

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

REDWOOD TECHNOLOGIES, LLC,

Plaintiff,

v.

**ACER INC. AND ACER AMERICA
CORPORATION,**

Defendants.

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§ **JURY TRIAL DEMANDED**
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§ **C.A. NO. 6:23-cv-280**
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PLAINTIFF’S COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Redwood Technologies, LLC (“Redwood”) files this Complaint against Defendants Acer Inc. (“AI”) and Acer America Corporation (“AAC”) (collectively Acer Inc. and Acer America Corporation are referred to as “Defendants,” “Acer Group,” or “Acer”) for infringement of U.S. Patent No. 7,359,457 (the “457 patent”), U.S. Patent No. 7,688,901 (the “901 patent”), U.S. Patent No. 7,974,371 (the “371 patent”), U.S. Patent No. 8,284,866 (the “866 patent”), U.S. Patent No. 9,374,209 (the “209 patent”), U.S. Patent No. 7,826,555 (the “555 patent”), U.S. Patent No. 7,917,102 (the “102 patent”), and U.S. Patent No. 7,983,140 (the “140 patent”), collectively, the “Asserted Patents.”

THE PARTIES

1. Redwood Technologies, LLC is a Texas limited liability company, with a principal place of business at 812 West McDermott Dr. #1038, Allen, TX 75013.
2. On information and belief, Acer Inc. is a corporation organized and existing under the laws of Taiwan with a principal place of business at 8F., No.88, Sec. 1, Xintai 5th Rd., Xizhi Dist., New Taipei City 221, Taiwan. Acer Inc. owns 100% of the shares of Boardwalk Capital

Holdings limited. Boardwalk Capital Holdings limited owns 100% of the shares of Acer American Holdings Corporation. Acer American Holdings Corporation owns 100% of the shares of Gateway, Inc. Gateway, Inc. holds more than 10% of the shares of Acer America Corporation. Acer Inc. holds at least a 10% interest in and, on information and belief, a controlling interest in Acer America Corporation.

3. On information and belief, Acer America Corporation is a corporation organized and existing under the laws of California. Acer America Corporation maintains a place of business in this District, including at 1394 Eberhardt Rd, Temple, Texas 76504.

4. On information and belief, Defendants are an interrelated group of companies which collectively comprise one of the largest electronics manufacturers in the United States.

5. On information and belief, Defendants, individually, together, and/or in concert, participate in the design, development, manufacture, sale for importation into the United States, offers for sale for importation into the United States, importation into the United States, sale within the United States after importation, and offers for sale within the United States after importation, of computers that infringe the Asserted Patents.

6. Prior to the filing of the Complaint, Redwood sent a letter received by Acer on November 8, 2021, where Redwood attempted to engage Acer in licensing discussions related to the Asserted Patents for reasonable and non-discriminatory terms for a license to be taken in the absence of litigation. Acer responded to this letter on January 13, 2022, where Acer was then provided access to further materials as to the Asserted Patents and Acer's infringement on January 14, 2022. Indeed, Acer has known about each of the Asserted Patents since at least November 8, 2021, when Acer received notice of its infringement of the Asserted Patents via the letter sent by Redwood.

7. On information and belief, Defendants operate in agency with each other as a group. *See, e.g.*, <https://www.acer-group.com/ag/en/TW/content/home> (“Acer is one of the world’s top ICT companies with a presence in more than 160 countries.”). Acer induces its subsidiaries, affiliates, retail partners, and customers in the making, using, selling, offering for sale, and/or importing throughout the United States, including within this District, products, such as Wi-Fi compliant devices, accused of infringement. Defendants provide a distribution channel of infringing products within this District and the U.S. nationally. Defendants, between and amongst themselves, purposefully direct the Accused Products into established distribution channels within this District and the U.S. nationally.

8. On information and belief, Defendants maintain a corporate presence in the United States via at least its, U.S.-based sales subsidiaries including, Acer America Corporation. Acer America Corporation provides sales and distribution support in North America as part of the Acer Group and for related entities. Acer America Corporation is an agent of Acer Inc. At the direction and control of the Acer Group, U.S.-based sales subsidiaries including, Acer America Corporation imports infringing products, such as computers and projectors, into the United States and this District.

9. On information and belief, Acer and its U.S.-based sales subsidiaries (which act as part of a global network of overseas sales and manufacturing subsidiaries on behalf of Acer) have operated as agents of one another and vicariously as parts of the same business group to work in concert together and enter into agreements that are nearer than arm’s length. For example, Acer Inc., alone and via at least the activities of its U.S.-based sales subsidiaries (e.g., Acer America Corporation), conducts business in the United States, including importing, distributing, and selling computers and projectors that incorporate devices, systems, and processes that infringe the

Asserted Patents in Texas and this judicial district. *See Trois v. Apple Tree Auction Center, Inc.*, 882 F.3d 485, 490 (5th Cir. 2018) (“A defendant may be subject to personal jurisdiction because of the activities of its agent within the forum state....”); *see also Cephalon, Inc. v. Watson Pharmaceuticals, Inc.*, 629 F. Supp. 2d 338, 348 (D. Del. 2009) (“The agency theory may be applied not only to parents and subsidiaries, but also to companies that are ‘two arms of the same business group,’ operate in concert with each other, and enter into agreements with each other that are nearer than arm’s length.”).

10. Defendant’s past and continuing making, using, selling, offering for sale, and/or importing, and/or inducing its subsidiaries, affiliates, retail partners, and customers in the making, using, selling, offering for sale, and/or importing the accused Wi-Fi compliant devices throughout the United States i) willfully infringe each of the Asserted Patents and ii) impermissibly take the significant benefits of Redwood’s patented technologies without fair compensation to Redwood.

11. Defendants are engaged in making, using, selling, offering for sale, and/or importing, and/or induces their subsidiaries, affiliates, retail partners, and customers in the making, using, selling, offering for sale, and/or importing throughout the United States, including within this District, Wi-Fi compliant products accused of infringement.

JURISDICTION AND VENUE

12. This action arises under the patent laws of the United States, namely 35 U.S.C. §§ 271, 281, and 284-285, among others.

13. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

14. This Court has general and specific personal jurisdiction over Defendants pursuant to due process and/or the Texas Long Arm Statute because, *inter alia*, (i) Defendants have done

and continue to do business in Texas and (ii) Defendants have, directly and through intermediaries, committed and continue to commit acts of patent infringement in the State of Texas, including making, using, offering to sell, and/or selling accused products in Texas, and/or importing accused products into Texas, including by Internet sales and sales via retail and wholesale stores, inducing others to commit acts of patent infringement in Texas, and/or committing a least a portion of any other infringements alleged herein. Defendants have placed, and are continuing to place, infringing products into the stream of commerce, via an established distribution channel, with the knowledge and/or understanding that such products are sold in Texas, including in this District. Defendants have derived substantial revenues from its infringing acts occurring within Texas and within this District. Defendants have substantial business in this State and judicial district, including: (A) at least part of its infringing activities alleged herein; and (B) regularly doing or soliciting business, engaging in other persistent conduct, and/or deriving substantial revenue from infringing goods offered for sale, sold, and imported, and services provided to Texas residents vicariously through and/or in concert with its alter egos, intermediaries, agents, distributors, importers, customers, subsidiaries, and/or consumers.

15. This Court has personal jurisdiction over Defendants, directly or through intermediaries, distributors, importers, customers, subsidiaries, and/or consumers including its U.S.-based sales subsidiaries, *e.g.*, Acer America Corporation. Through direction and control of such subsidiaries, Defendants have committed acts of direct and/or indirect patent infringement within Texas, and elsewhere within the United States, giving rise to this action and/or has established minimum contacts with Texas such that personal jurisdiction over Defendants would not offend traditional notions of fair play and substantial justice. Acer America Corporation is controlled by Acer Inc. The primary business of Acer America Corporation is the marketing and

sale of electronic products in the United States. Acer Inc. has a controlling ownership interest in Acer America Corporation and maintains more than half of the voting rights for such subsidiaries as its basis for control. Upon information and belief, Acer Inc. compensates Acer America Corporation for its sales support services in the United States. As such, Acer Inc. has a direct financial interest in its U.S.-based subsidiaries, and vice versa.

16. Personal jurisdiction is proper because Defendants have committed acts of infringement in this District. This Court has personal jurisdiction over Defendants because, inter alia, this action arises from activities Defendants purposefully directed towards the State of Texas and this District.

17. Exercising personal jurisdiction over Defendants in this District would not be unreasonable given Defendants' contacts in this District, the interest in this District of resolving disputes related to products sold herein, and the harm that would occur to Redwood.

18. In addition, Defendants have knowingly induced and continue to knowingly induce infringement within this District by advertising, marketing, offering for sale and/or selling devices pre-loaded with infringing functionality within this District, to consumers, customers, manufacturers, distributors, resellers, partners, and/or end users, and providing instructions, user manuals, advertising, and/or marketing materials which facilitate, direct or encourage the use of infringing functionality with knowledge thereof.

19. Personal jurisdiction also exists specifically over each of the Defendants because each, directly or through affiliates, subsidiaries, agents, or intermediaries, transacts business in this State or purposefully directed at this State (including, without limitation, retail stores including Target and Walmart) by making, importing, offering to sell, selling, and/or having sold infringing products within this State and District or purposefully directed at this State or District.

20. Personal jurisdiction also exists specifically over each of the Defendants because Defendants have overlapping executives, interlocking corporate structures, and close relationships as manufacturer, importer, and distributor of the products accused of infringement.

21. To the extent any foreign Defendant is not subject to jurisdiction in any state's court of general jurisdiction, exercising jurisdiction over such Defendant in this State and this District would be consistent with due process and this State's long-arm statute and under national contacts in light of facts alleged in this Complaint.

22. In addition, each of the Defendants, directly or through affiliates, subsidiaries, agents, or intermediaries, places infringing products into the stream of commerce knowing they will be sold and used in Texas, and economically benefits from the retail sale of infringing products in this State. For example, Defendants' products have been sold and are available for sale in this District at Target and Walmart retail stores, and are also available for sale and offered for sale in this District through online retailers such as Target, Walmart, and Amazon. Acer also advertises its infringing products and provides customer support of its infringing products to consumers in Texas and this District through its agent's websites. *See, e.g.*, <https://store.acer.com/en-us/laptops>; <https://www.acer.com/ac/en/US/content/support>.

23. With respect to the '457 patent, the '102 patent, and the '140 patent, the Accused Products are devices that include, but are not limited, to Defendant's devices that are compliant with IEEE 802.11n and/or IEEE 802.11ac and/or IEEE 802.11ax (*e.g.*, Acer Halo Smart Speaker, Iconia One 10 Tablet, Iconia One 8 T2 Tablet, Iconia Tab 10 Tablet, Enduro T1 Tablet, Chromebook 514, Enduro Urban T1 Tablet, Iconia One 7 Tablet, Iconia One 8 Tablet, Pawbo WagTag, Chromebook Spin 513, Halo 360, GrandPad Tablet, Chromebook Spin 311, Chromebook Tab 10 Tablet, Spin 1, Spin 3, Spin 5, Air Monitor MATE, Wireless Projection Kit,

AOPEN DLP Projector, Chromebook Spin 514, Acer Enduro Connect M3, and Portable OLED monitor) and other devices, as well as, their components, and processes related to the same. With respect to the '901 patent, the '371 patent, the '866 patent, the '209 patent, and the '555 patent, the Accused Products are devices that include, but are not limited, to Defendant's devices that are compliant with IEEE 802.11n and/or IEEE 802.11ac and/or IEEE 802.11ax (e.g., Acer Halo Smart Speaker, Chromebook 514, Chromebook Spin 513, Chromebook Spin 311, Chromebook Tab 10 Tablet, Spin 3, Spin 5, Chromebook Spin 514, and Acer Enduro Connect M3) and other devices, as well as, their components, and processes related to the same.¹

24. On information and belief, Acer controls or otherwise directs and authorizes all activities of its U.S.-based sales subsidiaries. Such directed and authorized activities include, the U.S. Subsidiaries' using, offering for sale, selling, and/or importing the Accused Products, their components, and/or products containing the same that incorporate the fundamental technologies covered by the Asserted Patents. The Defendants' U.S.-based sales subsidiaries are authorized to import, distribute, sell, or offer for sale the Accused Products on behalf of Defendants. For example, Acer researches, designs, develops, and manufactures computers and then directs its U.S.-based sales subsidiaries to import, distribute, offer for sale, and sell the Accused Products in the United States. *See, e.g., United States v. Hui Hsiung*, 778 F.3d 738, 743 (9th Cir. 2015) (finding that the sale of infringing products to third parties rather than for direct import into the U.S. did not "place [defendants'] conduct beyond the reach of United States law [or] escape culpability under the rubric of extraterritoriality"). Furthermore, Defendants' U.S.-based sales subsidiaries also administer, on behalf of Defendants, requests for service under and any disputes arising from

¹ Each of the relevant standards cited herein, and related to the Asserted Patents, are specifically incorporated into this Complaint.

Defendants' limited warranty of the Accused Products sold in the U.S., including in Texas and this judicial district. *See, e.g.,* https://static.acer.com/up/Resource/Acer/Docs/US/Standard%20Warranty/PanAm-20150126/20150129/Acer_CONS_WTY_DOC_1_YR_MICI_US_CA_MX_LA_46_AD148_008_090514.pdf. Thus, Defendants' U.S.-based sales subsidiaries conduct infringing activities on behalf of Defendants.

25. On information and belief, Defendants' U.S.-based sales subsidiaries' corporate presence in the United States gives Acer substantially the business advantages that it would have enjoyed if it conducted its business through its own offices or paid agents in the state. Defendants' U.S.-based sales subsidiaries are authorized to import, distribute, sell, and offer for sale Defendants' products, including computers incorporating infringing devices and processes, on behalf of Defendants. For example, Defendants' U.S.-based sales subsidiaries operate within Defendants' global network of sales subsidiaries in North and South America, Europe, Asia, Australia, and the Middle East. In the U.S., including within the Western District of Texas, Defendants' Accused Products, which comprise infringing devices and processes, are imported, distributed, offered for sale, and sold.

26. Via Defendants' alter egos, agents, intermediaries, distributors, importers, customers, subsidiaries, and/or consumers maintaining a business presence, operating in, and/or residing in the U.S., Defendants' products, including products and processes accused of infringing the Asserted Patents, are or have been widely distributed and sold in retail stores, both brick and mortar and online, in Texas including within this judicial district. *See Litecubes, LLC v. Northern Light Products, Inc.*, 523 F.3d 1353, 1369-70 (Fed. Cir. 2008) (“[T]he sale [for purposes of § 271] occurred at the location of the buyer.”); *see also Semcon IP Inc. v. Kyocera Corp.*, No. 2:18-cv-

00197-JRG, 2019 WL 1979930, at *3 (E.D. Tex. May 3, 2019) (denying accused infringer's motion to dismiss because plaintiff sufficiently plead that purchases of infringing products outside of the United States for importation into and sales to end users in the U.S. may constitute an offer to sell under § 271(a)). For example, Defendants' Accused Products are sold to end users by the U.S.-based subsidiaries, distributors, and customers online and at retail stores located throughout the Western District of Texas.

27. On information and belief, Acer has placed and continues to place infringing products and/or products that practice infringing processes into the stream of commerce via established distribution channels comprising at least subsidiaries and distributors, such as Acer America Corporation, and customers such as Walmart Target, and Amazon, with the knowledge and/or intent that those products are and/or will be imported, used, offered for sale, sold, and continue to be sold in the United States and Texas, including in this judicial district. As a result, Acer has, vicariously through and/or in concert with its alter egos, agents, intermediaries, distributors, importers, customers, subsidiaries, and/or consumers, placed the Accused Products into the stream of commerce via established distribution channels with the knowledge and/or intent that those products were sold and continue to be sold in the United States and Texas, including in this judicial district.

28. In the alternative, the Court has personal jurisdiction over Defendants under Federal Rule of Civil Procedure 4(k)(2), because the claims for patent infringement in this action arise under federal law, Defendants are not subject to the jurisdiction of the courts of general jurisdiction of any state, and exercising jurisdiction over Defendants is consistent with the U.S. Constitution.

29. Venue is proper in this judicial district pursuant to 28 U.S.C. § 1391 because, among other things, Defendants are not residents in the United States, and thus may be sued in any

judicial district, including this one, pursuant to 28 U.S.C. § 1391(c)(3). *See In re HTC Corp.*, 889 F.3d 1349, 1357 (Fed. Cir. 2018) (“The Court’s recent decision in TC Heartland does not alter” the alien-venue rule.).

COUNT I

(INFRINGEMENT OF U.S. PATENT NO. 7,359,457)

30. Plaintiff incorporates paragraphs 1 through 29 herein by reference.

31. Redwood is the assignee of the ’457 patent, entitled “Transmission Apparatus, Reception Apparatus and Digital Radio Communication Method,” with ownership of all substantial rights in the ’457 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

32. The ’457 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The ’457 patent issued from U.S. Patent Application No. 10/827,445.

33. Acer has and continues to directly and/or indirectly infringe (by inducing infringement) one or more claims of the ’457 patent in this judicial district and elsewhere in Texas and the United States.

34. On information and belief, Acer designs, develops, manufactures, assembles and markets Wi-Fi compliant devices accused of infringement. *See, e.g.*, <https://www.acer.com/us-en/chromebooks/acer-chromebook-514-cb514-2h-cb514-2ht> (“This Chromebook comes with many functional features, including Wi-Fi 6 ...”).

35. Acer directly infringes the ’457 patent via 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or importing those Accused Products, their components and processes, and/or products containing the same that incorporate the fundamental technologies covered by the ’457 patent to, for example, its alter egos, agents, intermediaries, distributors, importers,

customers, subsidiaries, and/or consumers. Furthermore, upon information and belief, Acer sells and makes the Accused Products outside of the United States, delivers those products to its customers, distributors, and/or subsidiaries in the United States, or in the case that it delivers the Accused Products outside of the United States it does so intending and/or knowing that those products are destined for the United States and/or designing those products for sale in the United States, thereby directly infringing the '457 patent. *See, e.g., Lake Cherokee Hard Drive Techs., L.L.C. v. Marvell Semiconductor, Inc.*, 964 F. Supp. 2d 653, 658 (E.D. Tex. 2013). Furthermore, Acer directly infringes the '457 patent through its direct involvement in the activities of its subsidiaries, including Acer America Corporation, including by selling and offering for sale the Accused Products directly to Acer America Corporation and importing the Accused Products into the United States for Acer America Corporation. Additionally, Acer directly infringes the '457 patent by using and/or testing the Accused Products. Upon information and belief, Acer America Corporation conducts activities that constitutes direct infringement of the '457 patent under 35 U.S.C. § 271(a) by making, using, offering for sale, selling, and/or importing those Accused Products. For example, and upon information and belief, Acer offers for sale, sells, and imports the Accused Products within the U.S. to, for example, its distributors, customers, subsidiaries, importers, and/or consumers. Further, Acer is vicariously liable for this infringing conduct of Acer America Corporation (under both the alter ego and agency theories) because, as an example and upon information and belief, Acer Inc. and Acer America Corporation are essentially the same company, and Acer Inc. has the right and ability to control Acer America Corporation's infringing acts and receives a direct financial benefit from Acer America Corporation's infringement.

36. For example, Acer infringes claim 1 of the '457 patent via the Accused Products, including the Acer Chromebook 514. The Accused Products, including the Acer Chromebook 514,

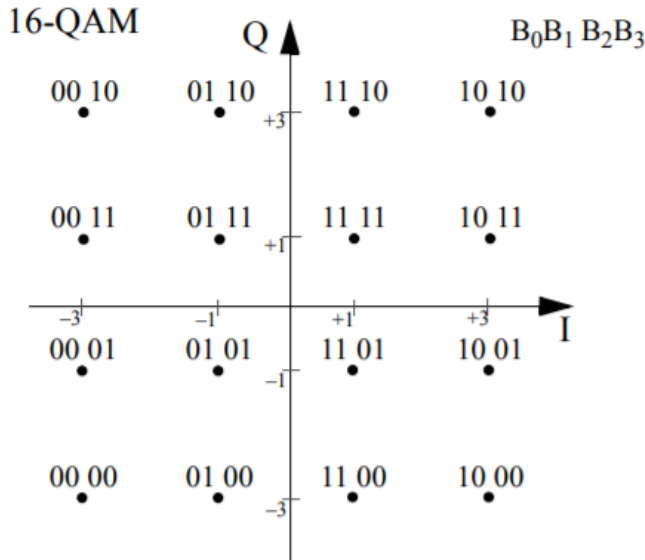
each are compliant with IEEE 802.11n and/or IEEE 802.11ac and/or IEEE 802.11ax, and each comprise a transmission apparatus of claim 1. *See, e.g.*, <https://www.acer.com/us-en/chromebooks/acer-chromebook-514-cb514-2h-cb514-2ht> (“This Chromebook comes with many functional features, including Wi-Fi 6 ...”). Wi-Fi 6 refers to IEEE 802.11ax. *See, e.g.*, <https://www.wi-fi.org/discover-wi-fi>.

37. The Accused Products, including the Acer Chromebook 514, each comprise circuitry and/or components (hardware and/or software) that determine a modulation system from among a plurality of modulation systems based on a communication situation. For example, the Accused Products utilize a Modulation and Coding Scheme (MCS) value that is used to determine the modulation, coding, and number of spatial channels based on information associated with a channel quality assessment. *See, e.g.*, Sections 19.3.5 and 19.3.13.4 of Part 11: Wireless LAN Medium Access Control (MAC) and Physical (PHY) Specifications of IEEE Std 802.11™ -2016 (“IEEE 802.11 2016”). Based on the results of the channel quality assessment, the Accused Products select an appropriate MCS value from a plurality of MCS values. *See, e.g.*, Section 19.3.5 and Table 19-27 of IEEE 802.11 2016.

38. The Accused Products, including the Acer Chromebook 514, each comprise circuitry and/or components (hardware and/or software) that modulate a digital transmission signal according to the modulation system previously determined and generates a first symbol. The first symbol comprises a first quadrature baseband signal. For example, the Accused Products, including the Acer Chromebook 514, generate a first data symbol (*e.g.*, Data), comprising a first quadrature baseband signal (*e.g.*, an OFDM signal before up-conversion to the carrier frequency), that is modulated according to the MCS value. *See, e.g.*, Section 19.3.5 and Figures 19-1 and 19-22 of IEEE 802.11 2016. The signal is a quadrature signal, in that it is expressed as a combination

of sine and cosine waveforms. For example, when the 16-QAM modulation scheme is used, the following equation and constellation diagram are used to express the signal as a quadrature signal:

$$d = (I + jQ) \times K_{MOD} \quad (17-20)$$



The signal is a quadrature signal because it is expressed with in-phase (I) and quadrature (Q) components. The signal is a baseband signal in that it has not been up-converted to the frequency of its intended carrier wave:

The transmitted signal is described in complex baseband signal notation. The actual transmitted signal is related to the complex baseband signal by the relation shown in Equation (19-1).

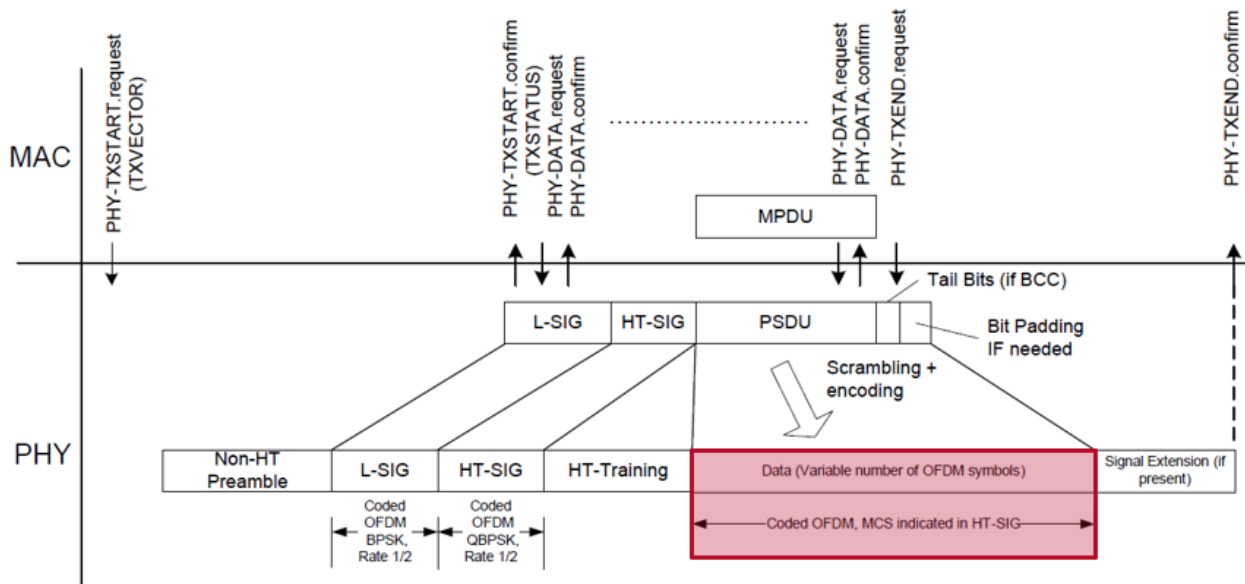
$$r_{RF}(t) = \text{Re}\{r(t)\exp(j2\pi f_c t)\} \quad (19-1)$$

where

f_c is the center frequency of the carrier

The transmitted RF signal is derived by modulating the complex baseband signal, which consists of several fields. The timing boundaries for the various fields are shown in Figure 19-4.

The mandatory PHY transmit procedure feature of annotated Figure 19-22 of IEEE 802.11 2016 is illustrated below:



NOTE—This procedure does not describe the operation of optional features, such as LDPC or STBC

Figure 19-22—PHY transmit procedure (HT-mixed format PPDU)

Furthermore, an annotated passage of Section 19.3.20 directed to the mandatory “PHY transmit procedure” for HT-mixed format PPDU is recited below:

19.3.20 PHY transmit procedure

There are three options for the transmit PHY procedure. The first two options, for which typical transmit procedures are shown in Figure 19-22 and Figure 19-23, are selected if the FORMAT field of the PHY-TXSTART.request(TXVECTOR) primitive is equal to HT_MF or HT_GF, respectively. These transmit procedures do not describe the operation of optional features, such as LDPC or STBC. The third option is to follow the transmit procedure in Clause 17 or Clause 18 if the FORMAT field is equal to NON_HT. Additionally, if the FORMAT field is equal to NON_HT, CH_BANDWIDTH indicates

39. The option for the “transmit PHY procedure” as to the HT-mixed format PPDU is a mandatory feature of the standard. *See, e.g.,* https://www.albany.edu/faculty/dsaha/teach/2019Spring_CEN574/slides/08_WLAN.pdf at slides 67-68 (the HT-mixed format PPDU is mandatory). Thus, the Accused Devices, including the Acer Chromebook 514, must be configured pursuant to Figures 19-1 and 19-22, as described above.

40. The Accused Products, including the Acer Chromebook 514, each comprise circuitry and/or components (hardware and/or software) that modulates the digital signal according to a predetermined modulation system and generates a second symbol. The second symbol comprises a second quadrature baseband signal. For example, the Accused Products, including the Acer Chromebook 514, generate a second data symbol (*e.g.*, the HT-SIG), comprising a second quadrature baseband signal (*e.g.*, OFDM signal before up-conversion to the carrier frequency), that is modulated according to a predetermined modulation system (*e.g.*, QBPSK). *See, e.g.*, Section 19.3.9.4.3 and Figures 19-1 and 19-22 of IEEE 802.11 2016. The signal is a quadrature signal, in that it is expressed as a combination of sine and cosine waveforms. For example, when the QBPSK modulation scheme is used, the following constellation diagram is used to express the signal as a quadrature signal:

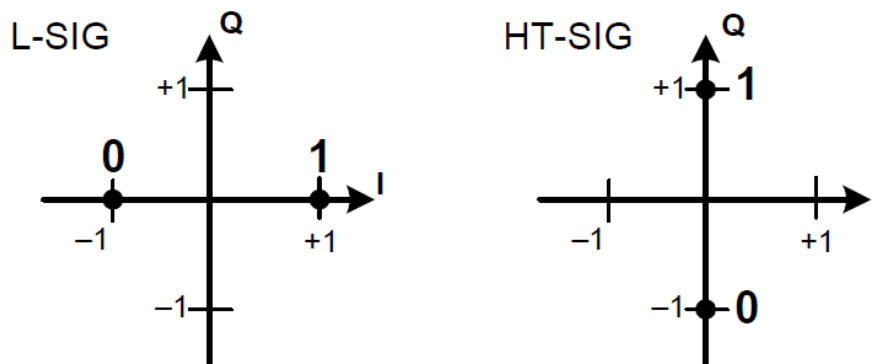


Figure 19-7—Data tone constellations in an HT-mixed format PPDU

The signal is a quadrature signal because it is expressed with in-phase (I) and quadrature (Q) components. The signal is a baseband signal in that it has not been up-converted to the frequency of its intended carrier wave:

The transmitted signal is described in complex baseband signal notation. The actual transmitted signal is related to the complex baseband signal by the relation shown in Equation (19-1).

$$r_{RF}(t) = \text{Re}\{r(t)\exp(j2\pi f_c t)\} \quad (19-1)$$

where

f_c is the center frequency of the carrier

The transmitted RF signal is derived by modulating the complex baseband signal, which consists of several fields. The timing boundaries for the various fields are shown in Figure 19-4.

41. The specific ways in which the Accused Products, including the Acer Chromebook 514, are configured to support the aforementioned features of IEEE 802.11n and/or 802.11ac and/or 802.11ax are further detailed in confidential documents and/or source code that evidence infringement by the Accused Products, including the Acer Chromebook 514, as to at least Claim 1 of the '457 patent.

42. Furthermore, the Accused Products, including the Acer Chromebook 514, are configured or implemented in an infringing manner with the features and functionality recited in at least Claim 1 of the '457 patent.

43. The technology discussion above and the exemplary Accused Products provide context for Plaintiff's infringement allegations.

44. The claims of the '457 Patent are patent eligible under 35 U.S.C. § 101. The '457 Patent is not directed to an ineligible abstract idea. For example, it is not a mathematical algorithm executed on a generic computer or a fundamental economic business practice. Instead, for example, it offers a technologically complex, particularized "transmission apparatus, reception apparatus and digital radio communication method capable of flexibly improving the data transmission efficiency and the quality of data." '457 Patent, 1:59-63. The '457 Patent provides a technical solution above, for example, by using a "[f]rame configuration determination section"

that “judges the communication situation based on transmission path information” to determine a modulation system from a plurality of modulation systems, then generate symbols comprising quadrature baseband signals, including one symbol that is generated by modulating a digital transmission signal according to the selected modulation system and a second symbol that is generated by modulating the digital transmission signal according to a predetermined modulation system. `457 Patent, 3:36-48; claim 1. That solution is reflected in the claims of the `457 Patent such as independent claims 1 and 6.

45. At a minimum, Acer has known of the `457 patent at least as early as the filing date of the Complaint. In addition, Acer has known about the `457 patent since at least November 8, 2021, when Acer and/or its agents received notice of its infringement via a letter. Furthermore, Acer has known about the `457 patent since at least January 14, 2022, when Acer and/or its agents received access to additional materials in a data room that further put Acer on notice of its infringement of the `457 patent.

46. On information and belief, since at least the above-mentioned dates when Acer was on notice of its infringement, Acer has actively induced, under U.S.C. § 271(b), its distributors, customers, subsidiaries, importers, and/or consumers that import, purchase, or sell the Accused Products that include or are made using all of the limitations of one or more claims of the `457 patent to directly infringe one or more claims of the `457 patent by using, offering for sale, selling, and/or importing the Accused Products. Since at least the notice provided on the above-mentioned dates, Acer does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the `457 patent. Upon information and belief, Acer intends to cause, and have taken affirmative steps to induce infringement by distributors, importers, customers, subsidiaries, and/or consumers by at least, inter alia, creating advertisements that promote the

infringing use of the Accused Products, creating and/or maintaining established distribution channels for the Accused Products into and within the United States, manufacturing the Accused Products in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, testing wireless networking features in the Accused Products, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States.

47. On information and belief, despite having knowledge of the '457 patent and knowledge that it is directly and/or indirectly infringing one or more claims of the '457 patent, Acer has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. Acer's infringing activities relative to the '457 patent have been, and continue to be, willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such that Plaintiff is entitled under 35 U.S.C. § 284 to enhanced damages up to three times the amount found or assessed.

48. Redwood has been damaged as a result of Acer's infringing conduct described in this Count. Acer is, thus, liable to Redwood in an amount that adequately compensates Redwood for Acer's infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT II

(INFRINGEMENT OF U.S. PATENT NO. 7,688,901)

49. Plaintiff incorporates paragraphs 1 through 48 herein by reference.

50. Redwood is the assignee of the '901 patent, entitled "Transmission Method, Transmission Apparatus, and Reception Apparatus," with ownership of all substantial rights in the

'901 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

51. The '901 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '901 patent issued from U.S. Patent Application No. 10/486,895.

52. Acer has and continues to directly and/or indirectly infringe (by inducing infringement) one or more claims of the '901 patent in this judicial district and elsewhere in Texas and the United States.

53. On information and belief, Acer designs, develops, manufactures, assembles and markets Wi-Fi compliant devices accused of infringement. *See, e.g.*, <https://www.acer.com/us-en/chromebooks/acer-chromebook-514-cb514-2h-cb514-2ht> (“This Chromebook comes with many functional features, including Wi-Fi 6 ...”).

54. Acer directly infringes the '901 patent via 35 U.S.C. § 271(a) by using and/or testing those Accused Products, their components and processes, and/or products containing the same that incorporate the fundamental technologies covered by the '901 patent. Upon information and belief, Acer America Corporation conducts activities that constitutes direct infringement of the '901 patent under 35 U.S.C. § 271(a) by using and/or testing those Accused Products. Further, Acer is vicariously liable for this infringing conduct of Acer America Corporation (under both the alter ego and agency theories) because, as an example and upon information and belief, Acer Inc. and Acer America Corporation are essentially the same company, and Acer Inc. has the right and ability to control Acer America Corporation's infringing acts and receives a direct financial benefit from Acer America Corporation's infringement.

55. For example, Acer infringes claim 1 of the '901 patent via the Accused Products, including the Acer Chromebook 514. The Accused Products, including the Acer Chromebook 514, transmit modulation signals. *See, e.g.*, Sections 19.1.1 and 19.1.2 of IEEE 802.11 2016; <https://www.acer.com/us-en/chromebooks/acer-chromebook-514-cb514-2h-cb514-2ht> (“This Chromebook comes with many functional features, including Wi-Fi 6 ...”). Wi-Fi 6 refers to IEEE 802.11ax. *See, e.g.*, <https://www.wi-fi.org/discover-wi-fi>.

56. The Accused Products, including the Acer Chromebook 514, each generate a plurality of modulation signals each of which is to be transmitted from a different one of a plurality of antennas, where each modulation signal is to include one or more preamble symbol groups each consisting of a plurality of preamble symbols used for demodulation. For example, the Accused Products generate modulation signals (*e.g.*, HT-mixed format PPDU) which are transmitted from a plurality of antennas. *See, e.g.*, Sections 19.3.3 of IEEE 802.11 2016. Each OFDM symbol within a modulation signal comprises a pilot symbol sequence consisting of four pilot symbols used for demodulation. *See, e.g.*, Sections 17.3.5.9 and 19.3.11.10 of IEEE 802.11 2016.

57. The Accused Products, including the Acer Chromebook 514, each insert the one or more preamble symbol groups at the same one or more temporal points in each modulation signal, wherein the one or more preamble symbol groups at the one or more temporal points are orthogonal to other preamble symbol groups at the same one or more temporal points with zero mutual correlation among the plurality of modulation signals, each preamble symbol having a non-zero amplitude, and each preamble symbol group consisting of preamble symbols the quantity of which is greater than that of the plurality of modulation signals to be transmitted. For example, each of the Accused Products insert one or more OFDM symbols comprising a pilot symbol sequence in each modulation signal, where each modulation signal sent from different antennas are transmitted

simultaneously in time. *See, e.g.*, Section 19.3.11.10 of IEEE 802.11 2016. The pilot symbol sequences corresponding to different spatial streams are orthogonal at the same one or more temporal points with zero mutual correlation among the plurality of spatial streams. *See, e.g.*, Table 19-19 of IEEE 802.11 2016. The pilot symbols are BPSK modulated and have a non-zero amplitude. *See, e.g.*, Section 17.3.5.9 of IEEE 802.11 2016. Each pilot symbol sequence contains four pilot symbols, which is greater than the modulation signals to be transmitted by two or three antennas utilized by the Accused Products. *See, e.g.*, Sections 19.1.1 and 19.3.11.10 of IEEE 802.11 2016.

58. The Accused Products, including the Acer Chromebook 514, each transmit the plurality of modulation signals, each comprising transmission data, which is different between the plurality of modulation signals, and the one or more preamble symbol groups, from the plurality of antennas, respectively, in an identical frequency band. For example, each of the Accused Products transmit the plurality of modulation signals comprising transmission data and the pilot symbol sequence from the two or three antennas in the same channel having a particular width (*e.g.*, 20 MHz). *See, e.g.*, Section 19.3.15.1, Tables 19-28, 19-29, and 19-30, and Figure 17-13 of IEEE 802.11 2016. Each stream of data to be transmitted is divided into multiple spatial streams to form respective modulation signals having different transmission data during the encoding process. *See, e.g.*, Section 19.3.4 of IEEE 802.11 2016.

59. The specific ways in which the Accused Products, including the Acer Chromebook 514, are configured to support the aforementioned features of IEEE 802.11n and/or 802.11ac and/or 802.11ax are further detailed in confidential documents and/or source code that evidence infringement by the Accused Products, including the Acer Chromebook 514, as to Claim 1 of the '901 patent.

60. Furthermore, the Accused Products, including the Acer Chromebook 514, are configured or implemented in an infringing manner with the features and functionality recited in at least Claim 1 of the '901 patent.

61. The technology discussion above and the exemplary Accused Products provide context for Plaintiff's infringement allegations.

62. The claims of the '901 Patent are patent eligible under 35 U.S.C. § 101. The '901 Patent is not directed to an ineligible abstract idea. For example, it is not a mathematical algorithm executed on a generic computer or a fundamental economic business practice. Instead, it is a technologically complex, particularized method of transmitting modulation signals. As the '901 Patent explains, the "present invention aims to provide a transmission method for estimating channels accurately and with ease from multiplexed modulation signals." '901 Patent, 1:50-52. The '901 Patent further explains that the "conventional structure gives no thought to the synchronization between channels in the same frequency band as well as a frequency offset. As a result, this structure encounters the difficulty of achieving the most important factor in order to demultiplex [sic] a multiplexed signal, namely, obtaining an accuracy of estimating channels." '901 Patent, 1:41-45.

63. The '901 Patent provides the technical solution above by, for example, "plac[ing] the symbols used for demodulation at an identical time of the respective channels and orthogonally to each other." '901 Patent, 2:16-18. The '901 Patent explains that "[t]his preparation, i.e. the symbols used for demodulation are placed to be orthogonal to each other, allows the reception apparatus to isolate the symbols with ease for estimating channels." '901 Patent, 2:18-22. That solution is reflected in the claims of the '901 Patent such as independent claim 1.

64. At a minimum, Acer has known of the '901 patent at least as early as the filing date of the Complaint. In addition, Acer has known about the '901 patent since at least November 8, 2021, when Acer and/or its agents received notice of its infringement via a letter. Furthermore, Acer has known about the '901 patent since at least January 14, 2022, when Acer and/or its agents received access to additional materials in a data room that further put Acer on notice of its infringement of the '901 patent.

65. On information and belief, since at least the above-mentioned dates when Acer was on notice of its infringement, Acer has actively induced, under U.S.C. § 271(b), its distributors, customers, subsidiaries, importers, and/or consumers that import, purchase, or sell the Accused Products that include or are made using all of the limitations of one or more claims of the '901 patent to directly infringe one or more claims of the '901 patent by using and/or testing the Accused Products. Since at least the notice provided on the above-mentioned dates, Acer does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the '901 patent. Upon information and belief, Acer intends to cause, and have taken affirmative steps to induce infringement by distributors, importers, customers, subsidiaries, and/or consumers by at least, inter alia, creating advertisements that promote the infringing use of the Accused Products, creating and/or maintaining established distribution channels for the Accused Products into and within the United States, manufacturing the Accused Products in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, testing wireless networking features in the Accused Products, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States.

66. On information and belief, despite having knowledge of the '901 patent and knowledge that it is directly and/or indirectly infringing one or more claims of the '901 patent, Acer has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. Acer's infringing activities relative to the '901 patent have been, and continue to be, willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such that Plaintiff is entitled under 35 U.S.C. § 284 to enhanced damages up to three times the amount found or assessed.

67. Redwood has been damaged as a result of Acer's infringing conduct described in this Count. Acer is, thus, liable to Redwood in an amount that adequately compensates Redwood for Acer's infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT III

(INFRINGEMENT OF U.S. PATENT NO. 7,974,371)

68. Plaintiff incorporates paragraphs 1 through 67 herein by reference.

69. Redwood is the assignee of the '371 patent, entitled "Communication Method and Radio Communication Apparatus," with ownership of all substantial rights in the '371 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

70. The '371 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '371 patent issued from U.S. Patent Application No. 10/486,896.

71. Acer has and continues to directly and/or indirectly infringe (by inducing infringement) one or more claims of the '371 patent in this judicial district and elsewhere in Texas and the United States.

72. On information and belief, Acer designs, develops, manufactures, assembles and markets Wi-Fi compliant devices accused of infringement. *See, e.g.*, <https://www.acer.com/us-en/chromebooks/acer-chromebook-514-cb514-2h-cb514-2ht> (“This Chromebook comes with many functional features, including Wi-Fi 6 ...”).

73. Acer directly infringes the '371 patent via 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or importing those Accused Products, their components and processes, and/or products containing the same that incorporate the fundamental technologies covered by the '371 patent to, for example, its alter egos, agents, intermediaries, distributors, importers, customers, subsidiaries, and/or consumers. Furthermore, upon information and belief, Acer sells and makes the Accused Products outside of the United States, delivers those products to its customers, distributors, and/or subsidiaries in the United States, or in the case that it delivers the Accused Products outside of the United States it does so intending and/or knowing that those products are destined for the United States and/or designing those products for sale in the United States, thereby directly infringing the '371 patent. *See, e.g., Lake Cherokee Hard Drive Techs., L.L.C. v. Marvell Semiconductor, Inc.*, 964 F. Supp. 2d 653, 658 (E.D. Tex. 2013). Furthermore, Acer directly infringes the '371 patent through its direct involvement in the activities of its subsidiaries, including Acer America Corporation, including by selling and offering for sale the Accused Products directly to Acer America Corporation and importing the Accused Products into the United States for Acer America Corporation. Additionally, Acer directly infringes the '371 patent by using and/or testing the Accused Products. Upon information and belief, Acer America

Corporation conducts activities that constitutes direct infringement of the '371 patent under 35 U.S.C. § 271(a) by making, using, offering for sale, selling, and/or importing those Accused Products. For example, and upon information and belief, Acer offers for sale, sells, and imports the Accused Products within the U.S. to, for example, its distributors, customers, subsidiaries, importers, and/or consumers. Further, Acer is vicariously liable for this infringing conduct of Acer America Corporation (under both the alter ego and agency theories) because, as an example and upon information and belief, Acer Inc. and Acer America Corporation are essentially the same company, and Acer Inc. has the right and ability to control Acer America Corporation's infringing acts and receives a direct financial benefit from Acer America Corporation's infringement.

74. For example, Acer infringes claim 14 of the '371 patent via the Accused Products, including the Acer Chromebook 514. The Accused Products, including the Acer Chromebook 514, comprise a radio transmission apparatus. *See, e.g.*, Fig. 19-2 of IEEE 802.11 2016; <https://www.acer.com/us-en/chromebooks/acer-chromebook-514-cb514-2h-cb514-2ht> (“This Chromebook comes with many functional features, including Wi-Fi 6 ...”). Wi-Fi 6 refers to IEEE 802.11ax. *See, e.g.*, <https://www.wi-fi.org/discover-wi-fi>.

75. The Accused Products, including the Acer Chromebook 514, each comprise circuitry and/or components (hardware and/or software) comprising a transmission method determining unit configured to select one of a first transmission method and a second transmission method based on received information of an estimated radio-wave propagation environment corresponding to a communication partner. For example, the Accused Products receive information associated with a channel quality assessment to select an appropriate Modulation and Coding Scheme (MCS) for Accused Products to utilize in subsequent transmissions to a receiving station, where the MCS value is utilized to determine the modulation, coding, and number of

spatial channels based on information associated with the channel quality assessment. *See, e.g.*, Sections 19.3.13.4 and 19.3.5 of IEEE 802.11 2016.

76. The Accused Products, including the Acer Chromebook 514, each comprise circuitry and/or components (hardware and/or software) comprising a modulation signal generator configured to generate a single modulation signal if said transmission method determining unit choose selects said first transmission method, and to generate a plurality of modulation signals which include different information from each other for transmission to an identical frequency band at an identical temporal point, if said transmission method determining unit selects said second transmission method. For example, if the MCS indicates that a transmission will utilize only one spatial stream, the Accused Products generate a single modulation signal. *See, e.g.*, Section 19.3.5 of IEEE 802.11 2016. If the MCS indicates that a transmission will include multiple spatial streams for, *e.g.*, spatial multiplexing, a plurality of modulation signals are produced, where each of the modulation signals represents a respective spatial stream and each spatial stream includes distinct information. *See, e.g.*, Section 19.3.5 of IEEE 802.11 2016. Spatial multiplexing increases bandwidth by transmitting data over multiple available spatial channels. Transmissions are simultaneous and are transmitted using the same channel having a particular width (*e.g.*, 20 Mhz). *See, e.g.*, Section 19.3.15.1 and Tables 19-28, 19-29, and 19-30 of IEEE 802.11 2016.

77. The single modulation signal and the plurality of modulation signals contain information indicating the number of modulation signals to multiplex and transmit at the same time. For example, all HT transmissions of the Accused Products, including the Acer Chromebook 514, utilize an HT-SIG, which contains an MCS that indicates the number of modulation signals to multiplex and transmit at the same time. *See, e.g.*, Sections 19.3.9.4.3 and 19.3.5 of IEEE 802.11 2016

78. The specific ways in which the Accused Products, including the Acer Chromebook 514, are configured to support the aforementioned features of IEEE 802.11n and/or 802.11ac and/or 802.11ax are further detailed in confidential documents and/or source code that evidence infringement by the Accused Products as to at least Claim 14 of the '371 patent.

79. Furthermore, the Accused Products, including the Acer Chromebook 514, are configured or implemented in an infringing manner with the features and functionality recited in at least Claim 14 of the '371 patent.

80. The technology discussion above and the exemplary Accused Products provide context for Plaintiff's infringement allegations.

81. The claims of the '371 Patent are patent eligible under 35 U.S.C. § 101. The '371 Patent is not directed to an ineligible abstract idea. For example, it is not a mathematical algorithm executed on a generic computer or a fundamental economic business practice. Instead, it offers, for example, a technologically complex communication method and a radio communication apparatus that, for example, "switches between the method of transmitting modulation signals of a plurality of channels to the same frequency band from a plurality of antennas and the method of transmitting a modulation signal of one channel from an antenna." '371 Patent, 4:27-31. This allows the transmitter to choose which of these transmission methods is used, based on estimated channel conditions. The '371 Patent explains that "when the communication method is used, which multiplexes modulation signals of a plurality of channels to the same frequency band, a receiver transmits the information of an estimated radio-wave propagation environment to a transmitter. The transmitter then selects a communication method based on the information. Multiplexing modulation signals of a plurality of channels to the same frequency band by using the foregoing method can increase the data transmission rate. At the same time, a radio communication apparatus

of the present invention can advantageously demultiplex the multiplexed modulation signals received with ease.” ’371 Patent, 5:4-16. That solution is reflected in, for example, claim 14 of the ’371 Patent.

82. At a minimum, Acer has known of the ’371 patent at least as early as the filing date of the Complaint. In addition, Acer has known about the ’371 patent since at least November 8, 2021, when Acer and/or its agents received notice of its infringement via a letter. Furthermore, Acer has known about the ’371 patent since at least January 14, 2022, when Acer and/or its agents received access to additional materials in a data room that further put Acer on notice of its infringement of the ’371 patent.

83. On information and belief, since at least the above-mentioned dates when Acer was on notice of its infringement, Acer has actively induced, under U.S.C. § 271(b), its distributors, customers, subsidiaries, importers, and/or consumers that import, purchase, or sell the Accused Products that include or are made using all of the limitations of one or more claims of the ’371 patent to directly infringe one or more claims of the ’371 patent by using, offering for sale, selling, and/or importing the Accused Products. Since at least the notice provided on the above-mentioned dates, Acer does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the ’371 patent. Upon information and belief, Acer intends to cause, and have taken affirmative steps to induce infringement by distributors, importers, customers, subsidiaries, and/or consumers by at least, inter alia, creating advertisements that promote the infringing use of the Accused Products, creating and/or maintaining established distribution channels for the Accused Products into and within the United States, manufacturing the Accused Products in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, testing wireless

networking features in the Accused Products, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States.

84. On information and belief, despite having knowledge of the '371 patent and knowledge that it is directly and/or indirectly infringing one or more claims of the '371 patent, Acer has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. Acer's infringing activities relative to the '371 patent have been, and continue to be, willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such that Plaintiff is entitled under 35 U.S.C. § 284 to enhanced damages up to three times the amount found or assessed.

85. Redwood has been damaged as a result of Acer's infringing conduct described in this Count. Acer is, thus, liable to Redwood in an amount that adequately compensates Redwood for Acer's infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT IV

(INFRINGEMENT OF U.S. PATENT NO. 8,284,866)

86. Plaintiff incorporates paragraphs 1 through 85 herein by reference.

87. Redwood is the assignee of the '866 patent, entitled "OFDM Transmission Signal Generation Apparatus and Method, and OFDM Reception Data Generation Apparatus and Method," with ownership of all substantial rights in the '866 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

88. The '866 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '866 patent issued from U.S. Patent Application No. 13/171,121.

89. Acer has and continues to directly and/or indirectly infringe (by inducing infringement) one or more claims of the '866 patent in this judicial district and elsewhere in Texas and the United States.

90. On information and belief, Acer designs, develops, manufactures, assembles and markets Wi-Fi compliant devices accused of infringement. *See, e.g.*, <https://www.acer.com/us-en/chromebooks/acer-chromebook-514-cb514-2h-cb514-2ht> (“This Chromebook comes with many functional features, including Wi-Fi 6 ...”).

91. Acer directly infringes the '866 patent via 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or importing those Accused Products, their components and processes, and/or products containing the same that incorporate the fundamental technologies covered by the '866 patent to, for example, its alter egos, agents, intermediaries, distributors, importers, customers, subsidiaries, and/or consumers. Furthermore, upon information and belief, Acer sells and makes the Accused Products outside of the United States, delivers those products to its customers, distributors, and/or subsidiaries in the United States, or in the case that it delivers the Accused Products outside of the United States it does so intending and/or knowing that those products are destined for the United States and/or designing those products for sale in the United States, thereby directly infringing the '866 patent. *See, e.g., Lake Cherokee Hard Drive Techs., L.L.C. v. Marvell Semiconductor, Inc.*, 964 F. Supp. 2d 653, 658 (E.D. Tex. 2013). Furthermore, Acer directly infringes the '866 patent through its direct involvement in the activities of its subsidiaries, including Acer America Corporation, including by selling and offering for sale the Accused Products directly to Acer America Corporation and importing the Accused Products into the United States for Acer America Corporation. Additionally, Acer directly infringes the '866 patent by using and/or testing the Accused Products. Upon information and belief, Acer America

Corporation conducts activities that constitutes direct infringement of the '866 patent under 35 U.S.C. § 271(a) by making, using, offering for sale, selling, and/or importing those Accused Products. For example, and upon information and belief, Acer offers for sale, sells, and imports the Accused Products within the U.S. to, for example, its distributors, customers, subsidiaries, importers, and/or consumers. Further, Acer is vicariously liable for this infringing conduct of Acer America Corporation (under both the alter ego and agency theories) because, as an example and upon information and belief, Acer Inc. and Acer America Corporation are essentially the same company, and Acer Inc. has the right and ability to control Acer America Corporation's infringing acts and receives a direct financial benefit from Acer America Corporation's infringement.

92. For example, Acer infringes claim 1 of the '866 patent via the Accused Products, including the Acer Chromebook 514. The Accused Products, including the Acer Chromebook 514, comprise an OFDM transmission signal generation apparatus. *See, e.g.*, Figure 19-3 of IEEE 802.11 2016; <https://www.acer.com/us-en/chromebooks/acer-chromebook-514-cb514-2h-cb514-2ht> ("This Chromebook comes with many functional features, including Wi-Fi 6 ..."). Wi-Fi 6 refers to IEEE 802.11ax. *See, e.g.*, <https://www.wi-fi.org/discover-wi-fi>.

93. The Accused Products, including the Acer Chromebook 514, each comprise circuitry and/or components (hardware and/or software) configured to form a plurality of transmission signals, where each of the plurality of transmission signals comprises several pilot carriers, which are located in identical carrier positions among the plurality of transmission signals. For example, each of the Accused Products comprises a spatial mapper configured to form a plurality of OFDM signals. *See, e.g.*, Section 19.3.3 and Figure 19-3 of IEEE 802.11 2016. Further, each of the OFDM signals contains, for example, four pilot carriers, in a 20MHz transmission, inserted in carrier positions of -21, -7, 7, and 21, or six pilot carriers, in a 40MHz transmission,

inserted in carrier positions of -53, -25, -11, 11, 25, and 53. *See, e.g.*, Section 19.3.11.10 and Equation 19-54 of IEEE 802.11 2016. Orthogonal pilot sequences are assigned to identical time slots of pilot carriers in identical carrier positions among the plurality of OFDM signals, and identical pilot sequences are assigned to at least two of the OFDM signals. *See, e.g.*, Section 19.3.11.10 and Table 19-19 of IEEE 802.11 2016.

94. The Accused Products, including the Acer Chromebook 514, each comprise circuitry and/or components (hardware and/or software) of an Inverse Fourier transform section configured to convert the plurality of transmission signals to a plurality of OFDM signals to be transmitted over an identical frequency band at an identical time. *See, e.g.*, Section 19.3.3 and Figure 19-3 of IEEE 802.11 2016. For example, the Accused Products are configured to send simultaneous transmissions that are transmitted using the same channel (*e.g.*, a channel having a width of 20 MHz). *See, e.g.*, Section 19.3.15.1 and Tables 19-28, 19-29, and 19-30 of IEEE 802.11 2016.

95. The specific ways in which the Accused Products, including the Acer Chromebook 514, are configured to support the aforementioned features of IEEE 802.11 2016 are further detailed in confidential documents and/or source code that evidence infringement by the Accused Products as to Claim 1 of the '866 patent.

96. Furthermore, the Accused Products, including the Acer Chromebook 514, are configured or implemented in an infringing manner with the features and functionality recited in at least Claim 1 of the '866 patent.

97. The technology discussion above and the exemplary Accused Products provide context for Plaintiff's infringement allegations.

98. The claims of the '866 Patent are patent eligible under 35 U.S.C. § 101. The '866 Patent is not directed to an ineligible abstract idea. For example, it is not a mathematical algorithm executed on a generic computer or a fundamental economic business practice. Instead, it offers, for example, a technologically complex MIMO-OFDM transmission apparatus and method that allows “realizing an ideal symbol configuration for frequency offset estimation, transmission path fluctuation (channel fluctuation) estimation and synchronization/signal detection, in MIMO-OFDM communication.” '866 Patent, 1:21-24.

99. The '866 Patent explains that “sufficient consideration has not been given to the method of transmitting symbols for transmission path estimation and symbols for frequency offset estimation to realize high accuracy frequency offset estimation, high accuracy transmission path fluctuation estimation and high accuracy synchronization/signal detection.” '866 Patent, 1:21-24. The '866 Patent solves this problem with technical solutions. For example, the '866 Patent explains that, in a configuration of its invention, “orthogonal sequences are assigned to corresponding subcarriers among OFDM signals transmitted at the same time from the respective antennas in the time domain to form pilot carriers, so that, even when pilot symbols are multiplexed among a plurality of channels (antennas), it is possible to estimate frequency offset/phase noise with high accuracy.” '866 Patent, 3:4-10. That solution is reflected in, for example, claim 1 of the '866 Patent.

100. At a minimum, Acer has known of the '866 patent at least as early as the filing date of the Complaint. In addition, Acer has known about the '866 patent since at least November 8, 2021, when Acer and/or its agents received notice of the '866 patent via a letter. Furthermore, Acer has known about the '866 patent since at least May 5, 2022, when additional materials were added

to the data room accessible by Acer, and, on information and belief, accessed by Acer, which further put Acer on notice of its infringement of the '866 patent.

101. On information and belief, since at least the above-mentioned dates when Acer was on notice of its infringement, Acer has actively induced, under U.S.C. § 271(b), its distributors, customers, subsidiaries, importers, and/or consumers that import, purchase, or sell the Accused Products that include or are made using all of the limitations of one or more claims of the '866 patent to directly infringe one or more claims of the '866 patent by using, offering for sale, selling, and/or importing the Accused Products. Since at least the notice provided on the above-mentioned dates, Acer does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the '866 patent. Upon information and belief, Acer intends to cause, and have taken affirmative steps to induce infringement by distributors, importers, customers, subsidiaries, and/or consumers by at least, inter alia, creating advertisements that promote the infringing use of the Accused Products, creating and/or maintaining established distribution channels for the Accused Products into and within the United States, manufacturing the Accused Products in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, testing wireless networking features in the Accused Products, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States.

102. On information and belief, despite having knowledge of the '866 patent and knowledge that it is directly and/or indirectly infringing one or more claims of the '866 patent, Acer has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. Acer's infringing activities relative to the '866 patent have been, and continue to be, willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant,

characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such that Plaintiff is entitled under 35 U.S.C. § 284 to enhanced damages up to three times the amount found or assessed.

103. Redwood has been damaged as a result of Acer's infringing conduct described in this Count. Acer is, thus, liable to Redwood in an amount that adequately compensates Redwood for Acer's infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT V

(INFRINGEMENT OF U.S. PATENT NO. 9,374,209)

104. Plaintiff incorporates paragraphs 1 through 103 herein by reference.

105. Redwood is the assignee of the '209 patent, entitled "Transmission Signal Generation Apparatus, Transmission Signal Generation Method, Reception Signal Apparatus, and Reception Signal Method," with ownership of all substantial rights in the '209 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

106. The '209 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '209 patent issued from U.S. Patent Application No. 14/703,938.

107. Acer has and continues to directly and/or indirectly infringe (by inducing infringement) one or more claims of the '209 patent in this judicial district and elsewhere in Texas and the United States.

108. On information and belief, Acer designs, develops, manufactures, assembles and markets Wi-Fi compliant devices accused of infringement. *See, e.g.*, <https://www.acer.com/us->

en/chromebooks/acer-chromebook-514-cb514-2h-cb514-2ht (“This Chromebook comes with many functional features, including Wi-Fi 6 ...”).

109. Acer directly infringes the '209 patent via 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or importing those Accused Products, their components and processes, and/or products containing the same that incorporate the fundamental technologies covered by the '209 patent to, for example, its alter egos, agents, intermediaries, distributors, importers, customers, subsidiaries, and/or consumers. Furthermore, upon information and belief, Acer sells and makes the Accused Products outside of the United States, delivers those products to its customers, distributors, and/or subsidiaries in the United States, or in the case that it delivers the Accused Products outside of the United States it does so intending and/or knowing that those products are destined for the United States and/or designing those products for sale in the United States, thereby directly infringing the '209 patent. *See, e.g., Lake Cherokee Hard Drive Techs., L.L.C. v. Marvell Semiconductor, Inc.*, 964 F. Supp. 2d 653, 658 (E.D. Tex. 2013). Furthermore, Acer directly infringes the '209 patent through its direct involvement in the activities of its subsidiaries, including Acer America Corporation, including by selling and offering for sale the Accused Products directly to Acer America Corporation and importing the Accused Products into the United States for Acer America Corporation. Additionally, Acer directly infringes the '209 patent by using and/or testing the Accused Products. Upon information and belief, Acer America Corporation conducts activities that constitutes direct infringement of the '209 patent under 35 U.S.C. § 271(a) by making, using, offering for sale, selling, and/or importing those Accused Products. For example, and upon information and belief, Acer offers for sale, sells, and imports the Accused Products within the U.S. to, for example, its distributors, customers, subsidiaries, importers, and/or consumers. Further, Acer is vicariously liable for this infringing conduct of Acer

America Corporation (under both the alter ego and agency theories) because, as an example and upon information and belief, Acer Inc. and Acer America Corporation are essentially the same company, and Acer Inc. has the right and ability to control Acer America Corporation's infringing acts and receives a direct financial benefit from Acer America Corporation's infringement.

110. For example, Acer infringes claim 11 of the '209 patent via the Accused Products, including the Acer Chromebook 514. The Accused Products, including the Acer Chromebook 514, comprise a transmission signal generation apparatus configured to generate transmission signals (e.g., HT-mixed format transmission signals). *See, e.g.*, Figure 19-2 of IEEE 802.11 2016; <https://www.acer.com/us-en/chromebooks/acer-chromebook-514-cb514-2h-cb514-2ht> (“This Chromebook comes with many functional features, including Wi-Fi 6 ...”). Wi-Fi 6 refers to IEEE 802.11ax. *See, e.g.*, <https://www.wi-fi.org/discover-wi-fi>.

111. The Accused Products, including the Acer Chromebook 514, each comprise circuitry and/or components (hardware and/or software) configured to generate one or more transmission signals, where each transmission signal includes a data frame having preamble information, pilot information, and data information. *See, e.g.*, Sections 19.3.3 and 19.3.20 and Figure 19-2 of IEEE 802.11 2016. Further, each of the transmission signals include the PHY preamble, at least four pilot symbols, and data information. *See, e.g.*, Sections 19.3.1, 19.3.11.10, and 19.3.20 of IEEE 802.11 2016.

112. Each of the one or more transmission signals includes an associated preamble multiplied by a factor so that an average reception power of the associated preamble corresponds to an average reception power of the data information received with the associated preamble. For example, each of the transmission signals is multiplied by a normalization factor corresponding to the modulation scheme to achieve the same average power for all mappings, where the preamble

and data information can have different modulation types and therefore different corresponding normalization factors. *See, e.g.*, Section 17.3.5.8, Table 17-11, Equation 17-20, and Figure 17.1 of IEEE 802.11 2016.

113. Each of the one or more transmission signals includes plural pilot symbol sequences. For example, each of the transmission signals include at least four pilot symbols inserted in, for example, carrier positions -21, -7, 7, and 21. *See, e.g.*, Section 19.3.11.10 and Figure 19-3 of IEEE 802.11 2016.

114. The Accused Products, including the Acer Chromebook 514, each comprise circuitry and/or components (hardware and/or software) of an Inverse Fourier transformer configured to generate for each of the one or more transmission signals a corresponding OFDM signal for transmission by a corresponding one of one or more antennas by Inverse Fourier transforming each of the transmission signals. *See, e.g.*, Section 19.3.3 and Figure 19-3 of IEEE 802.11 2016.

115. The Inverse Fourier transformer of each of the Accused Products, including the Acer Chromebook 514, is configured to arrange the pilot symbol sequences in corresponding pilot carriers during a first time period. For example, the Inverse Fourier transformer is configured to arrange pilot sequences in the pilot carriers of each OFDM symbol transmitted during a first time period (*e.g.*, the 3.2 μ s DFT period). *See, e.g.*, Section 19.3.6, 19.3.11.10, 19.3.21, 19.4.3, and Equation 19-90 of IEEE 802.11 2016.

116. The transmitter of each of the Accused Products, including the Acer Chromebook 514, is configured to arrange sets of the pilot carriers in a same carrier position in the OFDM signal, where the plural pilot symbol sequences are all orthogonal to each other. For example, the transmitter is configured to arrange pilot sequences for each space-time stream, where each of the

OFDM signals contains four pilot carriers inserted in, for example, carrier positions -21, -7, 7, and 21. *See, e.g.*, Section 19.3.11.10, Equation 19-54, and Table 19-19 of IEEE 802.11 2016. Pilot sequences corresponding to different spatial streams are orthogonal to each other. *See, e.g.*, Table 19-19 of IEEE 802.11 2016.

117. The specific ways in which the Accused Products, including the Acer Chromebook 514, are configured to support the aforementioned features of IEEE 802.11 2016 are further detailed in confidential documents and/or source code that evidence infringement by the Accused Products as to at least Claim 11 of the '209 patent.

118. Furthermore, the Accused Products, including the Acer Chromebook 514, are configured or implemented in an infringing manner with the features and functionality recited in at least Claim 11 of the '209 patent.

119. The technology discussion above and the exemplary Accused Products provide context for Plaintiff's infringement allegations.

120. The claims of the '209 Patent are patent eligible under 35 U.S.C. § 101. The '209 Patent is not directed to an ineligible abstract idea. For example, it is not a mathematical algorithm executed on a generic computer or a fundamental economic business practice.

121. The '209 Patent explains that "in the present circumstances, sufficient consideration has not been given to the method of transmitting symbols for transmission path estimation and symbols for frequency offset estimation to realize high accuracy frequency offset estimation, high accuracy transmission path fluctuation estimation and high accuracy synchronization/signal detection." '209 Patent, 2:53-59. The '209 Patent provides a technical solution to achieve high accuracy frequency offset by assigning orthogonal sequences to corresponding subcarriers among OFDM signals transmitted at the same time from the respective

antennas in the time domain to form pilot carriers. '209 Patent, 3:9-15. The '209 Patent further explains that, in the technical solution of its invention, "since pilot symbols of each channel can be extracted without using a channel estimator value (transmission path fluctuation estimation value), it is possible to simplify the configuration of the section for compensating for the frequency offset/phase noise." '209 Patent, 3:15-19. Those solutions are reflected in, for example, claim 11 of the '209 Patent.

122. At a minimum, Acer has known of the '209 patent at least as early as the filing date of the Complaint. In addition, Acer has known about the '209 patent since at least November 8, 2021, when Acer and/or its agents received notice of the '209 patent via a letter. Furthermore, Acer has known about the '209 patent since at least May 5, 2022, when additional materials were added to the data room accessible by Acer, and, on information and belief, accessed by Acer, which further put Acer on notice of its infringement of the '209 patent.

123. On information and belief, since at least the above-mentioned dates when Acer was on notice of its infringement, Acer has actively induced, under U.S.C. § 271(b), its distributors, customers, subsidiaries, importers, and/or consumers that import, purchase, or sell the Accused Products that include or are made using all of the limitations of one or more claims of the '209 patent to directly infringe one or more claims of the '209 patent by using, offering for sale, selling, and/or importing the Accused Products. Since at least the notice provided on the above-mentioned dates, Acer does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the '209 patent. Upon information and belief, Acer intends to cause, and have taken affirmative steps to induce infringement by distributors, importers, customers, subsidiaries, and/or consumers by at least, inter alia, creating advertisements that promote the infringing use of the Accused Products, creating and/or maintaining established distribution

channels for the Accused Products into and within the United States, manufacturing the Accused Products in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, testing wireless networking features in the Accused Products, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States.

124. On information and belief, despite having knowledge of the '209 patent and knowledge that it is directly and/or indirectly infringing one or more claims of the '209 patent, Acer has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. Acer's infringing activities relative to the '209 patent have been, and continue to be, willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such that Plaintiff is entitled under 35 U.S.C. § 284 to enhanced damages up to three times the amount found or assessed.

125. Redwood has been damaged as a result of Acer's infringing conduct described in this Count. Acer is, thus, liable to Redwood in an amount that adequately compensates Redwood for Acer's infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT VI

(INFRINGEMENT OF U.S. PATENT NO. 7,826,555)

126. Plaintiff incorporates paragraphs 1 through 125 herein by reference.

127. Redwood is the assignee of the '555 patent, entitled "MIMO-OFDM Transmission Device and MIMO-OFDM Transmission Method," with ownership of all substantial rights in the '555 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

128. The '555 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '555 patent issued from U.S. Patent Application No. 11/577,791.

129. Acer has and continues to directly and/or indirectly infringe (by inducing infringement) one or more claims of the '555 patent in this judicial district and elsewhere in Texas and the United States.

130. On information and belief, Acer designs, develops, manufactures, assembles and markets Wi-Fi compliant devices accused of infringement. *See, e.g.*, <https://www.acer.com/us-en/chromebooks/acer-chromebook-514-cb514-2h-cb514-2ht> (“This Chromebook comes with many functional features, including Wi-Fi 6 ...”).

131. Acer directly infringes the '555 patent via 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or importing those Accused Products, their components and processes, and/or products containing the same that incorporate the fundamental technologies covered by the '555 patent to, for example, its alter egos, agents, intermediaries, distributors, importers, customers, subsidiaries, and/or consumers. Furthermore, upon information and belief, Acer sells and makes the Accused Products outside of the United States, delivers those products to its customers, distributors, and/or subsidiaries in the United States, or in the case that it delivers the Accused Products outside of the United States it does so intending and/or knowing that those products are destined for the United States and/or designing those products for sale in the United States, thereby directly infringing the '555 patent. *See, e.g., Lake Cherokee Hard Drive Techs., L.L.C. v. Marvell Semiconductor, Inc.*, 964 F. Supp. 2d 653, 658 (E.D. Tex. 2013). Furthermore, Acer directly infringes the '555 patent through its direct involvement in the activities of its subsidiaries, including Acer America Corporation, including by selling and offering for sale the

Accused Products directly to Acer America Corporation and importing the Accused Products into the United States for Acer America Corporation. Additionally, Acer directly infringes the '555 patent by using and/or testing the Accused Products. Upon information and belief, Acer America Corporation conducts activities that constitutes direct infringement of the '555 patent under 35 U.S.C. § 271(a) by making, using, offering for sale, selling, and/or importing those Accused Products. For example, and upon information and belief, Acer offers for sale, sells, and imports the Accused Products within the U.S. to, for example, its distributors, customers, subsidiaries, importers, and/or consumers. Further, Acer is vicariously liable for this infringing conduct of Acer America Corporation (under both the alter ego and agency theories) because, as an example and upon information and belief, Acer Inc. and Acer America Corporation are essentially the same company, and Acer Inc. has the right and ability to control Acer America Corporation's infringing acts and receives a direct financial benefit from Acer America Corporation's infringement.

132. For example, Acer infringes claim 1 of the '555 patent via the Accused Products, including the Acer Chromebook 514. The Accused Products, including the Acer Chromebook 514, each are compliant with IEEE 802.11n and/or IEEE 802.11ac and/or IEEE 802.11ax, and each comprise a MIMO-OFDM transmission apparatus that transmits OFDM-modulated data symbols from a plurality of antennas in a data transmission period and transmits pilot symbols from specific carriers of the plurality of antennas in the data transmission period. *See, e.g.*, <https://www.acer.com/us-en/chromebooks/acer-chromebook-514-cb514-2h-cb514-2ht> (“This Chromebook comes with many functional features, including Wi-Fi 6 ...”). Wi-Fi 6 refers to IEEE 802.11ax. *See, e.g.*, <https://www.wi-fi.org/discover-wi-fi>. For example, each of the Accused Products, including the Acer Chromebook 514, comprise a MIMO-OFDM transmission apparatus that transmits OFDM data symbols from two or more antennas in a data transmission period, such

that each transmitted OFDM symbol contains four pilot symbols, in a 20 MHz transmission, inserted in carrier positions -21, -7, 7, and 21. *See, e.g.*, Sections 17.3.5.9, 19.1.1, 19.1.2, and 19.3.11.10 and Equation 19-54 of IEEE 802.11 2016. In another example, the Accused Products transmit OFDM symbols and their corresponding pilot symbols in a data transmission period (*e.g.*, the 3.2 μ s DFT period). *See, e.g.*, Sections 19.3.6, 19.3.11.10, 19.3.21, 19.4.3, and Equation 19-90 of IEEE 802.11 2016.

133. The Accused Products, including the Acer Chromebook 514, each comprise an OFDM signal forming section that forms OFDM signals to be transmitted from the plurality of antennas. For example, the Accused Products form HT-mixed format PPDU signals into OFDM symbols to be transmitted from the two or more antennas. *See, e.g.*, Sections 19.1.1 and 19.3.4 of IEEE 802.11 2016.

134. The Accused Products, including the Acer Chromebook 514, each comprise a pilot symbol mapping section that assigns orthogonal sequences to same carriers of the OFDM signals of a same time period. For example, each of the Accused Products assigns orthogonal sequences to same carriers of the OFDM carriers of a same time period (*e.g.*, the 3.2 μ s DFT period) by inserting pilot symbols in carrier positions -21, -7, 7, and 21 in each OFDM symbol, such that each sequence of the four pilot symbols is orthogonal to a corresponding sequence in the OFDM symbols of another space-time stream. *See, e.g.*, Section 19.3.11.10 and Equation 19-54 of IEEE 802.11 2016.

135. When the OFDM signals are transmitted from two antennas of the Accused Products, including the Acer Chromebook 514, the pilot symbol mapping section of the Accused Products forms the pilot carriers such that pilot signals of orthogonal sequences are used for same pilot carriers between a first antenna and a second antenna. For example, when there are two space-

time streams used for transmission by the Accused Products, the pilot sequences corresponding to stream one and stream two are orthogonal. *See, e.g.*, Table 19-19 of IEEE 802.11 2016.

136. When the OFDM signals are transmitted from two antennas of the Accused Products, including the Acer Chromebook 514, the pilot symbol mapping section of the Accused Products forms the pilot carriers such that pilot signals of different sequences are used for different pilot carriers at each of the first antenna and the second antenna. For example, within transmissions from each antenna, pilot values differ from one pilot subcarrier to another pilot subcarrier and pilot values corresponding to a given carrier repeat over OFDM symbols, such that pilot values corresponding to different subcarriers at each antenna are different. *See, e.g.*, Table 19-19 of IEEE 802.11 2016.

137. When the OFDM signals are transmitted from two antennas of the Accused Products, including the Acer Chromebook 514, the pilot symbol mapping section of the Accused Products, form the pilot carriers such that pilot signals of a same sequence are used at the first antenna and the second antenna. For example, a cyclically rotated version of a same sequence of pilot values (*e.g.*, 1, 1, -1, -1) is repeated for each of the two antennas. *See, e.g.*, Table 19-19 of IEEE 802.11 2016.

138. The specific ways in which the Accused Products, including the Acer Chromebook 514, are configured to support the aforementioned features of IEEE 802.11n and/or 802.11ac and/or 802.11ax are further detailed in confidential documents and/or source code that evidence infringement by the Accused Products as to Claim 1 of the '555 patent.

139. Furthermore, the Accused Products, including the Acer Chromebook 514, are configured or implemented in an infringing manner with the features and functionality recited in at least Claim 1 of the '555 patent.

140. The technology discussion above and the exemplary Accused Products provide context for Plaintiff's infringement allegations.

141. The claims of the '555 Patent are patent eligible under 35 U.S.C. § 101. The '555 Patent is not directed to an ineligible abstract idea. For example, it is not a mathematical algorithm executed on a generic computer or a fundamental economic business practice. Instead, it offers, for example, a technologically complex MIMO-OFDM transmission method that allows "realizing an ideal symbol configuration for frequency offset estimation, transmission path fluctuation (channel fluctuation) estimation and synchronization/signal detection, in MIMO-OFDM communication." '555 Patent, 1:9-12.

142. The '555 Patent explains that "sufficient consideration has not been given to the method of transmitting symbols for transmission path estimation and symbols for frequency offset estimation to realize high accuracy frequency offset estimation, high accuracy transmission path fluctuation estimation and high accuracy synchronization/signal detection." '555 Patent, 1:34-40. The '555 Patent solves this problem with technical solutions. For example, the '555 Patent explains that, in a configuration of its invention, "orthogonal sequences are assigned to corresponding subcarriers among OFDM signals transmitted at the same time from the respective antennas in the time domain to form pilot carriers, so that, even when pilot symbols are multiplexed among a plurality of channels (antennas), it is possible to estimate frequency offset/phase noise with high accuracy." '555 Patent, 2:60-66. That solution is reflected in, for example, claims 1 and 4 of the '555 Patent.

143. At a minimum, Acer has known of the '555 patent at least as early as the filing date of the Complaint. In addition, Acer has known about the '555 patent since at least November 8, 2021, when Acer and/or its agents received notice of the '555 patent via a letter. Furthermore, Acer

has known about the '555 patent since at least May 5, 2022, when additional materials were added to the data room accessible by Acer, and, on information and belief, accessed by Acer, which further put Acer on notice of its infringement of the '555 patent.

144. On information and belief, since at least the above-mentioned dates when Acer was on notice of its infringement, Acer has actively induced, under U.S.C. § 271(b), its distributors, customers, subsidiaries, importers, and/or consumers that import, purchase, or sell the Accused Products that include or are made using all of the limitations of one or more claims of the '555 patent to directly infringe one or more claims of the '555 patent by using, offering for sale, selling, and/or importing the Accused Products. Since at least the notice provided on the above-mentioned dates, Acer does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the '555 patent. Upon information and belief, Acer intends to cause, and have taken affirmative steps to induce infringement by distributors, importers, customers, subsidiaries, and/or consumers by at least, inter alia, creating advertisements that promote the infringing use of the Accused Products, creating and/or maintaining established distribution channels for the Accused Products into and within the United States, manufacturing the Accused Products in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, testing wireless networking features in the Accused Products, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States.

145. On information and belief, despite having knowledge of the '555 patent and knowledge that it is directly and/or indirectly infringing one or more claims of the '555 patent, Acer has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. Acer's infringing activities relative to the '555 patent have been, and

continue to be, willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such that Plaintiff is entitled under 35 U.S.C. § 284 to enhanced damages up to three times the amount found or assessed.

146. Redwood has been damaged as a result of Acer's infringing conduct described in this Count. Acer is, thus, liable to Redwood in an amount that adequately compensates Redwood for Acer's infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT VII

(INFRINGEMENT OF U.S. PATENT NO. 7,917,102)

147. Plaintiff incorporates paragraphs 1 through 146 herein by reference.

148. Redwood is the assignee of the '102 patent, entitled "Radio Transmitting Apparatus and Radio Transmission Method," with ownership of all substantial rights in the '102 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

149. The '102 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '102 patent issued from U.S. Patent Application No. 11/937,422.

150. Acer has and continues to directly and/or indirectly infringe (by inducing infringement) one or more claims of the '102 patent in this judicial district and elsewhere in Texas and the United States.

151. On information and belief, Acer designs, develops, manufactures, assembles and markets Wi-Fi compliant devices accused of infringement. *See, e.g.*, <https://www.acer.com/us->

en/chromebooks/acer-chromebook-514-cb514-2h-cb514-2ht (“This Chromebook comes with many functional features, including Wi-Fi 6 ...”).

152. Acer directly infringes the ’102 patent via 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or importing those Accused Products, their components and processes, and/or products containing the same that incorporate the fundamental technologies covered by the ’102 patent to, for example, its alter egos, agents, intermediaries, distributors, importers, customers, subsidiaries, and/or consumers. Furthermore, upon information and belief, Acer sells and makes the Accused Products outside of the United States, delivers those products to its customers, distributors, and/or subsidiaries in the United States, or in the case that it delivers the Accused Products outside of the United States it does so intending and/or knowing that those products are destined for the United States and/or designing those products for sale in the United States, thereby directly infringing the ’102 patent. *See, e.g., Lake Cherokee Hard Drive Techs., L.L.C. v. Marvell Semiconductor, Inc.*, 964 F. Supp. 2d 653, 658 (E.D. Tex. 2013). Furthermore, Acer directly infringes the ’102 patent through its direct involvement in the activities of its subsidiaries, including Acer America Corporation, including by selling and offering for sale the Accused Products directly to Acer America Corporation and importing the Accused Products into the United States for Acer America Corporation. Additionally, Acer directly infringes the ’102 patent by using and/or testing the Accused Products. Upon information and belief, Acer America Corporation conducts activities that constitutes direct infringement of the ’102 patent under 35 U.S.C. § 271(a) by making, using, offering for sale, selling, and/or importing those Accused Products. For example, and upon information and belief, Acer offers for sale, sells, and imports the Accused Products within the U.S. to, for example, its distributors, customers, subsidiaries, importers, and/or consumers. Further, Acer is vicariously liable for this infringing conduct of Acer

America Corporation (under both the alter ego and agency theories) because, as an example and upon information and belief, Acer Inc. and Acer America Corporation are essentially the same company, and Acer Inc. has the right and ability to control Acer America Corporation's infringing acts and receives a direct financial benefit from Acer America Corporation's infringement.

153. For example, Acer infringes claim 3 of the '102 patent via the Accused Products, including the Acer Chromebook 514. The Accused Products, including the Acer Chromebook 514, each are compliant with IEEE 802.11n and/or IEEE 802.11ac and/or IEEE 802.11ax, and each comprise a radio transmitting apparatus that transmits a modulated signal. *See, e.g.*, <https://www.acer.com/us-en/chromebooks/acer-chromebook-514-cb514-2h-cb514-2ht> (“This Chromebook comes with many functional features, including Wi-Fi 6 ...”). Wi-Fi 6 refers to IEEE 802.11ax. *See, e.g.*, <https://www.wi-fi.org/discover-wi-fi>.

154. The Accused Products, including the Acer Chromebook 514, each comprise circuitry and/or components (hardware and/or software) that forms a transmission frame which includes a frequency offset estimation signal for estimating frequency offset of the modulated signal at a receiving apparatus, a channel fluctuation estimation signal for estimating channel fluctuation of the modulated signal at the receiving apparatus and a gain control signal for performing gain control of the modulated signal at the receiving apparatus. The Accused Products, including the Acer Chromebook 514, must be configured to form the claimed “transmission frame” for a HT-mixed format PPDU frame, which is a mandatory feature of IEEE 802.11 2016. *See, e.g.*, Figure 19-1 of IEEE 802.11 2016; https://www.albany.edu/faculty/dsaha/teach/2019Spring_CEN574/slides/08_WLAN.pdf at slides 67-68 (the HT-mixed format PPDU is mandatory). For example, the Accused Products, including the Acer Chromebook 514, each form a HT-mixed format PPDU frame, which comprises an L-

LTF subframe, which is a frequency offset estimation signal. *See, e.g.*, Figures 17-4 and 19-1 of IEEE 802.11 2016. The HT-mixed format PPDU frame also comprises an HT-LTF subframe, which is a channel fluctuation estimation signal. *See, e.g.*, Figure 19-1 and Section 19.3.9.4.6 of IEEE 802.11 2016. The HT-mixed format PPDU frame also comprises an L-STF subframe, which is a gain control signal. *See, e.g.*, Figure 19-1 and Section 19.3.9.3.3 of IEEE 802.11 2016.

155. The Accused Products, including the Acer Chromebook 514, each comprise circuitry and/or components (hardware and/or software) configured to transmit the transmission frame. For example, the Accused Products, including the Acer Chromebook 514, must be configured to transmit a transmission frame for a HT-mixed format PPDU, which is a mandatory feature of IEEE 802.11 2016. *See, e.g.*, Figure 19-1 of IEEE 802.11 2016; https://www.albany.edu/faculty/dsaha/teach/2019Spring_CEN574/slides/08_WLAN.pdf at slides 67-68 (the HT-mixed format PPDU is mandatory).

156. The transmission frame includes a first gain control signal and a second gain control signal. For example, the HT-mixed format PPDU comprises a first gain control signal in the L-STF subframe and a second gain control signal in the HT-STF subframe. *See, e.g.*, Figure 19-1 and Sections 19.3.9.3.3 and 19.3.9.4.5 of IEEE 802.11 2016. The first gain control signal is arranged prior to the frequency offset estimation signal. For example, the L-STF subframe is arranged prior to the L-LTF subframe. *See, e.g.*, Figure 19-1 of IEEE 802.11 2016. The second gain control is arranged subsequent to the frequency offset estimation signal and prior to the channel fluctuation estimation signal. For example, the HT-STF subframe is arranged subsequent to the L-LTF subframe and prior to the HT-LTF subframe. *See, e.g.*, Figure 19-1 of IEEE 802.11 2016.

157. The specific ways in which the Accused Products, including the Acer Chromebook 514, are configured to support the aforementioned features of IEEE 802.11n and/or 802.11ac and/or 802.11ax are further detailed in confidential documents and/or source code that evidence infringement by the Accused Products as to Claim 3 of the '102 patent.

158. Furthermore, the Accused Products, including the Acer Chromebook 514, are configured or implemented in an infringing manner with the features and functionality recited in at least Claim 3 of the '102 patent.

159. The technology discussion above and the exemplary Accused Products provide context for Plaintiff's infringement allegations.

160. The claims of the '102 Patent are patent eligible under 35 U.S.C. § 101. The '102 Patent is not directed to an ineligible abstract idea. For example, it is not a mathematical algorithm executed on a generic computer or a fundamental economic business practice. Instead, for example, it offers a technologically complex, particularized "radio transmitting apparatus and radio transmission method that enable[s] reception quality to be improved by reducing pilot symbol and data symbol quantization error in a system in which the number of simultaneously transmitted modulated signals is changed according to the propagation environment and so forth." '102 Patent, 2:12-18. The '102 Patent provides the technical solution above, for example, by "changing the transmit power of the modulated signal transmitted from each antenna according to the number of antennas that simultaneously transmit modulated signals (that is, the number of modulated signals)." '102 Patent, 2:19-22. That solution is reflected in the claims 1, 3, 5, and 10 of the '102 Patent, which include, for example, gain control limitations that can be used in the changing of the transmit power of the modulated signals. *See, e.g.*, '102 Patent, 17:34-50.

161. At a minimum, Acer has known of the '102 patent at least as early as the filing date of the Complaint. In addition, Acer has known about the '102 patent since at least November 8, 2021, when Acer and/or its agents received notice of its infringement via a letter. Furthermore, Acer has known about the '102 patent since at least January 14, 2022, when Acer and/or its agents received access to additional materials in a data room that further put Acer on notice of its infringement of the '102 patent.

162. On information and belief, since at least the above-mentioned dates when Acer was on notice of its infringement, Acer has actively induced, under U.S.C. § 271(b), its distributors, customers, subsidiaries, importers, and/or consumers that import, purchase, or sell the Accused Products that include or are made using all of the limitations of one or more claims of the '102 patent to directly infringe one or more claims of the '102 patent by using, offering for sale, selling, and/or importing the Accused Products. Since at least the notice provided on the above-mentioned dates, Acer does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the '102 patent. Upon information and belief, Acer intends to cause, and have taken affirmative steps to induce infringement by distributors, importers, customers, subsidiaries, and/or consumers by at least, inter alia, creating advertisements that promote the infringing use of the Accused Products, creating and/or maintaining established distribution channels for the Accused Products into and within the United States, manufacturing the Accused Products in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, testing wireless networking features in the Accused Products, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States.

163. On information and belief, despite having knowledge of the '102 patent and knowledge that it is directly and/or indirectly infringing one or more claims of the '102 patent, Acer has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. Acer's infringing activities relative to the '102 patent have been, and continue to be, willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such that Plaintiff is entitled under 35 U.S.C. § 284 to enhanced damages up to three times the amount found or assessed.

164. Redwood has been damaged as a result of Acer's infringing conduct described in this Count. Acer is, thus, liable to Redwood in an amount that adequately compensates Redwood for Acer's infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT VIII

(INFRINGEMENT OF U.S. PATENT NO. 7,983,140)

165. Plaintiff incorporates paragraphs 1 through 164 herein by reference.

166. Redwood is the assignee of the '140 patent, entitled "Transmitting Apparatus, Receiving Apparatus, and Communication System for Formatting Data," with ownership of all substantial rights in the '140 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

167. The '140 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '140 patent issued from U.S. Patent Application No. 11/004,256.

168. Acer has and continues to directly and/or indirectly infringe (by inducing infringement) one or more claims of the '140 patent in this judicial district and elsewhere in Texas and the United States.

169. On information and belief, Acer designs, develops, manufactures, assembles and markets Wi-Fi compliant devices accused of infringement. *See, e.g.*, <https://www.acer.com/us-en/chromebooks/acer-chromebook-514-cb514-2h-cb514-2ht> (“This Chromebook comes with many functional features, including Wi-Fi 6 ...”).

170. Acer directly infringes the '140 patent via 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or importing those Accused Products, their components and processes, and/or products containing the same that incorporate the fundamental technologies covered by the '140 patent to, for example, its alter egos, agents, intermediaries, distributors, importers, customers, subsidiaries, and/or consumers. Furthermore, upon information and belief, Acer sells and makes the Accused Products outside of the United States, delivers those products to its customers, distributors, and/or subsidiaries in the United States, or in the case that it delivers the Accused Products outside of the United States it does so intending and/or knowing that those products are destined for the United States and/or designing those products for sale in the United States, thereby directly infringing the '140 patent. *See, e.g., Lake Cherokee Hard Drive Techs., L.L.C. v. Marvell Semiconductor, Inc.*, 964 F. Supp. 2d 653, 658 (E.D. Tex. 2013). Furthermore, Acer directly infringes the '140 patent through its direct involvement in the activities of its subsidiaries, including Acer America Corporation, including by selling and offering for sale the Accused Products directly to Acer America Corporation and importing the Accused Products into the United States for Acer America Corporation. Additionally, Acer directly infringes the '140 patent by using and/or testing the Accused Products. Upon information and belief, Acer America

Corporation conducts activities that constitutes direct infringement of the '140 patent under 35 U.S.C. § 271(a) by making, using, offering for sale, selling, and/or importing those Accused Products. For example, and upon information and belief, Acer offers for sale, sells, and imports the Accused Products within the U.S. to, for example, its distributors, customers, subsidiaries, importers, and/or consumers. Further, Acer is vicariously liable for this infringing conduct of Acer America Corporation (under both the alter ego and agency theories) because, as an example and upon information and belief, Acer Inc. and Acer America Corporation are essentially the same company, and Acer Inc. has the right and ability to control Acer America Corporation's infringing acts and receives a direct financial benefit from Acer America Corporation's infringement.

171. For example, Acer infringes claim 1 of the '140 patent via the Accused Products, including the Acer Chromebook 514. The Accused Products, including the Acer Chromebook 514, comprise a transmitting apparatus, in an orthogonal frequency division multiplexing communication system. *See, e.g.*, <https://www.acer.com/us-en/chromebooks/acer-chromebook-514-cb514-2h-cb514-2ht> ("This Chromebook comes with many functional features, including Wi-Fi 6 ..."). Wi-Fi 6 refers to IEEE 802.11ax. *See, e.g.*, <https://www.wi-fi.org/discover-wi-fi>.

172. The Accused Products, including the Acer Chromebook 514, each comprise circuitry and/or components (hardware and/or software) for converting a transmission signal into a transmission time slot. For example, the Accused Products, including the Acer Chromebook 514, convert PSDUs into PPDU. *See, e.g.*, Sections 17.3.1 and 17.3.2.1 of IEEE 802.11 2016.

173. The Accused Products, including the Acer Chromebook 514, each comprise circuitry and/or components (hardware and/or software) for generating a frame that includes a series of n (greater than 1) time slots and a frame guard period added to the series of n time slots, where each time slot includes an effective symbol period and guard period added to the effective

symbol period, where the length of the series of n time slots is less than the length of the frame. For example, each of the Accused Products, including the Acer Chromebook 514, generates a PPDU frame that comprises a series of time slots associated with the signal and data OFDM symbols. *See, e.g.*, Figures 17-1 and 17-4 of IEEE 802.11 2016. Each of the Accused Products, including the Acer Chromebook 514, generates cyclic shifts that are added to the series of n time slots. *See, e.g.*, Sections 19.3.4 and 19.3.9.3.2 of IEEE 802.11 2016. Each time slot in the PPDU frame comprises an effective symbol period, and a guard period is added at the start of each effective symbol period. *See, e.g.*, Table 19-6 and Figure 17-4 of IEEE 802.11 2016. Further, the length of the series of n time slots is less than the total length of the PPDU frame. *See, e.g.*, Figure 17-4 of IEEE 802.11 2016.

174. The Accused Products, including the Acer Chromebook 514, each comprise circuitry and/or components (hardware and/or software) for transmitting the generated frame as a radio signal. *See, e.g.*, Section 17.3.8.2 of IEEE 802.11 2016.

175. The specific ways in which the Accused Products, including the Acer Chromebook 514, are configured to support the aforementioned features of IEEE 802.11n and/or 802.11ac and/or 802.11ax are further detailed in confidential documents and/or source code that evidence infringement by the Accused Products as to at least Claim 1 of the '140 patent.

176. Furthermore, the Accused Products, including the Acer Chromebook 514, are configured or implemented in an infringing manner with the features and functionality recited in at least Claim 1 of the '140 patent.

177. The technology discussion above and the exemplary Accused Products provide context for Plaintiff's infringement allegations.

178. The claims of the '140 Patent are patent eligible under 35 U.S.C. § 101. The '140 Patent is not directed to an ineligible abstract idea. For example, it is not a mathematical algorithm executed on a generic computer or a fundamental economic business practice. Instead, it is a technologically complex, particularized method of signal conversion and transmission. The '140 Patent explains a problem that exists in cellular networks, namely that different cells transmitting in the same frequency will interfere with each other. *See, e.g.*, '140 Patent, 1:30-32. That interference can be solved by having the different cells use different frequencies, but that solution causes another problem, i.e., decreased spectrum efficiency. *See, e.g.*, '140 Patent, 1:30-44. Thus, '140 Patent explains, "it is important to design a communication system such that the system has high resistance against interference thereby achieving an improvement in the spectrum efficiency". '140 Patent, 1:45-47.

179. The '140 Patent provides a technical solution to that technical problem by implementing "an improvement in a format of data that is modulated and transmitted using, for example, an OFDM (Orthogonal Frequency Division Multiplexing) technique." '140 Patent, 1:14-17. The claims of the '140 Patent provide for a specific format of transmission for that purpose. For example, the "frame" in claim 1 includes a "a frame guard period added to the series of n time slots." As the '140 Patent explains, when "no frame guard is used, the interfering wave IFW interferes with two frames of the desired wave DSW. In contrast, in the communication system according to the present embodiment of the invention, a frame guard included in an OFDM signal prevents the interfering wave IFW from interfering with the second frame, as shown in FIGS. 15(A) and 15(B)." '140 Patent, 18:63-19:2. This helps achieve the goal of the of the '140 Patent of "suppression of a frame loss due to interference caused by use of the same channel." *Id.* at 3:32-33. Thus, the claimed transmission apparatus uses a transmission format designed to add efficiency

to the transmission process in a particular manner. As such, the recited transmission apparatus is a concrete technical contribution and not simply the embodiment of an abstract idea.

180. At a minimum, Acer has known of the '140 patent at least as early as the filing date of the Complaint. In addition, Acer has known about the '140 patent since at least November 8, 2021, when Acer and/or its agents received notice of its infringement via a letter. Furthermore, Acer has known about the '140 patent since at least January 14, 2022, when Acer and/or its agents received access to additional materials in a data room that further put Acer on notice of its infringement of the '140 patent.

181. On information and belief, since at least the above-mentioned dates when Acer was on notice of its infringement, Acer has actively induced, under U.S.C. § 271(b), its distributors, customers, subsidiaries, importers, and/or consumers that import, purchase, or sell the Accused Products that include or are made using all of the limitations of one or more claims of the '140 patent to directly infringe one or more claims of the '140 patent by using, offering for sale, selling, and/or importing the Accused Products. Since at least the notice provided on the above-mentioned dates, Acer does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the '140 patent. Upon information and belief, Acer intends to cause, and have taken affirmative steps to induce infringement by distributors, importers, customers, subsidiaries, and/or consumers by at least, inter alia, creating advertisements that promote the infringing use of the Accused Products, creating and/or maintaining established distribution channels for the Accused Products into and within the United States, manufacturing the Accused Products in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, testing wireless

networking features in the Accused Products, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States.

182. On information and belief, despite having knowledge of the '140 patent and knowledge that it is directly and/or indirectly infringing one or more claims of the '140 patent, Acer has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. Acer's infringing activities relative to the '140 patent have been, and continue to be, willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such that Plaintiff is entitled under 35 U.S.C. § 284 to enhanced damages up to three times the amount found or assessed.

183. Redwood has been damaged as a result of Acer's infringing conduct described in this Count. Acer is, thus, liable to Redwood in an amount that adequately compensates Redwood for Acer's infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

CONCLUSION

184. Plaintiff Redwood is entitled to recover from Acer the damages sustained by Plaintiff as a result of Acer's wrongful acts, and willful infringement, in an amount subject to proof at trial, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court.

185. Plaintiff has incurred and will incur attorneys' fees, costs, and expenses in the prosecution of this action. The circumstances of this dispute may give rise to an exceptional case within the meaning of 35 U.S.C. § 285, and Plaintiff is entitled to recover its reasonable and necessary attorneys' fees, costs, and expenses.

JURY DEMAND

186. Plaintiff hereby requests a trial by jury pursuant to Rule 38 of the Federal Rules of Civil Procedure.

PRAYER FOR RELIEF

187. Plaintiff respectfully requests that the Court find in its favor and against Acer, and that the Court grant Plaintiff the following relief:

1. A judgment that Acer has infringed the Asserted Patents as alleged herein, directly and/or indirectly by way of inducing infringement of such patents;
2. A judgment for an accounting of all damages sustained by Plaintiff as a result of the acts of infringement by Acer;
3. A judgment and order requiring Acer to pay Plaintiff damages under 35 U.S.C. § 284, including up to treble damages as provided by 35 U.S.C. § 284, and any royalties determined to be appropriate;
4. A judgment and order requiring Acer to pay Plaintiff pre-judgment and post-judgment interest on the damages awarded;
5. A judgment and order finding this to be an exceptional case and requiring Acer to pay the costs of this action (including all disbursements) and attorneys' fees as provided by 35 U.S.C. § 285; and
6. Such other and further relief as the Court deems just and equitable.

Dated: April 14, 2023

Respectfully submitted,

/s/ Patrick J. Conroy

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