook Q302L Product, including desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, are covered by at least one of the Asserted Claims of the '923 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent Asus.

160. In addition to incorporating an audio codec chip from Respondent Realtek and software from Respondent Realtek in a manner such that use of the product directly infringes the Asserted Claims of the '923 Patent, as shown in Exhibit 17, Andrea also believes that Asus incorporates audio codec chips and/or software from other companies into its desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in a manner that similarly

infringes the Asserted Claims of the '923 Patent. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against Asus' importation, sale for importation, and/or sale after importation of these products as well.

161. Additionally, Asus has indirectly infringed at least one claim of the '923 Patent by inducing infringement.

162. Asus has been aware of the '923 Patent and of Andrea's allegations of infringement since at least being sent the January 14, 2015 Complaint in *Andrea Electronics Corp. v. ASUSTeK Computer Inc., et al*, Case No. 2:15-cv-00214, currently pending before the U.S. District Court for the Eastern District of New York.

163. Despite Asus' awareness of the '923 Patent and Andrea's allegations, Asus has knowingly and actively induced others to infringe the '923 Patent by selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing audio processing hardware and software which induce the direct infringement of at least one of the claims of the '923 Patent by end-users – for example, customers. Upon information and belief, at least one customer has directly infringed one or more claims of Andrea's '923 Patent.

164. Asus has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '923 Patent. For example, Asus has advertised and continues to advertise its "Sonic Master."<sup>9</sup> (*See, e.g.*, Exhibits 47-50.) As shown for the exemplary Vivobook Q302L Product (Exhibit 17), Asus' audio processing implementation reduces or eliminates interference in a received signal in a manner that infringes the claims of the '923 Patent. At least by advertising such functionality, Asus has induced and is

---

<sup>9</sup> For avoidance of doubt, Andrea provides Asus' "Sonic Master" as an exemplary way by which Asus induces infringement of the '923 Patent. None of Andrea's infringement allegations are limited to Asus' Sonic Master.

actively inducing use of that functionality and infringement of at least one claim of Andrea's '923 Patent.

165. Finally, Asus has indirectly infringed at least one of the claims of the '923 Patent by contributing to infringement.

166. The hardware (*e.g.*, microphone(s) and/or microphone input(s)) and/or software (*e.g.*, audio processing software) in Asus' desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets are made solely for the purpose of reducing or eliminating interference from voice and/or other audio signals in a manner that infringes at least one claim of the '923 Patent. Further, this hardware and software is especially made and/or especially adapted for use in the infringement of Andrea's '923 Patent, is not a staple commodity of commerce, and is not suitable for substantial non-infringing use. By selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing this hardware and software, Asus has contributed to the infringement of the '923 Patent by end-users – for example, customers – who use said hardware and software provided in Asus' desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets.

**c. Dell**

167. Respondent Dell is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain products containing audio processing hardware and software that are used to infringe at least the Asserted Claims of the '923 Patent.

168. Andrea has obtained products containing audio processing hardware and software that Dell imported, sold for importation, and/or sold within the United States after importation, and that infringe, directly or indirectly, at least the Asserted Claims of the '923 Patent.

169. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibit 18 includes a chart comparing the asserted independent claims of the '923 Patent to Dell's Inspiron 13 7347

Product. Exhibit 18 shows that use of the Inspiron 13 7347 Product is covered by at least the asserted independent claims of the '923 Patent. Additionally, pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 18 contains photographs of the Inspiron 13 7347 Product. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only "a representative involved article" of Respondent Dell that violates Section 337. Andrea believes that the use of Dell devices in addition to the Inspiron 13 7347 Product, including desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, are covered by at least one of the Asserted Claims of the '923 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent Dell.

170. In addition to incorporating an audio codec chip from Respondent Realtek and software from Respondent Realtek in a manner such that use of the product directly infringes the Asserted Claims of the '923 Patent, as shown in Exhibit 18, Andrea also believes that Dell incorporates audio codec chips and/or software from other companies into its desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in a manner that similarly infringes the Asserted Claims of the '923 Patent. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against Dell's importation, sale for importation, and/or sale after importation of these products as well.

171. Additionally, Dell has indirectly infringed at least one claim of the '923 Patent by inducing infringement.

172. Dell has been aware of the '923 Patent and of Andrea's allegations of infringement since at least being sent the January 14, 2015 Complaint in *Andrea Electronics Corp. v. Dell Inc.*, Case No. 2:15-cv-00209, currently pending before the U.S. District Court for the Eastern District of New York.

173. Despite Dell's awareness of the '923 Patent and Andrea's allegations, Dell has knowingly and actively induced others to infringe the '923 Patent by selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing audio processing hardware and software which induce the direct infringement of at least one of the claims of the '923 Patent by end-users – for example, customers. Upon information and belief, at least one customer has directly infringed one or more claims of Andrea's '923 Patent.

174. Dell has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '923 Patent. For example, Dell has advertised and continues to advertise its microphone focus.<sup>10</sup> (*See, e.g.*, Exhibits 57-61.) As shown for the exemplary Inspiron 13 7347 Product (Exhibit 18), Dell's audio processing implementation reduces or eliminates interference in a received signal in a manner that infringes the claims of the '923 Patent. At least by advertising such functionality, Dell has induced and is actively inducing use of that functionality and infringement of at least one claim of Andrea's '923 Patent.

175. Finally, Dell has indirectly infringed at least one of the claims of the '923 Patent by contributing to infringement.

176. The hardware (*e.g.*, microphone(s) and/or microphone input(s)) and/or software (*e.g.*, audio processing software) in Dell's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets are made solely for the purpose of reducing or eliminating interference from voice and/or other audio signals in a manner that infringes at least one claim of the '923 Patent. Further, this hardware and software is especially made and/or especially

---

<sup>10</sup> For avoidance of doubt, Andrea provides these examples as exemplary ways by which Dell induces infringement of the '923 Patent. None of Andrea's infringement allegations are limited to these examples.

adapted for use in the infringement of Andrea's '923 Patent, is not a staple commodity of commerce, and is not suitable for substantial non-infringing use. By selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing this hardware and software, Dell has contributed to the infringement of the '923 Patent by end-users – for example, customers – who use said hardware and software provided in Dell's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets.

**d. HP**

177. Respondent HP is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain products containing audio processing hardware and software that are used to infringe at least the Asserted Claims of the '923 Patent.

178. Andrea has obtained products containing audio processing hardware and software that HP imported, sold for importation, and/or sold within the United States after importation, and that infringe, directly or indirectly, at least the Asserted Claims of the '923 Patent.

179. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibit 19 includes a chart comparing the asserted independent claims of the '923 Patent to HP's Elitebook 820 G1 Product. Exhibit 19 shows that use of the Elitebook 820 G1 Product is covered by at least the asserted independent claims of the '923 Patent. Additionally, pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 19 contains photographs of the Elitebook 820 G1 Product. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only "a representative involved article" of Respondent HP that violates Section 337. Andrea believes that the use of HP devices in addition to the Elitebook 820 G1 Product, including desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, are covered by at least one of the Asserted Claims of the '923 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent HP.

180. In addition to incorporating an audio codec chip and software from Integrated Device Technologies, Inc. (now sold and supported by Tempo Semiconductor, Inc.) in a manner such that use of the product directly infringes the Asserted Claims of the '923 Patent, as shown in Exhibit 19, Andrea also believes that HP incorporates audio codec chips and/or software from other companies into its desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in a manner that similarly infringes the Asserted Claims of the '923 Patent. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against HP's importation, sale for importation, and/or sale after importation of these products as well.

181. Additionally, HP has indirectly infringed at least one claim of the '923 Patent by inducing infringement.

182. HP has been aware of the '923 Patent and of Andrea's allegations of infringement since at least being sent the January 14, 2015 Complaint in *Andrea Electronics Corp. v. Hewlett Packard Co.*, Case No. 2:15-cv-00208, currently pending before the U.S. District Court for the Eastern District of New York.

183. Despite HP's awareness of the '923 Patent and Andrea's allegations, HP has knowingly and actively induced others to infringe the '923 Patent by selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing audio processing hardware and software which induce the direct infringement of at least one of the claims of the '923 Patent by end-users – for example, customers. Upon information and belief, at least one customer has directly infringed one or more claims of Andrea's '923 Patent.

184. HP has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '923 Patent. For example, HP has



advertised and continues to advertise its dual array microphones with beam forming.<sup>11</sup> (*See, e.g.*, Exhibits 68-70.) As shown for the exemplary Elitebook 820 G1 Product (Exhibit 19), HP's audio processing implementation reduces or eliminates interference in a received signal in a manner that infringes the claims of the '923 Patent. At least by advertising such functionality, HP has induced and is actively inducing use of that functionality and infringement of at least one claim of Andrea's '923 Patent.

185. Finally, HP has indirectly infringed at least one of the claims of the '923 Patent by contributing to infringement.

186. The hardware (*e.g.*, microphone(s) and/or microphone input(s)) and/or software (*e.g.*, audio processing software) in HP's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets are made solely for the purpose of reducing or eliminating interference from voice and/or other audio signals in a manner that infringes at least one claim of the '923 Patent. Further, this hardware and software is especially made and/or especially adapted for use in the infringement of Andrea's '923 Patent, is not a staple commodity of commerce, and is not suitable for substantial non-infringing use. By selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing this hardware and software, HP has contributed to the infringement of the '923 Patent by end-users – for example, customers – who use said hardware and software provided in HP's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets.

**e. Lenovo**

---

<sup>11</sup> For avoidance of doubt, Andrea provides these examples as exemplary ways by which HP induces infringement of the '923 Patent. None of Andrea's infringement allegations are limited to these examples.

187. Respondent Lenovo is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain products containing audio processing hardware and software that are used to infringe at least the Asserted Claims of the '923 Patent.

188. Andrea has obtained products containing audio processing hardware and software that Lenovo imported, sold for importation, and/or sold within the United States after importation, and that infringe, directly or indirectly, at least the Asserted Claims of the '923 Patent.

189. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibit 20 includes a chart comparing the asserted independent claims of the '923 Patent to Lenovo's ThinkPad T440 Product. Exhibit 20 shows that use of the ThinkPad T440 Product is covered by at least the asserted independent claims of the '923 Patent. Additionally, pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 20 contains photographs of the ThinkPad T440 Product. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only "a representative involved article" of Respondent Lenovo that violates Section 337. Andrea believes that the use of Lenovo devices in addition to the ThinkPad T440 Product, including desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, are covered by at least one of the Asserted Claims of the '923 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent Lenovo.

190. In addition to incorporating an audio codec chip from Respondent Realtek and software from Fortemedia, Inc. in a manner such that use of the product directly infringes the Asserted Claims of the '923 Patent, as shown in Exhibit 20, Andrea also believes that Lenovo incorporates audio codec chips and/or software from other companies into its desktops,

notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in a manner that similarly infringes the Asserted Claims of the '923 Patent. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against Lenovo's importation, sale for importation, and/or sale after importation of these products as well.

191. Additionally, Lenovo has indirectly infringed at least one claim of the '923 Patent by inducing infringement.

192. Lenovo has been aware of the '923 Patent and of Andrea's allegations of infringement since at least being sent the July 25, 2014 Complaint in *Andrea Electronics Corp. v. Lenovo Group Ltd. et al*, Case No. 2:14-cv-04489-KAM-GRB, currently pending before the U.S. District Court for the Eastern District of New York.

193. Despite Lenovo's awareness of the '923 Patent and Andrea's allegations, Lenovo has knowingly and actively induced others to infringe the '923 Patent by selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing audio processing hardware and software which induce the direct infringement of at least one of the claims of the '923 Patent by end-users – for example, customers. Upon information and belief, at least one customer has directly infringed one or more claims of Andrea's '923 Patent.

194. Lenovo has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '923 Patent. For example, Lenovo has advertised and continues to advertise its dual array microphones for noise cancellation.<sup>12</sup> (*See, e.g.*, Exhibits 73-74.) As shown for the exemplary ThinkPad T440 Product (Exhibit 20), Lenovo's audio processing implementation reduces or eliminates interference in a

---

<sup>12</sup> For avoidance of doubt, Andrea provides these examples as exemplary ways by which Lenovo induces infringement of the '923 Patent. None of Andrea's infringement allegations are limited to these examples.

received signal in a manner that infringes the claims of the '923 Patent. At least by advertising such functionality, Lenovo has induced and is actively inducing use of that functionality and infringement of at least one claim of Andrea's '923 Patent.

195. Finally, Lenovo has indirectly infringed at least one of the claims of the '923 Patent by contributing to infringement.

196. The hardware (*e.g.*, microphone(s) and/or microphone input(s)) and/or software (*e.g.*, audio processing software) in Lenovo's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets are made solely for the purpose of reducing or eliminating interference from voice and/or other audio signals in a manner that infringes at least one claim of the '923 Patent. Further, this hardware and software is especially made and/or especially adapted for use in the infringement of Andrea's '923 Patent, is not a staple commodity of commerce, and is not suitable for substantial non-infringing use. By selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing this hardware and software, Lenovo has contributed to the infringement of the '923 Patent by end-users – for example, customers – who use said hardware and software provided in Lenovo's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets.

**f. Toshiba**

197. Respondent Toshiba is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain products containing audio processing hardware and software that are used to infringe at least the Asserted Claims of the '923 Patent.

198. Andrea has obtained products containing audio processing hardware and software that Toshiba imported, sold for importation, and/or sold within the United States after

importation, and that infringe, directly or indirectly, at least the Asserted Claims of the '923 Patent.

199. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibit 21 includes a chart comparing the asserted independent claims of the '923 Patent to Toshiba's Satellite E45t-B4300 Product. Exhibit 21 shows that use of the Satellite E45t-B4300 Product is covered by at least the asserted independent claims of the '923 Patent. Additionally, pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 21 contains photographs of the Satellite E45t-B4300 Product. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only "a representative involved article" of Respondent Toshiba that violates Section 337. Andrea believes that the use of Toshiba devices in addition to the Satellite E45t-B4300 Product, including desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, are covered by at least one of the Asserted Claims of the '923 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent Toshiba.

200. In addition to incorporating an audio codec chip from Respondent Realtek and software from Respondent Realtek in a manner such that use of the product directly infringes the Asserted Claims of the '923 Patent, as shown in Exhibit 21, Andrea also believes that Toshiba incorporates audio codec chips and/or software from other companies into its desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in a manner that similarly infringes the Asserted Claims of the '923 Patent. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against Toshiba's importation, sale for importation, and/or sale after importation of these products as well.

201. Additionally, Toshiba has indirectly infringed at least one claim of the '923 Patent by inducing infringement.

202. Toshiba has been aware of the '923 Patent and of Andrea's allegations of infringement since at least being sent the July 25, 2014 Complaint in *Andrea Electronics Corp. v. Toshiba Corp. et al*, Case No. 2:14-cv-04492-KAM-GRB, currently pending before the U.S. District Court for the Eastern District of New York.

203. Despite Toshiba's awareness of the '923 Patent and Andrea's allegations, Toshiba has knowingly and actively induced others to infringe the '923 Patent by selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing audio processing hardware and software which induce the direct infringement of at least one of the claims of the '923 Patent by end-users – for example, customers. Upon information and belief, at least one customer has directly infringed one or more claims of Andrea's '923 Patent.

204. Toshiba has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '923 Patent. For example, Toshiba has advertised and continues to advertise its dual array microphones with beam forming for noise reduction and greater sound clarity.<sup>13</sup> (*See, e.g., Exhibit 77.*) As shown for the exemplary Satellite E45t-B4300 Product (Exhibit 21), Toshiba's audio processing implementation reduces or eliminates interference in a received signal in a manner that infringes the claims of the '923 Patent. At least by advertising such functionality, Toshiba has induced and is actively inducing use of that functionality and infringement of at least one claim of Andrea's '923 Patent.

205. Finally, Toshiba has indirectly infringed at least one of the claims of the '923 Patent by contributing to infringement.

---

<sup>13</sup> For avoidance of doubt, Andrea provides these examples as exemplary ways by which Toshiba induces infringement of the '923 Patent. None of Andrea's infringement allegations are limited to these examples.

206. The hardware (*e.g.*, microphone(s) and/or microphone input(s)) and/or software (*e.g.*, audio processing software) in Toshiba's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets are made solely for the purpose of reducing or eliminating interference from voice and/or other audio signals in a manner that infringes at least one claim of the '923 Patent. Further, this hardware and software is especially made and/or especially adapted for use in the infringement of Andrea's '923 Patent, is not a staple commodity of commerce, and is not suitable for substantial non-infringing use. By selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing this hardware and software, Toshiba has contributed to the infringement of the '923 Patent by end-users – for example, customers – who use said hardware and software provided in Toshiba's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets.

**g. Realtek**

207. Respondent Realtek is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain audio codec chips and/or audio processing software contained in other Respondent products that are used to infringe at least the Asserted Claims of the '923 Patent.

208. Andrea has obtained products containing audio codec chips and/or audio processing software that Realtek imported, sold for importation, and/or sold within the United States after importation, and that indirectly infringe at least the Asserted Claims of the '923 Patent.

209. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibits 16-18, 20, and 21 include charts comparing the asserted independent claims of the '923 Patent to products containing Realtek's audio codec chips and/or audio processing software. Exhibits 16-18, 20, and 21 show that the use of products containing Realtek's audio codec chips and/or audio

processing software are covered by at least the asserted independent claims of the '923 Patent. Additionally, pursuant to Commission Rule 210.12(a)(9)(x), Exhibits 16-18, 20, and 21 contain photographs of products containing Realtek's audio codec chips and/or audio processing software. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only "a representative involved article" of Respondent Realtek that violates Section 337. Andrea believes that the use of Realtek audio codec chips and/or audio processing software in addition to the audio codec chips and/or audio processing software contained in the products charted in Exhibits 16-18, 20, and 21 are covered by at least one of the Asserted Claims of the '923 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent Realtek.

210. Realtek has indirectly infringed at least one claim of the '923 Patent by inducing infringement.

211. Realtek has been aware of the '923 Patent and of Andrea's allegations of infringement since at least being sent the January 14, 2015 Complaint in *Andrea Electronics Corp. v. Realtek Semiconductor Corp., et al*, Case No. 2:15-cv-00215, currently pending before the U.S. District Court for the Eastern District of New York.

212. Despite Realtek's awareness of the '923 Patent and Andrea's allegations, Realtek has knowingly and actively induced others to infringe the '923 Patent by selling audio codec chips and/or audio processing software which induce the direct infringement of at least one of the claims of the '923 Patent by Realtek's customers and/or users. Upon information and belief, at least one customer and/or user has directly infringed one or more claims of Andrea's '923 Patent.



213. Realtek has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '923 Patent. For example, Realtek has advertised and continues to advertise its beam forming.<sup>14</sup> (*See, e.g.*, Exhibits 78-80.) As shown for the exemplary Aspire M5-583P Product (Exhibit 16), Vivobook Q302L Product (Exhibit 17), Inspiron 13 7347 Product (Exhibit 18), ThinkPad T440 Product (Exhibit 20), and Satellite E45t-B4300 Product (Exhibit 21), Realtek's audio codec chips and/or audio processing software reduce or eliminate interference in a received signal in a manner that infringes the claims of the '923 Patent. At least by advertising such functionality, Realtek has induced and is actively inducing incorporation of its audio processing hardware and/or software and use of that functionality and infringement of at least one claim of Andrea's '923 Patent.

214. Finally, Realtek has indirectly infringed at least one of the claims of the '923 Patent by contributing to infringement.

215. Realtek's audio codec chips and/or audio processing software are made solely for the purpose of reducing or eliminating interference from voice and/or other audio signals in a manner that infringes at least one claim of the '923 Patent. Further, these audio codec chips and/or audio processing software are especially made and/or especially adapted for use in the infringement of Andrea's '923 Patent, are not a staple commodity of commerce, and are not suitable for substantial non-infringing use. By selling or licensing these audio codec chips and/or audio processing software, Realtek has contributed to the infringement of the '923 Patent by users of said audio codec chips and/or audio processing software.

---

<sup>14</sup> For avoidance of doubt, Andrea provides these examples as an exemplary way by which Realtek induces infringement of the '923 Patent. None of Andrea's infringement allegations are limited to these examples.

216. In addition to selling its infringing audio codec chips and/or audio processing software to the other Respondents for importation, Andrea also believes that Realtek sells infringing audio codec chips and/or audio processing software to third parties for importation. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against Realtek's importation, sale for importation, and/or sale after importation of these products as well.

### **3. The '607 Patent**

#### **a. Acer**

217. Respondent Acer is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain products containing audio processing hardware and software that infringe or are used to infringe at least the Asserted Claims of the '607 Patent.

218. Andrea has obtained products containing audio processing hardware and software that Acer imported, sold for importation, and/or sold within the United States after importation, and that infringe, directly or indirectly, at least the Asserted Claims of the '607 Patent.

219. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibit 22 includes a chart comparing the asserted independent claims of the '607 Patent to Acer's Aspire M5-583P Product. Exhibit 22 shows that the Aspire M5-583P Product and its use are covered by at least the asserted independent claims of the '607 Patent. Additionally, pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 22 contains photographs of the Aspire M5-583P Product. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only "a representative involved article" of Respondent Acer that violates Section 337. Andrea believes that Acer devices in addition to the Aspire M5-583P Product, including desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, and their use, are covered by at least one of the

Asserted Claims of the '607 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent Acer.

220. In addition to incorporating an audio codec chip from Respondent Realtek and software from Fortemedia, Inc. in a manner that directly infringes at least one of the Asserted Claims of the '607 Patent, as does its use, as shown in Exhibit 22, Andrea also believes that Acer incorporates audio codec chips and/or software from other companies into its desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in a manner that similarly infringes the Asserted Claims of the '607 Patent. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against Acer's importation, sale for importation, and/or sale after importation of these products as well.

221. Additionally, Acer has indirectly infringed at least one claim of the '607 Patent by inducing infringement.

222. Acer has been aware of the '607 Patent and of Andrea's allegations of infringement since at least being sent the July 25, 2014 Complaint in *Andrea Electronics Corp. v. Acer Inc. et al*, Case No. 2:14-cv-04488-KAM-GRB, currently pending before the U.S. District Court for the Eastern District of New York.

223. Despite Acer's awareness of the '607 Patent and Andrea's allegations, Acer has knowingly and actively induced others to infringe the '607 Patent by selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing audio processing hardware and software which induce the direct infringement of at least one of the claims of the '607 Patent by end-users – for example, customers. Upon information and belief, at least one customer has directly infringed one or more claims of Andrea's '607 Patent.

224. Acer has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '607 Patent. For example, Acer has advertised and continues to advertise its "Purified Voice."<sup>15</sup> (See, e.g., Exhibits 42-44.) As shown for the exemplary Aspire M5-583P Product (Exhibit 22), Acer's audio processing implementation reduces or eliminates interference in a manner that infringes the claims of the '607 Patent. At least by advertising such functionality, Acer has induced and is actively inducing use of that functionality and infringement of at least one claim of Andrea's '607 Patent.

225. Finally, Acer has indirectly infringed at least one of the claims of the '607 Patent by contributing to infringement.

226. The hardware (e.g., microphone(s) and/or microphone input(s)) and/or software (e.g., audio processing software) in Acer's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets are made solely for the purpose of reducing or eliminating interference from voice and/or other audio signals in a manner that infringes at least one claim of the '607 Patent. Further, this hardware and software is especially made and/or especially adapted for use in the infringement of Andrea's '607 Patent, is not a staple commodity of commerce, and is not suitable for substantial non-infringing use. By selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing this hardware and software, Acer has contributed to the infringement of the '607 Patent by end-users – for example, customers – who use said hardware and software provided in Acer's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets.

**b. Asus**

---

<sup>15</sup> For avoidance of doubt, Andrea provides Acer's "Purified Voice" as an exemplary way by which Acer induces infringement of the '607 Patent. None of Andrea's infringement allegations are limited to Acer's Purified Voice.

227. Respondent Asus is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain products containing audio processing hardware and software that infringe or are used to infringe at least the Asserted Claims of the '607 Patent.

228. Andrea has obtained products containing audio processing hardware and software that Asus imported, sold for importation, and/or sold within the United States after importation, and that infringe, directly or indirectly, at least the Asserted Claims of the '607 Patent.

229. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibit 23 includes a chart comparing the asserted independent claims of the '607 Patent to Asus' Vivobook Q302L Product. Exhibit 23 shows that the Vivobook Q302L Product and its use are covered by at least the asserted independent claims of the '607 Patent. Additionally, pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 23 contains photographs of the Vivobook Q302L Product. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only "a representative involved article" of Respondent Asus that violates Section 337. Andrea believes that Asus devices in addition to the Vivobook Q302L Product, including desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, and their use, are covered by at least one of the Asserted Claims of the '607 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent Asus.

230. In addition to incorporating an audio codec chip from Respondent Realtek and software from Respondent Realtek in a manner that directly infringes at least one of the Asserted Claims of the '607 Patent, as does its use, as shown in Exhibit 23, Andrea also believes that Asus incorporates audio codec chips and/or software from other companies into its desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in a manner that similarly

infringes the Asserted Claims of the '607 Patent. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against Asus' importation, sale for importation, and/or sale after importation of these products as well.

231. Additionally, Asus has indirectly infringed at least one claim of the '607 Patent by inducing infringement.

232. Asus has been aware of the '607 Patent and of Andrea's allegations of infringement since at least being sent the January 14, 2015 Complaint in *Andrea Electronics Corp. v. ASUSTeK Computer Inc., et al*, Case No. 2:15-cv-00214, currently pending before the U.S. District Court for the Eastern District of New York.

233. Despite Asus' awareness of the '607 Patent and Andrea's allegations, Asus has knowingly and actively induced others to infringe the '607 Patent by selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing audio processing hardware and software which induce the direct infringement of at least one of the claims of the '607 Patent by end-users – for example, customers. Upon information and belief, at least one customer has directly infringed one or more claims of Andrea's '607 Patent.

234. Asus has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '607 Patent. For example, Asus has advertised and continues to advertise its "Sonic Master."<sup>16</sup> (*See, e.g.*, Exhibits 47, 48, 51, and 52.) As shown for the exemplary Vivobook Q302L Product (Exhibit 23), Asus' audio processing implementation reduces or eliminates interference in a manner that infringes the claims of the '607 Patent. At least by advertising such functionality, Asus has induced and is

---

<sup>16</sup> For avoidance of doubt, Andrea provides Asus' "Sonic Master" as an exemplary way by which Asus induces infringement of the '607 Patent. None of Andrea's infringement allegations are limited to Asus' Sonic Master.

actively inducing use of that functionality and infringement of at least one claim of Andrea's '607 Patent.

235. Finally, Asus has indirectly infringed at least one of the claims of the '607 Patent by contributing to infringement.

236. The hardware (*e.g.*, microphone(s) and/or microphone input(s)) and/or software (*e.g.*, audio processing software) in Asus' desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets are made solely for the purpose of reducing or eliminating interference from voice and/or other audio signals in a manner that infringes at least one claim of the '607 Patent. Further, this hardware and software is especially made and/or especially adapted for use in the infringement of Andrea's '607 Patent, is not a staple commodity of commerce, and is not suitable for substantial non-infringing use. By selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing this hardware and software, Asus has contributed to the infringement of the '607 Patent by end-users – for example, customers – who use said hardware and software provided in Asus' desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets.

**c. Dell**

237. Respondent Dell is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain products containing audio processing hardware and software that infringe or are used to infringe at least the Asserted Claims of the '607 Patent.

238. Andrea has obtained products containing audio processing hardware and software that Dell imported, sold for importation, and/or sold within the United States after importation, and that infringe, directly or indirectly, at least the Asserted Claims of the '607 Patent.

239. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibit 24 includes a chart comparing the asserted independent claims of the '607 Patent to Dell's Inspiron 13 7347 Product. Exhibit 24 shows that the Inspiron 13 7347 Product and its use are covered by at least the asserted independent claims of the '607 Patent. Additionally, pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 24 contains photographs of the Inspiron 13 7347 Product. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only "a representative involved article" of Respondent Dell that violates Section 337. Andrea believes that Dell devices in addition to the Inspiron 13 7347 Product, including desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, and their use, are covered by at least one of the Asserted Claims of the '607 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent Dell.

240. In addition to incorporating an audio codec chip from Respondent Realtek and software from Respondent Realtek in a manner that directly infringes at least one of the Asserted Claims of the '607 Patent, as does its use, as shown in Exhibit 24, Andrea also believes that Dell incorporates audio codec chips and/or software from other companies into its desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in a manner that similarly infringes the Asserted Claims of the '607 Patent. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against Dell's importation, sale for importation, and/or sale after importation of these products as well.

241. Additionally, Dell has indirectly infringed at least one claim of the '607 Patent by inducing infringement.

242. Dell has been aware of the '607 Patent and of Andrea's allegations of infringement since at least being sent the January 14, 2015 Complaint in *Andrea Electronics*



*Corp. v. Dell Inc.*, Case No. 2:15-cv-00209, currently pending before the U.S. District Court for the Eastern District of New York.

243. Despite Dell's awareness of the '607 Patent and Andrea's allegations, Dell has knowingly and actively induced others to infringe the '607 Patent by selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing audio processing hardware and software which induce the direct infringement of at least one of the claims of the '607 Patent by end-users – for example, customers. Upon information and belief, at least one customer has directly infringed one or more claims of Andrea's '607 Patent.

244. Dell has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '607 Patent. For example, Dell has advertised and continues to advertise its echo cancellation functionality.<sup>17</sup> (*See, e.g.*, Exhibits 57-59, 62, and 63.) As shown for the exemplary Inspiron 13 7347 Product (Exhibit 24), Dell's audio processing implementation reduces or eliminates interference in a manner that infringes the claims of the '607 Patent. At least by advertising such functionality, Dell has induced and is actively inducing use of that functionality and infringement of at least one claim of Andrea's '607 Patent.

245. Finally, Dell has indirectly infringed at least one of the claims of the '607 Patent by contributing to infringement.

246. The hardware (*e.g.*, microphone(s) and/or microphone input(s)) and/or software (*e.g.*, audio processing software) in Dell's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets are made solely for the purpose of reducing or eliminating

---

<sup>17</sup> For avoidance of doubt, Andrea provides these examples as exemplary ways by which Dell induces infringement of the '607 Patent. None of Andrea's infringement allegations are limited to these examples.

interference from voice and/or other audio signals in a manner that infringes at least one claim of the '607 Patent. Further, this hardware and software is especially made and/or especially adapted for use in the infringement of Andrea's '607 Patent, is not a staple commodity of commerce, and is not suitable for substantial non-infringing use. By selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing this hardware and software, Dell has contributed to the infringement of the '607 Patent by end-users – for example, customers – who use said hardware and software provided in Dell's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets.

**d. HP**

247. Respondent HP is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain products containing audio processing hardware and software that infringe or are used to infringe at least the Asserted Claims of the '607 Patent.

248. Andrea has obtained products containing audio processing hardware and software that HP imported, sold for importation, and/or sold within the United States after importation, and that infringe, directly or indirectly, at least the Asserted Claims of the '607 Patent.

249. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibit 25 includes a chart comparing the asserted independent claims of the '607 Patent to HP's Elitebook 820 G1 Product. Exhibit 25 shows that the Elitebook 820 G1 Product and its use are covered by at least the asserted independent claims of the '607 Patent. Additionally, pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 25 contains photographs of the Elitebook 820 G1 Product. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only "a representative involved article" of Respondent HP that violates Section 337. Andrea believes that HP devices in addition to the Elitebook 820 G1 Product, including desktops, notebooks, laptops, all-in-ones,

Chromebooks, and computer tablets, and their use, are covered by at least one of the Asserted Claims of the '607 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent HP.

250. In addition to incorporating an audio codec chip and software from Integrated Device Technologies, Inc. (now sold and supported by Tempo Semiconductor, Inc.) in a manner that directly infringes at least one of the Asserted Claims of the '607 Patent, as does its use, as shown in Exhibit 25, Andrea also believes that HP incorporates audio codec chips and/or software from other companies into its desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in a manner that similarly infringes the Asserted Claims of the '607 Patent. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against HP's importation, sale for importation, and/or sale after importation of these products as well.

251. Additionally, HP has indirectly infringed at least one claim of the '607 Patent by inducing infringement.

252. HP has been aware of the '607 Patent and of Andrea's allegations of infringement since at least being sent the January 14, 2015 Complaint in *Andrea Electronics Corp. v. Hewlett Packard Co.*, Case No. 2:15-cv-00208, currently pending before the U.S. District Court for the Eastern District of New York.

253. Despite HP's awareness of the '607 Patent and Andrea's allegations, HP has knowingly and actively induced others to infringe the '607 Patent by selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing audio processing hardware and software which induce the direct infringement of at least one of the claims of the

'607 Patent by end-users – for example, customers. Upon information and belief, at least one customer has directly infringed one or more claims of Andrea's '607 Patent.

254. HP has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '607 Patent. For example, HP has advertised and continues to advertise its dual array microphones with echo cancellation functionality.<sup>18</sup> (See, e.g., Exhibits 68-70.) As shown for the exemplary Elitebook 820 G1 Product (Exhibit 25), HP's audio processing implementation reduces or eliminates interference in a manner that infringes the claims of the '607 Patent. At least by advertising such functionality, HP has induced and is actively inducing use of that functionality and infringement of at least one claim of Andrea's '607 Patent.

255. Finally, HP has indirectly infringed at least one of the claims of the '607 Patent by contributing to infringement.

256. The hardware (e.g., microphone(s) and/or microphone input(s)) and/or software (e.g., audio processing software) in HP's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets are made solely for the purpose of reducing or eliminating interference from voice and/or other audio signals in a manner that infringes at least one claim of the '607 Patent. Further, this hardware and software is especially made and/or especially adapted for use in the infringement of Andrea's '607 Patent, is not a staple commodity of commerce, and is not suitable for substantial non-infringing use. By selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing this hardware and software, HP has contributed to the infringement of the '607 Patent by end-users – for example, customers

---

<sup>18</sup> For avoidance of doubt, Andrea provides these examples as exemplary ways by which HP induces infringement of the '607 Patent. None of Andrea's infringement allegations are limited to these examples.

– who use said hardware and software provided in HP’s desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets.

**e. Lenovo**

257. Respondent Lenovo is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain products containing audio processing hardware and software that infringe or are used to infringe at least the Asserted Claims of the ’607 Patent.

258. Andrea has obtained products containing audio processing hardware and software that Lenovo imported, sold for importation, and/or sold within the United States after importation, and that infringe, directly or indirectly, at least the Asserted Claims of the ’607 Patent.

259. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibit 26 includes a chart comparing the asserted independent claims of the ’607 Patent to Lenovo’s ThinkPad T440 Product. Exhibit 26 shows that the ThinkPad T440 Product and its use are covered by at least the asserted independent claims of the ’607 Patent. Additionally, pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 26 contains photographs of the ThinkPad T440 Product. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only “a representative involved article” of Respondent Lenovo that violates Section 337. Andrea believes that Lenovo devices in addition to the ThinkPad T440 Product, including desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, and their use, are covered by at least one of the Asserted Claims of the ’607 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent Lenovo.

260. In addition to incorporating an audio codec chip from Respondent Realtek and software from Fortemedia, Inc. in a manner that directly infringes at least one of the Asserted

Claims of the '607 Patent, as does its use, as shown in Exhibit 26, Andrea also believes that Lenovo incorporates audio codec chips and/or software from other companies into its desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in a manner that similarly infringes the Asserted Claims of the '607 Patent. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against Lenovo's importation, sale for importation, and/or sale after importation of these products as well.

261. Additionally, Lenovo has indirectly infringed at least one claim of the '607 Patent by inducing infringement.

262. Lenovo has been aware of the '607 Patent and of Andrea's allegations of infringement since at least being sent the July 25, 2014 Complaint in *Andrea Electronics Corp. v. Lenovo Group Ltd. et al*, Case No. 2:14-cv-04489-KAM-GRB, currently pending before the U.S. District Court for the Eastern District of New York.

263. Despite Lenovo's awareness of the '607 Patent and Andrea's allegations, Lenovo has knowingly and actively induced others to infringe the '607 Patent by selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing audio processing hardware and software which induce the direct infringement of at least one of the claims of the '607 Patent by end-users – for example, customers. Upon information and belief, at least one customer has directly infringed one or more claims of Andrea's '607 Patent.

264. Lenovo has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '607 Patent. For example, Lenovo has advertised and continues to advertise that its products include microphones for

canceling noise, including, for example, echo and background noise.<sup>19</sup> (*See, e.g.*, Exhibits 73-74.) As shown for the exemplary ThinkPad T440 Product (Exhibit 26), Lenovo's audio processing implementation reduces or eliminates interference in a manner that infringes the claims of the '607 Patent. At least by advertising such functionality, Lenovo has induced and is actively inducing use of that functionality and infringement of at least one claim of Andrea's '607 Patent.

265. Finally, Lenovo has indirectly infringed at least one of the claims of the '607 Patent by contributing to infringement.

266. The hardware (*e.g.*, microphone(s) and/or microphone input(s)) and/or software (*e.g.*, audio processing software) in Lenovo's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets are made solely for the purpose of reducing or eliminating interference from voice and/or other audio signals in a manner that infringes at least one claim of the '607 Patent. Further, this hardware and software is especially made and/or especially adapted for use in the infringement of Andrea's '607 Patent, is not a staple commodity of commerce, and is not suitable for substantial non-infringing use. By selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing this hardware and software, Lenovo has contributed to the infringement of the '607 Patent by end-users – for example, customers – who use said hardware and software provided in Lenovo's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets.

**f. Toshiba**

---

<sup>19</sup> For avoidance of doubt, Andrea provides these examples as exemplary ways by which Lenovo induces infringement of the '607 Patent. None of Andrea's infringement allegations are limited to these examples.

267. Respondent Toshiba is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain products containing audio processing hardware and software that infringe or are used to infringe at least the Asserted Claims of the '607 Patent.

268. Andrea has obtained products containing audio processing hardware and software that Toshiba imported, sold for importation, and/or sold within the United States after importation, and that infringe, directly or indirectly, at least the Asserted Claims of the '607 Patent.

269. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibit 27 includes a chart comparing the asserted independent claims of the '607 Patent to Toshiba's Satellite E45t-B4300 Product. Exhibit 27 shows that the Satellite E45t-B4300 Product and its use are covered by at least the asserted independent claims of the '607 Patent. Additionally, pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 27 contains photographs of the Satellite E45t-B4300 Product. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only "a representative involved article" of Respondent Toshiba that violates Section 337. Andrea believes that Toshiba devices in addition to the Satellite E45t-B4300 Product, including desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, and their use, are covered by at least one of the Asserted Claims of the '607 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent Toshiba.

270. In addition to incorporating an audio codec chip from Respondent Realtek and software from Respondent Realtek in a manner that directly infringes at least one of the Asserted Claims of the '607 Patent, as does its use, as shown in Exhibit 27, Andrea also believes that Toshiba incorporates audio codec chips and/or software from other companies into its desktops,



notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in a manner that similarly infringes the Asserted Claims of the '607 Patent. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against Toshiba's importation, sale for importation, and/or sale after importation of these products as well.

271. Additionally, Toshiba has indirectly infringed at least one claim of the '607 Patent by inducing infringement.

272. Toshiba has been aware of the '607 Patent and of Andrea's allegations of infringement since at least being sent the July 25, 2014 Complaint in *Andrea Electronics Corp. v. Toshiba Corp. et al*, Case No. 2:14-cv-04492-KAM-GRB, currently pending before the U.S. District Court for the Eastern District of New York.

273. Despite Toshiba's awareness of the '607 Patent and Andrea's allegations, Toshiba has knowingly and actively induced others to infringe the '607 Patent by selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing audio processing hardware and software which induce the direct infringement of at least one of the claims of the '607 Patent by end-users – for example, customers. Upon information and belief, at least one customer has directly infringed one or more claims of Andrea's '607 Patent.

274. Toshiba has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '607 Patent. For example, Toshiba has advertised and continues to advertise that its products contain dual array microphones for noise reduction and greater sound clarity.<sup>20</sup> (*See, e.g.*, Exhibit 77.) As shown for the exemplary Satellite E45t-B4300 Product (Exhibit 27), Toshiba's audio processing

---

<sup>20</sup> For avoidance of doubt, Andrea provides these examples as exemplary ways by which Toshiba induces infringement of the '607 Patent. None of Andrea's infringement allegations are limited to these examples.

implementation reduces or eliminates interference in a received signal in a manner that infringes the claims of the '607 Patent. At least by advertising such functionality, Toshiba has induced and is actively inducing use of that functionality and infringement of at least one claim of Andrea's '607 Patent.

275. Finally, Toshiba has indirectly infringed at least one of the claims of the '607 Patent by contributing to infringement.

276. The hardware (*e.g.*, microphone(s) and/or microphone input(s)) and/or software (*e.g.*, audio processing software) in Toshiba's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets are made solely for the purpose of reducing or eliminating interference from voice and/or other audio signals in a manner that infringes at least one claim of the '607 Patent. Further, this hardware and software is especially made and/or especially adapted for use in the infringement of Andrea's '607 Patent, is not a staple commodity of commerce, and is not suitable for substantial non-infringing use. By selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing this hardware and software, Toshiba has contributed to the infringement of the '607 Patent by end-users – for example, customers – who use said hardware and software provided in Toshiba's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets.

**g. Realtek**

277. Respondent Realtek is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain audio codec chips and/or audio processing software contained in other Respondent products that are used to infringe at least the Asserted Claims of the '607 Patent.

278. Andrea has obtained products containing audio codec chips and/or audio processing software that Realtek imported, sold for importation, and/or sold within the United

States after importation, and that indirectly infringe at least the Asserted Claims of the '607 Patent.

279. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibits 22-24, 26, and 27 include charts comparing the asserted independent claims of the '607 Patent to products containing Realtek's audio codec chips and/or audio processing software. Exhibits 22-24, 26, and 27 show that products containing Realtek's audio codec chips and/or audio processing software, and their use, are covered by at least the asserted independent claims of the '607 Patent. Additionally, pursuant to Commission Rule 210.12(a)(9)(x), Exhibits 22-24, 26, and 27 contain photographs of products containing Realtek's audio codec chips and/or audio processing software. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only "a representative involved article" of Respondent Realtek that violates Section 337. Andrea believes that Realtek audio codec chips and/or audio processing software in addition to the audio codec chips and/or audio processing software contained in the products charted in Exhibits 22-24, 26, and 27, and their use, are covered by at least one of the Asserted Claims of the '607 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent Realtek.

280. Realtek has indirectly infringed at least one claim of the '607 Patent by inducing infringement.

281. Realtek has been aware of the '607 Patent and of Andrea's allegations of infringement since at least being sent the January 14, 2015 Complaint in *Andrea Electronics Corp. v. Realtek Semiconductor Corp., et al*, Case No. 2:15-cv-00215, currently pending before the U.S. District Court for the Eastern District of New York.

282. Despite Realtek's awareness of the '607 Patent and Andrea's allegations, Realtek has knowingly and actively induced others to infringe the '607 Patent by selling audio codec chips and/or audio processing software which induce the direct infringement of at least one of the claims of the '607 Patent by Realtek's customers and/or users. Upon information and belief, at least one customer and/or user has directly infringed one or more claims of Andrea's '607 Patent.

283. Realtek has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '607 Patent. For example, Realtek has advertised and continues to advertise its acoustic echo cancellation.<sup>21</sup> (*See, e.g.,* Exhibits 78-80.) As shown for the exemplary Aspire M5-583P Product (Exhibit 22), Vivobook Q302L Product (Exhibit 23), Inspiron 13 7347 Product (Exhibit 24), ThinkPad T440 Product (Exhibit 26), and Satellite E45t-B4300 Product (Exhibit 27), Realtek's audio codec chips and/or audio processing software reduce or eliminate interference in a received signal in a manner that infringes the claims of the '607 Patent. At least by advertising such functionality, Realtek has induced and is actively inducing incorporation of its audio processing hardware and/or software and use of that functionality and infringement of at least one claim of Andrea's '607 Patent.

284. Finally, Realtek has indirectly infringed at least one of the claims of the '607 Patent by contributing to infringement.

285. Realtek's audio codec chips and/or audio processing software are made solely for the purpose of reducing or eliminating interference from voice and/or other audio signals in a manner that infringes at least one claim of the '607 Patent. Further, these audio codec chips

---

<sup>21</sup> For avoidance of doubt, Andrea provides these examples as an exemplary way by which Realtek induces infringement of the '607 Patent. None of Andrea's infringement allegations are limited to these examples.

and/or audio processing software are especially made and/or especially adapted for use in the infringement of Andrea's '607 Patent, are not a staple commodity of commerce, and are not suitable for substantial non-infringing use. By selling or licensing these audio codec chips and/or audio processing software, Realtek has contributed to the infringement of the '607 Patent by users of said audio codec chips and/or audio processing software.

286. In addition to selling its infringing audio codec chips and/or audio processing software to the other Respondents for importation, Andrea also believes that Realtek sells infringing audio codec chips and/or audio processing software to third parties for importation. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against Realtek's importation, sale for importation, and/or sale after importation of these products as well.

#### **4. The '345 Patent**

##### **a. Acer**

287. Respondent Acer is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain products containing audio processing hardware and software that infringe or are used to infringe at least the Asserted Claims of the '345 Patent.

288. Andrea has obtained products containing audio processing hardware and software that Acer imported, sold for importation, and/or sold within the United States after importation, and that infringe, directly or indirectly, at least the Asserted Claims of the '345 Patent.

289. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibit 28 includes a chart comparing the asserted independent claims of the '345 Patent to Acer's Aspire M5-583P Product. Exhibit 28 shows that the Aspire M5-583P Product and its use are covered by at least the asserted independent claims of the '345 Patent. Additionally, pursuant to Commission Rule

210.12(a)(9)(x), Exhibit 28 contains photographs of the Aspire M5-583P Product. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only “a representative involved article” of Respondent Acer that violates Section 337. Andrea believes that Acer devices in addition to the Aspire M5-583P Product, including desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, and their use, are covered by at least one of the Asserted Claims of the '345 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent Acer.

290. In addition to incorporating an audio codec chip from Respondent Realtek and software from Fortemedia, Inc. in a manner that directly infringes at least one of the Asserted Claims of the '345 Patent, as does its use, as shown in Exhibit 28, Andrea also believes that Acer incorporates audio codec chips and/or software from other companies into its desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in a manner that similarly infringes the Asserted Claims of the '345 Patent. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against Acer's importation, sale for importation, and/or sale after importation of these products as well.

291. Additionally, Acer has indirectly infringed at least one claim of the '345 Patent by inducing infringement.

292. Acer has been aware of the '345 Patent and of Andrea's allegations of infringement since at least being sent the July 25, 2014 Complaint in *Andrea Electronics Corp. v. Acer Inc. et al*, Case No. 2:14-cv-04488-KAM-GRB, currently pending before the U.S. District Court for the Eastern District of New York.

293. Despite Acer's awareness of the '345 Patent and Andrea's allegations, Acer has knowingly and actively induced others to infringe the '345 Patent by selling desktops,

notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing audio processing hardware and software which induce the direct infringement of at least one of the claims of the '345 Patent by end-users – for example, customers. Upon information and belief, at least one customer has directly infringed one or more claims of Andrea's '345 Patent.

294. Acer has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '345 Patent. For example, Acer has advertised and continues to advertise its "Purified Voice."<sup>22</sup> (*See, e.g.*, Exhibits 42-44.) As shown for the exemplary Aspire M5-583P Product (Exhibit 28), Acer's audio processing implementation reduces or eliminates noise in a manner that infringes the claims of the '345 Patent. At least by advertising such functionality, Acer has induced and is actively inducing use of that functionality and infringement of at least one claim of Andrea's '345 Patent.

295. Finally, Acer has indirectly infringed at least one of the claims of the '345 Patent by contributing to infringement.

296. The hardware (*e.g.*, microphone(s) and/or microphone input(s)) and/or software (*e.g.*, audio processing software) in Acer's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets are made solely for the purpose of reducing or eliminating noise from voice and/or other audio signals in a manner that infringes at least one claim of the '345 Patent. Further, this hardware and software is especially made and/or especially adapted for use in the infringement of Andrea's '345 Patent, is not a staple commodity of commerce, and is not suitable for substantial non-infringing use. By selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing this hardware and software, Acer has

---

<sup>22</sup> For avoidance of doubt, Andrea provides Acer's "Purified Voice" as an exemplary way by which Acer induces infringement of the '345 Patent. None of Andrea's infringement allegations are limited to Acer's Purified Voice.

contributed to the infringement of the '345 Patent by end-users – for example, customers – who use said hardware and software provided in Acer's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets.

**b. Asus**

297. Respondent Asus is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain products containing audio processing hardware and software that infringe or are used to infringe at least the Asserted Claims of the '345 Patent.

298. Andrea has obtained products containing audio processing hardware and software that Asus imported, sold for importation, and/or sold within the United States after importation, and that infringe, directly or indirectly, at least the Asserted Claims of the '345 Patent.

299. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibit 29 includes a chart comparing the asserted independent claims of the '345 Patent to Asus' Vivobook Q302L Product. Exhibit 29 shows that the Vivobook Q302L Product and its use are covered by at least the asserted independent claims of the '345 Patent. Additionally, pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 29 contains photographs of the Vivobook Q302L Product. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only "a representative involved article" of Respondent Asus that violates Section 337. Andrea believes that Asus devices in addition to the Vivobook Q302L Product, including desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, and their use, are covered by at least one of the Asserted Claims of the '345 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent Asus.

300. In addition to incorporating an audio codec chip from Respondent Realtek and software from Respondent Realtek in a manner that directly infringes at least one of the Asserted



Claims of the '345 Patent, as does its use, as shown in Exhibit 29, Andrea also believes that Asus incorporates audio codec chips and/or software from other companies into its desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in a manner that similarly infringes the Asserted Claims of the '345 Patent. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against Asus' importation, sale for importation, and/or sale after importation of these products as well.

301. Additionally, Asus has indirectly infringed at least one claim of the '345 Patent by inducing infringement.

302. Asus has been aware of the '345 Patent and of Andrea's allegations of infringement since at least being sent the January 14, 2015 Complaint in *Andrea Electronics Corp. v. ASUSTeK Computer Inc., et al*, Case No. 2:15-cv-00214, currently pending before the U.S. District Court for the Eastern District of New York.

303. Despite Asus' awareness of the '345 Patent and Andrea's allegations, Asus has knowingly and actively induced others to infringe the '345 Patent by selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing audio processing hardware and software which induce the direct infringement of at least one of the claims of the '345 Patent by end-users – for example, customers. Upon information and belief, at least one customer has directly infringed one or more claims of Andrea's '345 Patent.

304. Asus has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '345 Patent. For example, Asus has advertised and continues to advertise its "Sonic Master."<sup>23</sup> (*See, e.g.*, Exhibits 47, 48, 53,

---

<sup>23</sup> For avoidance of doubt, Andrea provides Asus' "Sonic Master" as an exemplary way by which Asus induces infringement of the '345 Patent. None of Andrea's infringement allegations are limited to Asus' Sonic Master.

and 54.) As shown for the exemplary Vivobook Q302L Product (Exhibit 29), Asus' audio processing implementation reduces or eliminates noise in a manner that infringes the claims of the '345 Patent. At least by advertising such functionality, Asus has induced and is actively inducing use of that functionality and infringement of at least one claim of Andrea's '345 Patent.

305. Finally, Asus has indirectly infringed at least one of the claims of the '345 Patent by contributing to infringement.

306. The hardware (*e.g.*, microphone(s) and/or microphone input(s)) and/or software (*e.g.*, audio processing software) in Asus' desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets are made solely for the purpose of reducing or eliminating noise from voice and/or other audio signals in a manner that infringes at least one claim of the '345 Patent. Further, this hardware and software is especially made and/or especially adapted for use in the infringement of Andrea's '345 Patent, is not a staple commodity of commerce, and is not suitable for substantial non-infringing use. By selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing this hardware and software, Asus has contributed to the infringement of the '345 Patent by end-users – for example, customers – who use said hardware and software provided in Asus' desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets.

**c. Dell**

307. Respondent Dell is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain products containing audio processing hardware and software that infringe or are used to infringe at least the Asserted Claims of the '345 Patent.

308. Andrea has obtained products containing audio processing hardware and software that Dell imported, sold for importation, and/or sold within the United States after importation, and that infringe, directly or indirectly, at least the Asserted Claims of the '345 Patent.

309. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibit 30 includes a chart comparing the asserted independent claims of the '345 Patent to Dell's Inspiron 13 7347 Product. Exhibit 30 shows that the Inspiron 13 7347 Product and its use are covered by at least the asserted independent claims of the '345 Patent. Additionally, pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 30 contains photographs of the Inspiron 13 7347 Product. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only "a representative involved article" of Respondent Dell that violates Section 337. Andrea believes that Dell devices in addition to the Inspiron 13 7347 Product, including desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, and their use, are covered by at least one of the Asserted Claims of the '345 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent Dell.

310. In addition to incorporating an audio codec chip from Respondent Realtek and software from Respondent Realtek in a manner that directly infringes at least one of the Asserted Claims of the '345 Patent, as does its use, as shown in Exhibit 30, Andrea also believes that Dell incorporates audio codec chips and/or software from other companies into its desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in a manner that similarly infringes the Asserted Claims of the '345 Patent. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against Dell's importation, sale for importation, and/or sale after importation of these products as well.

311. Additionally, Dell has indirectly infringed at least one claim of the '345 Patent by inducing infringement.

312. Dell has been aware of the '345 Patent and of Andrea's allegations of infringement since at least being sent the January 14, 2015 Complaint in *Andrea Electronics Corp. v. Dell Inc.*, Case No. 2:15-cv-00209, currently pending before the U.S. District Court for the Eastern District of New York.

313. Despite Dell's awareness of the '345 Patent and Andrea's allegations, Dell has knowingly and actively induced others to infringe the '345 Patent by selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing audio processing hardware and software which induce the direct infringement of at least one of the claims of the '345 Patent by end-users – for example, customers. Upon information and belief, at least one customer has directly infringed one or more claims of Andrea's '345 Patent.

314. Dell has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '345 Patent. For example, Dell has advertised and continues to advertise that its products include noise suppression.<sup>24</sup> (*See, e.g.*, Exhibits 57-59, 64, and 65.) As shown for the exemplary Inspiron 13 7347 Product (Exhibit 30), Dell's audio processing implementation reduces or eliminates noise in a manner that infringes the claims of the '345 Patent. At least by advertising such functionality, Dell has induced and is actively inducing use of that functionality and infringement of at least one claim of Andrea's '345 Patent.

---

<sup>24</sup> For avoidance of doubt, Andrea provides these examples as exemplary ways by which Dell induces infringement of the '345 Patent. None of Andrea's infringement allegations are limited to these examples.

315. Finally, Dell has indirectly infringed at least one of the claims of the '345 Patent by contributing to infringement.

316. The hardware (*e.g.*, microphone(s) and/or microphone input(s)) and/or software (*e.g.*, audio processing software) in Dell's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets are made solely for the purpose of reducing or eliminating noise from voice and/or other audio signals in a manner that infringes at least one claim of the '345 Patent. Further, this hardware and software is especially made and/or especially adapted for use in the infringement of Andrea's '345 Patent, is not a staple commodity of commerce, and is not suitable for substantial non-infringing use. By selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing this hardware and software, Dell has contributed to the infringement of the '345 Patent by end-users – for example, customers – who use said hardware and software provided in Dell's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets.

**d. HP**

317. Respondent HP is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain products containing audio processing hardware and software that infringe or are used to infringe at least the Asserted Claims of the '345 Patent.

318. Andrea has obtained products containing audio processing hardware and software that HP imported, sold for importation, and/or sold within the United States after importation, and that infringe, directly or indirectly, at least the Asserted Claims of the '345 Patent.

319. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibit 31 includes a chart comparing the asserted independent claims of the '345 Patent to HP's Elitebook 820 G1 Product. Exhibit 31 shows that the Elitebook 820 G1 Product and its use are covered by at least the

asserted independent claims of the '345 Patent. Additionally, pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 31 contains photographs of the Elitebook 820 G1 Product. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only "a representative involved article" of Respondent HP that violates Section 337. Andrea believes that HP devices in addition to the Elitebook 820 G1 Product, including desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, and their use, are covered by at least one of the Asserted Claims of the '345 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent HP.

320. In addition to incorporating an audio codec chip and software from Integrated Device Technologies, Inc. (now sold and supported by Tempo Semiconductor, Inc.) in a manner that directly infringes at least one of the Asserted Claims of the '345 Patent, as does its use, as shown in Exhibit 31, Andrea also believes that HP incorporates audio codec chips and/or software from other companies into its desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in a manner that similarly infringes the Asserted Claims of the '345 Patent. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against HP's importation, sale for importation, and/or sale after importation of these products as well.

321. Additionally, HP has indirectly infringed at least one claim of the '345 Patent by inducing infringement.

322. HP has been aware of the '345 Patent and of Andrea's allegations of infringement since at least being sent the January 14, 2015 Complaint in *Andrea Electronics Corp. v. Hewlett Packard Co.*, Case No. 2:15-cv-00208, currently pending before the U.S. District Court for the Eastern District of New York.

323. Despite HP's awareness of the '345 Patent and Andrea's allegations, HP has knowingly and actively induced others to infringe the '345 Patent by selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing audio processing hardware and software which induce the direct infringement of at least one of the claims of the '345 Patent by end-users – for example, customers. Upon information and belief, at least one customer has directly infringed one or more claims of Andrea's '345 Patent.

324. HP has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '345 Patent. For example, HP has advertised and continues to advertise that its products include dual array digital microphones with noise cancellation.<sup>25</sup> (*See, e.g.*, Exhibits 68-70.) As shown for the exemplary Elitebook 820 G1 Product (Exhibit 31), HP's audio processing implementation reduces or eliminates noise in a manner that infringes the claims of the '345 Patent. At least by advertising such functionality, HP has induced and is actively inducing use of that functionality and infringement of at least one claim of Andrea's '345 Patent.

325. Finally, HP has indirectly infringed at least one of the claims of the '345 Patent by contributing to infringement.

326. The hardware (*e.g.*, microphone(s) and/or microphone input(s)) and/or software (*e.g.*, audio processing software) in HP's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets are made solely for the purpose of reducing or eliminating noise from voice and/or other audio signals in a manner that infringes at least one claim of the '345 Patent. Further, this hardware and software is especially made and/or especially adapted for

---

<sup>25</sup> For avoidance of doubt, Andrea provides these examples as exemplary ways by which HP induces infringement of the '345 Patent. None of Andrea's infringement allegations are limited to these examples.

use in the infringement of Andrea's '345 Patent, is not a staple commodity of commerce, and is not suitable for substantial non-infringing use. By selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing this hardware and software, HP has contributed to the infringement of the '345 Patent by end-users – for example, customers – who use said hardware and software provided in HP's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets.

**e. Lenovo**

327. Respondent Lenovo is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain products containing audio processing hardware and software that infringe or are used to infringe at least the Asserted Claims of the '345 Patent.

328. Andrea has obtained products containing audio processing hardware and software that Lenovo imported, sold for importation, and/or sold within the United States after importation, and that infringe, directly or indirectly, at least the Asserted Claims of the '345 Patent.

329. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibit 32 includes a chart comparing the asserted independent claims of the '345 Patent to Lenovo's ThinkPad T440 Product. Exhibit 32 shows that the ThinkPad T440 Product and its use are covered by at least the asserted independent claims of the '345 Patent. Additionally, pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 32 contains photographs of the ThinkPad T440 Product. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only "a representative involved article" of Respondent Lenovo that violates Section 337. Andrea believes that Lenovo devices in addition to the ThinkPad T440 Product, including desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, and their use, are covered by at least one of the



Asserted Claims of the '345 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent Lenovo.

330. In addition to incorporating an audio codec chip from Respondent Realtek and software from Fortemedia, Inc. in a manner that directly infringes at least one of the Asserted Claims of the '345 Patent, as does its use, as shown in Exhibit 32, Andrea also believes that Lenovo incorporates audio codec chips and/or software from other companies into its desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in a manner that similarly infringes the Asserted Claims of the '345 Patent. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against Lenovo's importation, sale for importation, and/or sale after importation of these products as well.

331. Additionally, Lenovo has indirectly infringed at least one claim of the '345 Patent by inducing infringement.

332. Lenovo has been aware of the '345 Patent and of Andrea's allegations of infringement since at least being sent the July 25, 2014 Complaint in *Andrea Electronics Corp. v. Lenovo Group Ltd. et al*, Case No. 2:14-cv-04489-KAM-GRB, currently pending before the U.S. District Court for the Eastern District of New York.

333. Despite Lenovo's awareness of the '345 Patent and Andrea's allegations, Lenovo has knowingly and actively induced others to infringe the '345 Patent by selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing audio processing hardware and software which induce the direct infringement of at least one of the claims of the '345 Patent by end-users – for example, customers. Upon information and belief, at least one customer has directly infringed one or more claims of Andrea's '345 Patent.

334. Lenovo has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '345 Patent. For example, Lenovo has advertised and continues to advertise that its products include microphones for canceling noise, including, for example, echo and background noise.<sup>26</sup> (See, e.g., Exhibits 73-74.) As shown for the exemplary ThinkPad T440 Product (Exhibit 32), Lenovo's audio processing implementation reduces or eliminates noise in a manner that infringes the claims of the '345 Patent. At least by advertising such functionality, Lenovo has induced and is actively inducing use of that functionality and infringement of at least one claim of Andrea's '345 Patent.

335. Finally, Lenovo has indirectly infringed at least one of the claims of the '345 Patent by contributing to infringement.

336. The hardware (e.g., microphone(s) and/or microphone input(s)) and/or software (e.g., audio processing software) in Lenovo's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets are made solely for the purpose of reducing or eliminating noise from voice and/or other audio signals in a manner that infringes at least one claim of the '345 Patent. Further, this hardware and software is especially made and/or especially adapted for use in the infringement of Andrea's '345 Patent, is not a staple commodity of commerce, and is not suitable for substantial non-infringing use. By selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing this hardware and software, Lenovo has contributed to the infringement of the '345 Patent by end-users – for example, customers – who use said hardware and software provided in Lenovo's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets.

---

<sup>26</sup> For avoidance of doubt, Andrea provides these examples as exemplary ways by which Lenovo induces infringement of the '345 Patent. None of Andrea's infringement allegations are limited to these examples.

**f. Toshiba**

337. Respondent Toshiba is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain products containing audio processing hardware and software that infringe or are used to infringe at least the Asserted Claims of the '345 Patent.

338. Andrea has obtained products containing audio processing hardware and software that Toshiba imported, sold for importation, and/or sold within the United States after importation, and that infringe, directly or indirectly, at least the Asserted Claims of the '345 Patent.

339. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibit 33 includes a chart comparing the asserted independent claims of the '345 Patent to Toshiba's Satellite E45t-B4300 Product. Exhibit 33 shows that the Satellite E45t-B4300 Product and its use are covered by at least the asserted independent claims of the '345 Patent. Additionally, pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 33 contains photographs of the Satellite E45t-B4300 Product. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only "a representative involved article" of Respondent Toshiba that violates Section 337. Andrea believes that Toshiba devices in addition to the Satellite E45t-B4300 Product, including desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, and their use, are covered by at least one of the Asserted Claims of the '345 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent Toshiba.

340. In addition to incorporating an audio codec chip from Respondent Realtek and software from Respondent Realtek in a manner that directly infringes at least one of the Asserted Claims of the '345 Patent, as does its use, as shown in Exhibit 33, Andrea also believes that Toshiba incorporates audio codec chips and/or software from other companies into its desktops,

notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in a manner that similarly infringes the Asserted Claims of the '345 Patent. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against Toshiba's importation, sale for importation, and/or sale after importation of these products as well.

341. Additionally, Toshiba has indirectly infringed at least one claim of the '345 Patent by inducing infringement.

342. Toshiba has been aware of the '345 Patent and of Andrea's allegations of infringement since at least being sent the July 25, 2014 Complaint in *Andrea Electronics Corp. v. Toshiba Corp. et al*, Case No. 2:14-cv-04492-KAM-GRB, currently pending before the U.S. District Court for the Eastern District of New York.

343. Despite Toshiba's awareness of the '345 Patent and Andrea's allegations, Toshiba has knowingly and actively induced others to infringe the '345 Patent by selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing audio processing hardware and software which induce the direct infringement of at least one of the claims of the '345 Patent by end-users – for example, customers. Upon information and belief, at least one customer has directly infringed one or more claims of Andrea's '345 Patent.

344. Toshiba has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '345 Patent. For example, Toshiba has advertised and continues to advertise that its products contain microphones for noise reduction and greater sound clarity.<sup>27</sup> (*See, e.g., Exhibit 77.*) As shown for the exemplary Satellite E45t-B4300 Product (Exhibit 33), Toshiba's audio processing implementation reduces

---

<sup>27</sup> For avoidance of doubt, Andrea provides these examples as exemplary ways by which Toshiba induces infringement of the '345 Patent. None of Andrea's infringement allegations are limited to these examples.

or eliminates noise in a manner that infringes the claims of the '345 Patent. At least by advertising such functionality, Toshiba has induced and is actively inducing use of that functionality and infringement of at least one claim of Andrea's '345 Patent.

345. Finally, Toshiba has indirectly infringed at least one of the claims of the '345 Patent by contributing to infringement.

346. The hardware (*e.g.*, microphone(s) and/or microphone input(s)) and/or software (*e.g.*, audio processing software) in Toshiba's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets are made solely for the purpose of reducing or eliminating noise from voice and/or other audio signals in a manner that infringes at least one claim of the '345 Patent. Further, this hardware and software is especially made and/or especially adapted for use in the infringement of Andrea's '345 Patent, is not a staple commodity of commerce, and is not suitable for substantial non-infringing use. By selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing this hardware and software, Toshiba has contributed to the infringement of the '345 Patent by end-users – for example, customers – who use said hardware and software provided in Toshiba's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets.

**g. Realtek**

347. Respondent Realtek is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain audio codec chips and/or audio processing software contained in other Respondent products that are used to infringe at least the Asserted Claims of the '345 Patent.

348. Andrea has obtained products containing audio codec chips and/or audio processing software that Realtek imported, sold for importation, and/or sold within the United

States after importation, and that indirectly infringe at least the Asserted Claims of the '345 Patent.

349. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibits 28-30, 32, and 33 include charts comparing the asserted independent claims of the '345 Patent to products containing Realtek's audio codec chips and/or audio processing software. Exhibits 28-30, 32, and 33 show that products containing Realtek's audio codec chips and/or audio processing software, and their use, are covered by at least the asserted independent claims of the '345 Patent. Additionally, pursuant to Commission Rule 210.12(a)(9)(x), Exhibits 28-30, 32, and 33 contain photographs of products containing Realtek's audio codec chips and/or audio processing software. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only "a representative involved article" of Respondent Realtek that violates Section 337. Andrea believes that Realtek audio codec chips and/or audio processing software in addition to the audio codec chips and/or audio processing software contained in the products charted in Exhibits 28-30, 32, and 33, and their use, are covered by at least one of the Asserted Claims of the '345 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent Realtek.

350. Realtek has indirectly infringed at least one claim of the '345 Patent by inducing infringement.

351. Realtek has been aware of the '345 Patent and of Andrea's allegations of infringement since at least being sent the January 14, 2015 Complaint in *Andrea Electronics Corp. v. Realtek Semiconductor Corp., et al*, Case No. 2:15-cv-00215, currently pending before the U.S. District Court for the Eastern District of New York.

352. Despite Realtek's awareness of the '345 Patent and Andrea's allegations, Realtek has knowingly and actively induced others to infringe the '345 Patent by selling audio codec chips and/or audio processing software which induce the direct infringement of at least one of the claims of the '345 Patent by Realtek's customers and/or users. Upon information and belief, at least one customer and/or user has directly infringed one or more claims of Andrea's '345 Patent.

353. Realtek has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '345 Patent. For example, Realtek has advertised and continues to advertise its noise suppression.<sup>28</sup> (See, e.g., Exhibits 78-80.) As shown for the exemplary Aspire M5-583P Product (Exhibit 28), Vivobook Q302L Product (Exhibit 29), Inspiron 13 7347 Product (Exhibit 30), ThinkPad T440 Product (Exhibit 32), and Satellite E45t-B4300 Product (Exhibit 33), Realtek's audio codec chips and/or audio processing software reduce or eliminate noise in a received signal in a manner that infringes the claims of the '345 Patent. At least by advertising such functionality, Realtek has induced and is actively inducing incorporation of its audio processing hardware and/or software and use of that functionality and infringement of at least one claim of Andrea's '345 Patent.

354. Finally, Realtek has indirectly infringed at least one of the claims of the '345 Patent by contributing to infringement.

355. Realtek's audio codec chips and/or audio processing software are made solely for the purpose of reducing or eliminating noise from voice and/or other audio signals in a manner that infringes at least one claim of the '345 Patent. Further, these audio codec chips and/or audio

---

<sup>28</sup> For avoidance of doubt, Andrea provides these examples as an exemplary way by which Realtek induces infringement of the '607 Patent. None of Andrea's infringement allegations are limited to these examples.

processing software are especially made and/or especially adapted for use in the infringement of Andrea's '345 Patent, are not a staple commodity of commerce, and are not suitable for substantial non-infringing use. By selling or licensing these audio codec chips and/or audio processing software, Realtek has contributed to the infringement of the '345 Patent by users of said audio codec chips and/or audio processing software.

356. In addition to selling its infringing audio codec chips and/or audio processing software to the other Respondents for importation, Andrea also believes that Realtek sells infringing audio codec chips and/or audio processing software to third parties for importation. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against Realtek's importation, sale for importation, and/or sale after importation of these products as well.

## **5. The '637 Patent**

### **a. Acer**

357. Respondent Acer is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain products containing audio processing hardware and software that infringe or are used to infringe at least the Asserted Claims of the '637 Patent.

358. Andrea has obtained products containing audio processing hardware and software that Acer imported, sold for importation, and/or sold within the United States after importation, and that infringe, directly or indirectly, at least the Asserted Claims of the '637 Patent.

359. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibit 34 includes a chart comparing the asserted independent claims of the '637 Patent to Acer's Aspire M5-583P Product. Exhibit 34 shows that the Aspire M5-583P Product and its use are covered by at least the asserted independent claims of the '637 Patent. Additionally, pursuant to Commission Rule



210.12(a)(9)(x), Exhibit 34 contains photographs of the Aspire M5-583P Product. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only “a representative involved article” of Respondent Acer that violates Section 337. Andrea believes that Acer devices in addition to the Aspire M5-583P Product, including desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, and their use, are covered by at least one of the Asserted Claims of the '637 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent Acer.

360. In addition to incorporating an audio codec chip from Respondent Realtek and software from Fortemedia, Inc. in a manner that directly infringes at least one of the Asserted Claims of the '637 Patent, as does its use, as shown in Exhibit 34, Andrea also believes that Acer incorporates audio codec chips and/or software from other companies into its desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in a manner that similarly infringes the Asserted Claims of the '637 Patent. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against Acer's importation, sale for importation, and/or sale after importation of these products as well.

361. Additionally, Acer has indirectly infringed at least one claim of the '637 Patent by inducing infringement.

362. Acer has been aware of the '637 Patent and of Andrea's allegations of infringement since at least being sent the January 14, 2015 Complaint in *Andrea Electronics Corp. v. Acer Inc., et al*, Case No. 2:15-cv-00210, currently pending before the U.S. District Court for the Eastern District of New York.

363. Despite Acer's awareness of the '637 Patent and Andrea's allegations, Acer has knowingly and actively induced others to infringe the '637 Patent by selling desktops,

notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing audio processing hardware and software which induce the direct infringement of at least one of the claims of the '637 Patent by end-users – for example, customers. Upon information and belief, at least one customer has directly infringed one or more claims of Andrea's '637 Patent.

364. Acer has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '637 Patent. For example, Acer has advertised and continues to advertise its "Purified Voice."<sup>29</sup> (See, e.g., Exhibits 42-44.) As shown for the exemplary Aspire M5-583P Product (Exhibit 34), Acer's audio processing implementation reduces or eliminates noise in a manner that infringes the claims of the '637 Patent. At least by advertising such functionality, Acer has induced and is actively inducing use of that functionality and infringement of at least one claim of Andrea's '637 Patent.

365. Finally, Acer has indirectly infringed at least one of the claims of the '637 Patent by contributing to infringement.

366. The hardware (e.g., microphone(s) and/or microphone input(s)) and/or software (e.g., audio processing software) in Acer's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets are made solely for the purpose of reducing or eliminating noise from voice and/or other audio signals in a manner that infringes at least one claim of the '637 Patent. Further, this hardware and software is especially made and/or especially adapted for use in the infringement of Andrea's '637 Patent, is not a staple commodity of commerce, and is not suitable for substantial non-infringing use. By selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing this hardware and software, Acer has

---

<sup>29</sup> For avoidance of doubt, Andrea provides Acer's "Purified Voice" as an exemplary way by which Acer induces infringement of the '637 Patent. None of Andrea's infringement allegations are limited to Acer's Purified Voice.

contributed to the infringement of the '637 Patent by end-users – for example, customers – who use said hardware and software provided in Acer's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets.

**b. Asus**

367. Respondent Asus is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain products containing audio processing hardware and software that infringe or are used to infringe at least the Asserted Claims of the '637 Patent.

368. Andrea has obtained products containing audio processing hardware and software that Asus imported, sold for importation, and/or sold within the United States after importation, and that infringe, directly or indirectly, at least the Asserted Claims of the '637 Patent.

369. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibit 35 includes a chart comparing the asserted independent claims of the '637 Patent to Asus' Vivobook Q302L Product. Exhibit 35 shows that the Vivobook Q302L Product and its use are covered by at least the asserted independent claims of the '637 Patent. Additionally, pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 35 contains photographs of the Vivobook Q302L Product. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only "a representative involved article" of Respondent Asus that violates Section 337. Andrea believes that Asus devices in addition to the Vivobook Q302L Product, including desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, and their use, are covered by at least one of the Asserted Claims of the '637 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent Asus.

370. In addition to incorporating an audio codec chip from Respondent Realtek and software from Respondent Realtek in a manner that directly infringes at least one of the Asserted

Claims of the '637 Patent, as does its use, as shown in Exhibit 35, Andrea also believes that Asus incorporates audio codec chips and/or software from other companies into its desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in a manner that similarly infringes the Asserted Claims of the '637 Patent. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against Asus' importation, sale for importation, and/or sale after importation of these products as well.

371. Additionally, Asus has indirectly infringed at least one claim of the '637 Patent by inducing infringement.

372. Asus has been aware of the '637 Patent and of Andrea's allegations of infringement since at least being sent the January 14, 2015 Complaint in *Andrea Electronics Corp. v. ASUSTeK Computer Inc., et al*, Case No. 2:15-cv-00214, currently pending before the U.S. District Court for the Eastern District of New York.

373. Despite Asus' awareness of the '637 Patent and Andrea's allegations, Asus has knowingly and actively induced others to infringe the '637 Patent by selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing audio processing hardware and software which induce the direct infringement of at least one of the claims of the '637 Patent by end-users – for example, customers. Upon information and belief, at least one customer has directly infringed one or more claims of Andrea's '637 Patent.

374. Asus has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '637 Patent. For example, Asus has advertised and continues to advertise its "Sonic Master."<sup>30</sup> (*See, e.g.*, Exhibits 47, 48, 53,

---

<sup>30</sup> For avoidance of doubt, Andrea provides Asus' "Sonic Master" as an exemplary way by which Asus induces infringement of the '637 Patent. None of Andrea's infringement allegations are limited to Asus' Sonic Master.

and 54.) As shown for the exemplary Vivobook Q302L Product (Exhibit 35), Asus' audio processing implementation reduces or eliminates noise in a manner that infringes the claims of the '637 Patent. At least by advertising such functionality, Asus has induced and is actively inducing use of that functionality and infringement of at least one claim of Andrea's '637 Patent.

375. Finally, Asus has indirectly infringed at least one of the claims of the '637 Patent by contributing to infringement.

376. The hardware (*e.g.*, microphone(s) and/or microphone input(s)) and/or software (*e.g.*, audio processing software) in Asus' desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets are made solely for the purpose of reducing or eliminating noise from voice and/or other audio signals in a manner that infringes at least one claim of the '637 Patent. Further, this hardware and software is especially made and/or especially adapted for use in the infringement of Andrea's '637 Patent, is not a staple commodity of commerce, and is not suitable for substantial non-infringing use. By selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing this hardware and software, Asus has contributed to the infringement of the '637 Patent by end-users – for example, customers – who use said hardware and software provided in Asus' desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets.

**c. Dell**

377. Respondent Dell is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain products containing audio processing hardware and software that infringe or are used to infringe at least the Asserted Claims of the '637 Patent.

378. Andrea has obtained products containing audio processing hardware and software that Dell imported, sold for importation, and/or sold within the United States after importation, and that infringe, directly or indirectly, at least the Asserted Claims of the '637 Patent.

379. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibit 36 includes a chart comparing the asserted independent claims of the '637 Patent to Dell's Inspiron 13 7347 Product. Exhibit 36 shows that the Inspiron 13 7347 Product and its use are covered by at least the asserted independent claims of the '637 Patent. Additionally, pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 36 contains photographs of the Inspiron 13 7347 Product. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only "a representative involved article" of Respondent Dell that violates Section 337. Andrea believes that Dell devices in addition to the Inspiron 13 7347 Product, including desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, and their use, are covered by at least one of the Asserted Claims of the '637 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent Dell.

380. In addition to incorporating an audio codec chip from Respondent Realtek and software from Respondent Realtek in a manner that directly infringes at least one of the Asserted Claims of the '637 Patent, as does its use, as shown in Exhibit 36, Andrea also believes that Dell incorporates audio codec chips and/or software from other companies into its desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in a manner that similarly infringes the Asserted Claims of the '637 Patent. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against Dell's importation, sale for importation, and/or sale after importation of these products as well.

381. Additionally, Dell has indirectly infringed at least one claim of the '637 Patent by inducing infringement.

382. Dell has been aware of the '637 Patent and of Andrea's allegations of infringement since at least being sent the January 14, 2015 Complaint in *Andrea Electronics Corp. v. Dell Inc.*, Case No. 2:15-cv-00209, currently pending before the U.S. District Court for the Eastern District of New York.

383. Despite Dell's awareness of the '637 Patent and Andrea's allegations, Dell has knowingly and actively induced others to infringe the '637 Patent by selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing audio processing hardware and software which induce the direct infringement of at least one of the claims of the '637 Patent by end-users – for example, customers. Upon information and belief, at least one customer has directly infringed one or more claims of Andrea's '637 Patent.

384. Dell has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '637 Patent. For example, Dell has advertised and continues to advertise that its products include noise suppression.<sup>31</sup> (*See, e.g.*, Exhibits 57-59, 64, and 65.) As shown for the exemplary Inspiron 13 7347 Product (Exhibit 36), Dell's audio processing implementation reduces or eliminates noise in a manner that infringes the claims of the '637 Patent. At least by advertising such functionality, Dell has induced and is actively inducing use of that functionality and infringement of at least one claim of Andrea's '637 Patent.

---

<sup>31</sup> For avoidance of doubt, Andrea provides these examples as exemplary ways by which Dell induces infringement of the '637 Patent. None of Andrea's infringement allegations are limited to these examples.

385. Finally, Dell has indirectly infringed at least one of the claims of the '637 Patent by contributing to infringement.

386. The hardware (*e.g.*, microphone(s) and/or microphone input(s)) and/or software (*e.g.*, audio processing software) in Dell's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets are made solely for the purpose of reducing or eliminating noise from voice and/or other audio signals in a manner that infringes at least one claim of the '637 Patent. Further, this hardware and software is especially made and/or especially adapted for use in the infringement of Andrea's '637 Patent, is not a staple commodity of commerce, and is not suitable for substantial non-infringing use. By selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing this hardware and software, Dell has contributed to the infringement of the '637 Patent by end-users – for example, customers – who use said hardware and software provided in Dell's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets.

**d. HP**

387. Respondent HP is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain products containing audio processing hardware and software that infringe or are used to infringe at least the Asserted Claims of the '637 Patent.

388. Andrea has obtained products containing audio processing hardware and software that HP imported, sold for importation, and/or sold within the United States after importation, and that infringe, directly or indirectly, at least the Asserted Claims of the '637 Patent.

389. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibit 37 includes a chart comparing the asserted independent claims of the '637 Patent to HP's Elitebook 820 G1 Product. Exhibit 37 shows that the Elitebook 820 G1 Product and its use are covered by at least the



asserted independent claims of the '637 Patent. Additionally, pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 37 contains photographs of the Elitebook 820 G1 Product. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only "a representative involved article" of Respondent HP that violates Section 337. Andrea believes that HP devices in addition to the Elitebook 820 G1 Product, including desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, and their use, are covered by at least one of the Asserted Claims of the '637 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent HP.

390. In addition to incorporating an audio codec chip and software from Integrated Device Technologies, Inc. (now sold and supported by Tempo Semiconductor, Inc.) in a manner that directly infringes at least one of the Asserted Claims of the '637 Patent, as does its use, as shown in Exhibit 37, Andrea also believes that HP incorporates audio codec chips and/or software from other companies into its desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in a manner that similarly infringes the Asserted Claims of the '637 Patent. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against HP's importation, sale for importation, and/or sale after importation of these products as well.

391. Additionally, HP has indirectly infringed at least one claim of the '637 Patent by inducing infringement.

392. HP has been aware of the '637 Patent and of Andrea's allegations of infringement since at least being sent the January 14, 2015 Complaint in *Andrea Electronics Corp. v. Hewlett Packard Co.*, Case No. 2:15-cv-00208, currently pending before the U.S. District Court for the Eastern District of New York.

393. Despite HP's awareness of the '637 Patent and Andrea's allegations, HP has knowingly and actively induced others to infringe the '637 Patent by selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing audio processing hardware and software which induce the direct infringement of at least one of the claims of the '637 Patent by end-users – for example, customers. Upon information and belief, at least one customer has directly infringed one or more claims of Andrea's '637 Patent.

394. HP has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '637 Patent. For example, HP has advertised and continues to advertise that its products include dual array digital microphones with noise cancellation.<sup>32</sup> (*See, e.g.*, Exhibits 68-70.) As shown for the exemplary Elitebook 820 G1 Product (Exhibit 37), HP's audio processing implementation reduces or eliminates noise in a manner that infringes the claims of the '637 Patent. At least by advertising such functionality, HP has induced and is actively inducing use of that functionality and infringement of at least one claim of Andrea's '637 Patent.

395. Finally, HP has indirectly infringed at least one of the claims of the '637 Patent by contributing to infringement.

396. The hardware (*e.g.*, microphone(s) and/or microphone input(s)) and/or software (*e.g.*, audio processing software) in HP's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets are made solely for the purpose of reducing or eliminating noise from voice and/or other audio signals in a manner that infringes at least one claim of the '637 Patent. Further, this hardware and software is especially made and/or especially adapted for

---

<sup>32</sup> For avoidance of doubt, Andrea provides these examples as exemplary ways by which HP induces infringement of the '637 Patent. None of Andrea's infringement allegations are limited to these examples.

use in the infringement of Andrea's '637 Patent, is not a staple commodity of commerce, and is not suitable for substantial non-infringing use. By selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing this hardware and software, HP has contributed to the infringement of the '637 Patent by end-users – for example, customers – who use said hardware and software provided in HP's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets.

**e. Lenovo**

397. Respondent Lenovo is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain products containing audio processing hardware and software that infringe or are used to infringe at least the Asserted Claims of the '637 Patent.

398. Andrea has obtained products containing audio processing hardware and software that Lenovo imported, sold for importation, and/or sold within the United States after importation, and that infringe, directly or indirectly, at least the Asserted Claims of the '637 Patent.

399. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibit 38 includes a chart comparing the asserted independent claims of the '637 Patent to Lenovo's ThinkPad T440 Product. Exhibit 38 shows that the ThinkPad T440 Product and its use are covered by at least the asserted independent claims of the '637 Patent. Additionally, pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 38 contains photographs of the ThinkPad T440 Product. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only "a representative involved article" of Respondent Lenovo that violates Section 337. Andrea believes that Lenovo devices in addition to the ThinkPad T440 Product, including desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, and their use, are covered by at least one of the

Asserted Claims of the '637 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent Lenovo.

400. In addition to incorporating an audio codec chip from Respondent Realtek and software from Fortemedia, Inc. in a manner that directly infringes at least one of the Asserted Claims of the '637 Patent, as does its use, as shown in Exhibit 38, Andrea also believes that Lenovo incorporates audio codec chips and/or software from other companies into its desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in a manner that similarly infringes the Asserted Claims of the '637 Patent. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against Lenovo's importation, sale for importation, and/or sale after importation of these products as well.

401. Additionally, Lenovo has indirectly infringed at least one claim of the '637 Patent by inducing infringement.

402. Lenovo has been aware of the '637 Patent and of Andrea's allegations of infringement since at least being sent the January 14, 2015 Complaint in *Andrea Electronics Corp. v. Lenovo Group Ltd., et al*, Case No. 2:15-cv-00212, currently pending before the U.S. District Court for the Eastern District of New York.

403. Despite Lenovo's awareness of the '637 Patent and Andrea's allegations, Lenovo has knowingly and actively induced others to infringe the '637 Patent by selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing audio processing hardware and software which induce the direct infringement of at least one of the claims of the '637 Patent by end-users – for example, customers. Upon information and belief, at least one customer has directly infringed one or more claims of Andrea's '637 Patent.

404. Lenovo has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '637 Patent. For example, Lenovo has advertised and continues to advertise that its products include microphones for canceling noise, including, for example, echo and background noise.<sup>33</sup> (See, e.g., Exhibits 73-74.) As shown for the exemplary ThinkPad T440 Product (Exhibit 38), Lenovo's audio processing implementation reduces or eliminates noise in a manner that infringes the claims of the '637 Patent. At least by advertising such functionality, Lenovo has induced and is actively inducing use of that functionality and infringement of at least one claim of Andrea's '637 Patent.

405. Finally, Lenovo has indirectly infringed at least one of the claims of the '637 Patent by contributing to infringement.

406. The hardware (e.g., microphone(s) and/or microphone input(s)) and/or software (e.g., audio processing software) in Lenovo's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets are made solely for the purpose of reducing or eliminating noise from voice and/or other audio signals in a manner that infringes at least one claim of the '637 Patent. Further, this hardware and software is especially made and/or especially adapted for use in the infringement of Andrea's '637 Patent, is not a staple commodity of commerce, and is not suitable for substantial non-infringing use. By selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing this hardware and software, Lenovo has contributed to the infringement of the '637 Patent by end-users – for example, customers – who use said hardware and software provided in Lenovo's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets.

---

<sup>33</sup> For avoidance of doubt, Andrea provides these examples as exemplary ways by which Lenovo induces infringement of the '637 Patent. None of Andrea's infringement allegations are limited to these examples.

**f. Toshiba**

407. Respondent Toshiba is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain products containing audio processing hardware and software that infringe or are used to infringe at least the Asserted Claims of the '637 Patent.

408. Andrea has obtained products containing audio processing hardware and software that Toshiba imported, sold for importation, and/or sold within the United States after importation, and that infringe, directly or indirectly, at least the Asserted Claims of the '637 Patent.

409. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibit 39 includes a chart comparing the asserted independent claims of the '637 Patent to Toshiba's Satellite E45t-B4300 Product. Exhibit 39 shows that the Satellite E45t-B4300 Product and its use are covered by at least the asserted independent claims of the '637 Patent. Additionally, pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 39 contains photographs of the Satellite E45t-B4300 Product. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only "a representative involved article" of Respondent Toshiba that violates Section 337. Andrea believes that Toshiba devices in addition to the Satellite E45t-B4300 Product, including desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets, and their use, are covered by at least one of the Asserted Claims of the '637 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent Toshiba.

410. In addition to incorporating an audio codec chip from Respondent Realtek and software from Respondent Realtek in a manner that directly infringes at least one of the Asserted Claims of the '637 Patent, as does its use, as shown in Exhibit 39, Andrea also believes that Toshiba incorporates audio codec chips and/or software from other companies into its desktops,

notebooks, laptops, all-in-ones, Chromebooks, and computer tablets in a manner that similarly infringes the Asserted Claims of the '637 Patent. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against Toshiba's importation, sale for importation, and/or sale after importation of these products as well.

411. Additionally, Toshiba has indirectly infringed at least one claim of the '637 Patent by inducing infringement.

412. Toshiba has been aware of the '637 Patent and of Andrea's allegations of infringement since at least being sent the January 14, 2015 Complaint in *Andrea Electronics Corp. v. Toshiba Corp., et al*, Case No. 2:15-cv-00211, currently pending before the U.S. District Court for the Eastern District of New York.

413. Despite Toshiba's awareness of the '637 Patent and Andrea's allegations, Toshiba has knowingly and actively induced others to infringe the '637 Patent by selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing audio processing hardware and software which induce the direct infringement of at least one of the claims of the '637 Patent by end-users – for example, customers. Upon information and belief, at least one customer has directly infringed one or more claims of Andrea's '637 Patent.

414. Toshiba has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '637 Patent. For example, Toshiba has advertised and continues to advertise that its products contain microphones for noise reduction and greater sound clarity.<sup>34</sup> (*See, e.g.*, Exhibit 77.) As shown for the exemplary Satellite E45t-B4300 Product (Exhibit 39), Toshiba's audio processing implementation in a

---

<sup>34</sup> For avoidance of doubt, Andrea provides these examples as exemplary ways by which Toshiba induces infringement of the '637 Patent. None of Andrea's infringement allegations are limited to these examples.

manner that infringes the claims of the '637 Patent. At least by advertising such functionality, Toshiba has induced and is actively inducing use of that functionality and infringement of at least one claim of Andrea's '637 Patent.

415. Finally, Toshiba has indirectly infringed at least one of the claims of the '637 Patent by contributing to infringement.

416. The hardware (*e.g.*, microphone(s) and/or microphone input(s)) and/or software (*e.g.*, audio processing software) in Toshiba's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets are made solely for the purpose of reducing or eliminating noise from voice and/or other audio signals in a manner that infringes at least one claim of the '637 Patent. Further, this hardware and software is especially made and/or especially adapted for use in the infringement of Andrea's '637 Patent, is not a staple commodity of commerce, and is not suitable for substantial non-infringing use. By selling desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets containing this hardware and software, Toshiba has contributed to the infringement of the '637 Patent by end-users – for example, customers – who use said hardware and software provided in Toshiba's desktops, notebooks, laptops, all-in-ones, Chromebooks, and computer tablets.

**g. Realtek**

417. Respondent Realtek is engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain audio codec chips and/or audio processing software contained in other Respondent products that are used to infringe at least the Asserted Claims of the '637 Patent.

418. Andrea has obtained products containing audio codec chips and/or audio processing software that Realtek imported, sold for importation, and/or sold within the United



States after importation, and that infringe, directly or indirectly, at least the Asserted Claims of the '637 Patent.

419. Pursuant to Commission Rule 210.12(a)(9)(viii), Exhibits 34-36, 38, and 39 include charts comparing the asserted independent claims of the '637 Patent to products containing Realtek's audio codec chips and/or audio processing software. Exhibits 34-36, 38, and 39 show that products containing Realtek's audio codec chips and/or audio processing software, and their use, are covered by at least the asserted independent claims of the '637 Patent. Additionally, pursuant to Commission Rule 210.12(a)(9)(x), Exhibits 34-36, 38, and 39 contain photographs of products containing Realtek's audio codec chips and/or audio processing software. Lastly, Commission Rule 210.12(a)(9)(viii) requires that Complainant chart only "a representative involved article" of Respondent Realtek that violates Section 337. Andrea believes that Realtek audio codec chips and/or audio processing software in addition to the software contained in the products charted in Exhibits 34-36, 38, and 39, and their use, are covered by at least one of the Asserted Claims of the '637 Patent and have been imported, sold for importation, or sold within the United States after importation by Respondent Realtek.

420. Realtek has indirectly infringed at least one claim of the '637 Patent by inducing infringement.

421. Realtek has been aware of the '637 Patent and of Andrea's allegations of infringement since at least being sent the January 14, 2015 Complaint in *Andrea Electronics Corp. v. Realtek Semiconductor Corp., et al*, Case No. 2:15-cv-00215, currently pending before the U.S. District Court for the Eastern District of New York.

422. Despite Realtek's awareness of the '637 Patent and Andrea's allegations, Realtek has knowingly and actively induced others to infringe the '637 Patent by selling audio codec

chips and/or audio processing software which induce the direct infringement of at least one of the claims of the '637 Patent by Realtek's customers or users. Upon information and belief, at least one customer and/or user has directly infringed one or more claims of Andrea's '637 Patent.

423. Realtek has provided and continues to provide promotional materials advertising the audio processing functionalities described and claimed in the '637 Patent. For example, Realtek has advertised and continues to advertise its noise suppression.<sup>35</sup> (*See, e.g.*, Exhibits 78-80.) As shown for the exemplary Aspire M5-583P Product (Exhibit 34), Vivobook Q302L Product (Exhibit 35), Inspiron 13 7347 Product (Exhibit 36), ThinkPad T440 Product (Exhibit 38), and Satellite E45t-B4300 Product (Exhibit 39), Realtek's audio codec chips and/or audio processing software reduce or eliminate noise in a received signal in a manner that infringes the claims of the '637 Patent. At least by advertising such functionality, Realtek has induced and is actively inducing incorporation of its audio processing hardware and/or software and use of that functionality and infringement of at least one claim of Andrea's '637 Patent.

424. Finally, Realtek has indirectly infringed at least one of the claims of the '637 Patent by contributing to infringement.

425. Realtek's audio codec chips and/or audio processing software are made solely for the purpose of reducing or eliminating noise from voice and/or other audio signals in a manner that infringes at least one claim of the '637 Patent. Further, these audio codec chips and/or audio processing software are especially made and/or especially adapted for use in the infringement of Andrea's '637 Patent, are not a staple commodity of commerce, and are not suitable for substantial non-infringing use. By selling or licensing these audio codec chips and/or audio

---

<sup>35</sup> For avoidance of doubt, Andrea provides these examples as an exemplary way by which Realtek induces infringement of the '607 Patent. None of Andrea's infringement allegations are limited to these examples.

processing software, Realtek has contributed to the infringement of the '637 Patent by users of said audio codec chips and/or audio processing software.

426. In addition to selling its infringing audio codec chips and/or audio processing software to the other Respondents for importation, Andrea also believes that Realtek sells infringing audio codec chips and/or audio processing software to third parties for importation. Andrea intends to and does accuse such products of infringement and seeks remedial orders and a bond against Realtek's importation, sale for importation, and/or sale after importation of these products as well.

## **B. Specific Instance of Sale and Importation**

### **1. Acer**

427. Respondent Acer imports, sells for importation, and/or sells within the United States after importation the Aspire M5-583P Product depicted in Exhibit 40. Pursuant to Commission Rule 210.12(a)(3), Exhibit 41 is a copy of a receipt from a Best Buy Retail Store showing a sale of Acer's Aspire M5-583P Product within the United States. As shown in the photograph contained in Exhibit 40, the Aspire M5-583P Product's packaging is marked as "Made in China." Thus, Acer is violating Section 337 of the Tariff Act of 1930 by importing, selling for importation, and/or selling within the United States after importation into the United States the Aspire M5-583P Product and other reasonably similar products and devices, which directly, either literally or under the doctrine of equivalents, or indirectly, infringe the '898 Patent, the '923 Patent, the '607 Patent, the '345 Patent, and the '637 Patent.

### **2. Asus**

428. Respondent Asus imports, sells for importation, and/or sells within the United States after importation the Vivobook Q302L Product depicted in Exhibit 45. Pursuant to Commission Rule 210.12(a)(3), Exhibit 46 is a copy of a receipt from a Best Buy Retail Store

showing a sale of Asus' Vivobook Q302L Product within the United States. As shown in the photograph contained in Exhibit 45, the Vivobook Q302L Product's packaging is marked as "Made in China." Thus, Asus is violating Section 337 of the Tariff Act of 1930 by importing, selling for importation, and/or selling within the United States after importation into the United States the Vivobook Q302L Product and other reasonably similar products and devices, which directly, either literally or under the doctrine of equivalents, or indirectly, infringe the '898 Patent, the '923 Patent, the '607 Patent, the '345 Patent, and the '637 Patent.

### **3. Dell**

429. Respondent Dell imports, sells for importation, and/or sells within the United States after importation the Inspiron 13 7347 Product depicted in Exhibit 55. Pursuant to Commission Rule 210.12(a)(3), Exhibit 56 is a copy of a receipt from a Micro Center Retail Store showing a sale of Dell's Inspiron 13 7347 Product within the United States. As shown in the photographs contained in Exhibit 55, the Inspiron 13 7347 Product's packaging is marked as "Made in China." Thus, Dell is violating Section 337 of the Tariff Act of 1930 by importing, selling for importation, and/or selling within the United States after importation into the United States the Inspiron 13 7347 Product and other reasonably similar products and devices, which directly, either literally or under the doctrine of equivalents, or indirectly, infringe the '898 Patent, the '923 Patent, the '607 Patent, the '345 Patent, and the '637 Patent.

### **4. HP**

430. Respondent HP imports, sells for importation, and/or sells within the United States after importation the Elitebook 820 G1 Product depicted in Exhibit 66. Pursuant to Commission Rule 210.12(a)(3), Exhibit 67 is a copy of a receipt from a Micro Center Retail Store showing a sale of HP's Elitebook 820 G1 Product within the United States. As shown in the photograph contained in Exhibit 66, the Elitebook 820 G1 Product's packaging is marked as

“Made in China.” Thus, HP is violating Section 337 of the Tariff Act of 1930 by importing, selling for importation, and/or selling within the United States after importation into the United States the Elitebook 820 G1 Product and other reasonably similar products and devices, which directly, either literally or under the doctrine of equivalents, or indirectly, infringe the ’898 Patent, the ’923 Patent, the ’607 Patent, the ’345 Patent, and the ’637 Patent.

#### **5. Lenovo**

431. Respondent Lenovo imports, sells for importation, and/or sells within the United States after importation the ThinkPad T440 Product depicted in Exhibit 71. Pursuant to Commission Rule 210.12(a)(3), Exhibit 72 is a copy of a receipt from a Micro Center Retail Store showing a sale of Lenovo’s ThinkPad T440 Product within the United States. As shown in the photographs contained in Exhibit 71, the ThinkPad T440 Product’s packaging is marked as “Made in China.” Thus, Lenovo is violating Section 337 of the Tariff Act of 1930 by importing, selling for importation, and/or selling within the United States after importation into the United States the ThinkPad T440 Product and other reasonably similar products and devices, which directly, either literally or under the doctrine of equivalents, or indirectly, infringe the ’898 Patent, the ’923 Patent, the ’607 Patent, the ’345 Patent, and the ’637 Patent.

#### **6. Toshiba**

432. Respondent Toshiba imports, sells for importation, and/or sells within the United States after importation the Satellite E45t-B4300 Product depicted in Exhibit 75. Pursuant to Commission Rule 210.12(a)(3), Exhibit 76 is a copy of a receipt from a Best Buy Retail Store showing a sale of Toshiba’s Satellite E45t-B4300 Product within the United States. As shown in the photograph contained in Exhibit 75, the Satellite E45t-B4300 Product’s packaging is marked as “Made in China.” Thus, Toshiba is violating Section 337 of the Tariff Act of 1930 by importing, selling for importation, and/or selling within the United States after importation into

the United States the Satellite E45t-B4300 Product and other reasonably similar products and devices, which directly, either literally or under the doctrine of equivalents, or indirectly, infringe the '898 Patent, the '923 Patent, the '607 Patent, the '345 Patent, and the '637 Patent.

#### **7. Realtek**

433. Respondent Realtek imports, sells for importation, and/or sells within the United States after importation the audio codec chips and/or audio processing software contained in the other Respondents' products depicted in Exhibits 41, 45, 55, 71, and 75. Pursuant to Commission Rule 210.12(a)(3), Exhibits 42, 46, 56, 72, and 76 are copies of receipts from Best Buy and Micro Center Retail Stores showing a sale of the other Respondents' products containing Realtek audio codec chips and/or audio processing software within the United States. As shown in the photographs contained in Exhibits 41, 45, 55, 71, and 75, the packaging of the other Respondents' products containing Realtek audio codec chips and/or audio processing software is marked as "Made in China." Thus, Realtek is violating Section 337 of the Tariff Act of 1930 by importing, selling for importation, and/or selling within the United States after importation into the United States its audio codec chips and/or audio processing software products and other reasonably similar products and devices, which indirectly, either literally or under the doctrine of equivalents, induce or contribute to, infringement of the '898 Patent, the '923 Patent, the '607 Patent, the '345 Patent, and the '637 Patent.

#### **VI. HARMONIZED TARIFF SCHEDULE INFORMATION**

434. The articles subject to this complaint are classifiable under at least the following headings and subheadings of the Harmonized Tariff Schedule ("HTS") of the United States: 8471.30.01 (Portable automatic data processing machines, weighing not more than 10 kg, consisting of at least a central processing unit, a keyboard, and a display), 8471.49.00 (Other [Automatic data processing machines and units thereof; magnetic or optical readers, machines

for transcribing data onto data media in coded form and machines for processing such data, not elsewhere specified or included], entered in the form of systems), 8471.50.01 (Processing units other than those of subheading 8471.41 or 8471.49, whether or not containing in the same housing one or two of the following types of unit: storage units, input units, output units), 8517.18.00 (Apparatus for Transmission or Reception of Voice, Images, or Other Data), 8541.50.00 (Other semiconductor devices), and 8542.31.00 (Electronic Integrated Circuits: Processors and controllers, whether or not combined with memories, converters, logic circuits, amplifiers, clock and timing circuits, or other circuits), and related subheadings of the HTS. These HTS numbers are illustrative only and are not intended to restrict the scope of this investigation.

## VII. RELATED LITIGATION

435. As of the day of filing of the original complaint, suits alleging infringement of the Asserted '898 Patent, '923 Patent, '607 Patent, and '345 Patent against Acer, Lenovo, and Toshiba are pending in the United States District Court for the Eastern District of New York as follows:

*Andrea Electronics Corp. v. Acer Inc. et al*, Case No. 2:14-cv-04488-KAM-GRB, filed on July 25, 2014;

*Andrea Electronics Corp. v. Lenovo Group Ltd. et al*, Case No. 2:14-cv-04489-KAM-GRB, filed on July 25, 2014; and

*Andrea Electronics Corp. v. Toshiba Corp. et al*, Case No. 2:14-cv-04492-KAM-GRB, filed on July 25, 2014.

436. Each of these three cases was assigned to Judge Kiyo A Matsumoto. The cases were consolidated for purposes of discovery, and oversight of discovery was assigned to Magistrate Judge Gary R. Brown. Acer, Lenovo, and Toshiba filed their respective answers to

Andrea's complaints. Andrea filed a First Amended Complaint in each action. Acer, Lenovo, and Toshiba filed their respective answers to Andrea's first amended complaints.

437. Magistrate Judge Brown's Individual Practice Rules provide for phased discovery, with Phase I requiring exchange of "information that parties believe needs to be exchanged before a reasoned settlement discussion can take place" and Phase II representing "the balance of discovery required to prepare for mediation and/or trial." (Individual Practice Rules of Magistrate Judge Gary R. Brown, pp. 3-4, available at <https://www.nyed.uscourts.gov/pub/rules/GRB-MLR.pdf>.) Andrea provided its Phase I Disclosure, including a list of accused products, components providing accused functionality, a copy of all patent licenses covering the asserted patents, and evidence of marking. Acer, Lenovo, and Toshiba provided their Phase I Disclosures. Additionally, as part of Phase II discovery, Andrea has provided a list of asserted claims and initial infringement contentions to Acer, Lenovo, and Toshiba. No other substantive discovery has been exchanged and no motions have been filed.

438. Additionally, suits alleging infringement of the Asserted '898 Patent, '923 Patent, '607 Patent, '345 Patent, and '637 Patent against Asus, Dell, HP, and Realtek are pending in the United States District Court for the Eastern District of New York as follows:

*Andrea Electronics Corp. v. ASUSTeK Computer Inc., et al*, Case No. 2:15-cv-00214, filed on January 14, 2015;

*Andrea Electronics Corp. v. Dell Inc.*, Case No. 2:15-cv-00209, filed on January 14, 2015;

*Andrea Electronics Corp. v. Hewlett Packard Co.*, Case No. 2:15-cv-00208, filed on January 14, 2015; and

*Andrea Electronics Corp. v. Realtek Semiconductor Corp., et al*, Case No. 2:15-cv-00215, filed on January 14, 2015.



439. Asus, Dell, HP, and Realtek have not answered Andrea's complaints in these actions.

440. Finally, suits alleging infringement of the Asserted '637 Patent against Acer, Lenovo, and Toshiba are pending in the United States District Court for the Eastern District of New York as follows:

*Andrea Electronics Corp. v. Acer Inc. et al*, Case No. 2:15-cv-00210, filed on January 14, 2015;

*Andrea Electronics Corp. v. Lenovo Group Ltd. et al*, Case No. 2:15-cv-00212, filed on January 14, 2015; and

*Andrea Electronics Corp. v. Toshiba Corp. et al*, Case No. 2:15-cv-00211, filed on January 14, 2015.

441. Acer, Lenovo, and Toshiba have not answered Andrea's complaints in these actions.

#### **VIII. DOMESTIC INDUSTRY RELATING TO THE ASSERTED PATENTS**

442. A domestic industry for the purposes of 19 U.S.C. § 1337(a)(2), as defined in U.S.C. § 1337(a)(3)(A), (B), and (C), exists with respect to Andrea's significant and continuous investment in plant and equipment, significant and continuous employment of labor, and substantial and ongoing investment in engineering and research and development.

##### **A. Andrea's Significant Investment in Plant and Equipment**

443. A domestic industry as defined by 19 U.S.C. § 1337(a)(3)(A) exists in the United States with respect to the articles protected by the Asserted Patents by reason of Andrea's significant investment in plant and equipment.

444. The Declaration of Corisa Guiffre, attached as Confidential Exhibit 81, provides a description of Andrea's significant investments in its plant and equipment with respect to articles

protected by the '898 Patent, the '923 Patent, the '607 Patent, the '345 Patent, and the '637 Patent.

**B. Andrea's Significant Employment of Labor and Capital**

445. A domestic industry as defined by 19 U.S.C. § 1337(a)(3)(B) exists in the United States with respect to the articles protected by the Asserted Patents by reason of Andrea's significant employment of labor and/or capital.

446. The Declaration of Corisa Guiffre, attached as Confidential Exhibit 81, provides a description of Andrea's significant investment in labor and/or capital with respect to articles protected by the '898 Patent, the '923 Patent, the '607 Patent, the '345 Patent, and the '637 Patent.

**C. Andrea's Substantial Investment in the Exploitation of the Asserted Patents**

447. A domestic industry as defined by 19 U.S.C. § 1337(a)(3)(C) exists in the United States with respect to the Asserted Patents by reason of Andrea's substantial investment in its engineering, research, and development directed to its audio processing technology.

448. The Declaration of Corisa Guiffre, attached as Confidential Exhibit 81, provides a more detailed description of Andrea's investments in engineering, research and development with respect to articles protected by the '898 Patent, the '923 Patent, the '607 Patent, the '345 Patent, and the '637 Patent.

**D. Andrea's Practice of the Asserted Patents**

449. Andrea's products practice the following claims of each of the Asserted Patents:

Patent	Claims Practiced By Andrea's Products
5,825,898	1-28
6,483,923	1-16
6,049,607	1-37
6,363,345	1-47
6,377,637	1-14

450. Pursuant to Commission Rule 210.12(a)(9)(ix), Confidential Exhibits 82-86 include charts that apply an exemplary claim of each Asserted Patent to a representative involved article of Andrea's that practices that patent.

**IX. RELIEF**

WHEREFORE, by reason of the foregoing, Andrea requests that the Commission:

- 1) Institute an investigation pursuant to Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, with respect to Respondents' violations of Section 337 based on the importation into the United States, the sale for importation into the United States, and/or the sale within the United States after importation of articles that infringe the Asserted Patents;
- 2) Schedule and conduct a hearing on permanent relief pursuant to 19 U.S.C. § 1337(d) and (f) of the Tariff Act of 1930, as amended;
- 3) Issue a Limited Exclusion Order specifically directed to each named Respondent, pursuant to 19 U.S.C. § 1337(d), excluding from entry into the United States articles that infringe the Asserted Patents;
- 4) Issue a cease and desist order pursuant to 19 U.S.C. § 1337(f) prohibiting each domestic Respondent from engaging in the unlawful importation and/or the sale within the United States after importation of articles that infringe the Asserted Patents; and
- 5) Impose a bond upon Respondents who continue to import infringing articles during the 60-day-Presidential review period per 19 U.S.C. § 1337(j); and issue such other and further relief as the Commission deems just and proper under the law, based upon the facts determined by the investigation and the authority of the Commission.

January 23, 2015

Respectfully submitted,



---

Goutam Patnaik  
Tuhin Ganguly  
David J. Shaw  
Kelly E. Rose  
Pepper Hamilton LLP  
Hamilton Square  
600 Fourteenth Street, N.W.  
Washington, DC 20005-2004  
202.220.1200  
202.220.1665 (facsimile)

William D. Belanger  
Frank D. Liu  
Suparna Datta  
Gwendolyn E. Tawresey  
Pepper Hamilton LLP  
19th Floor, High Street Tower  
125 High Street  
Boston, MA 02110-2736  
617.204.5100  
617.204.5150 (facsimile)

**Counsel for Complainant  
Andrea Electronics Corp.**