

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS**

USTA TECHNOLOGY, LLC,

*Plaintiff,*

v.

LENOVO GROUP LIMITED,

*Defendant.*

Civil Action No. 4:24-cv-515

JURY TRIAL DEMANDED

**SECOND AMENDED COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff USTA Technology, LLC (“USTA” or “Plaintiff”), for its Second Amended Complaint against Defendant Lenovo Group Limited (“Lenovo” or “Defendant”) pursuant to Fed. R. Civ. P. 15(a)(1)(B)<sup>1</sup>, alleges the following:

**NATURE OF THE ACTION**

1. This is an action for patent infringement arising under the Patent Laws of the United States, 35 U.S.C. § 1 *et seq.*

**THE PARTIES**

2. Plaintiff USTA is a limited liability company organized under the laws of the State of Delaware with a place of business at 211 W Tyler St., Ste. C, Longview, TX 75601.

3. Upon information and belief, Lenovo is a foreign company organized and existing under the laws of China, with its headquarters at 23rd Floor, Lincoln House, Taikoo Place, 979 King’s Road, Quarry Bay, Hong Kong S.A.R. of China. Upon information and belief, Lenovo does business in Texas and in the Eastern District of Texas, directly or through intermediaries, such as its wholly-owned subsidiaries, channel partners and authorized resellers. Lenovo may be

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<sup>1</sup> Plaintiff’s First Amended Complaint was filed pursuant to Fed. R. Civ. P. 15(a)(2).

served with process pursuant to the provisions of the Hague Convention. Lenovo may also be served with process by serving the Texas Secretary of State, 1019 Brazos Street, Austin, Texas 78701, as its agent for service because it engages in business in Texas but has not designated or maintained a resident agent for service of process in Texas as required by statute.

4. Lenovo owns or controls, directly or indirectly, each of the Lenovo entities with which it coordinates the sale, offer for sale, import, use, and manufacture of Accused Instrumentalities in the United States, including the other products. For example, in its 2024 Annual Report, Lenovo describes itself and its subsidiaries as follows<sup>2</sup>:

Lenovo Group Limited (the “Company”) and its subsidiaries (together, the “Group”) develop, manufacture and market reliable, high-quality, secure and easy-to-use technology products and services. Its product lines include legendary Think-branded commercial personal computers and Idea-branded consumer personal computers, as well as servers, workstations, and a family of mobile internet devices, including tablets and smartphones.

This includes Motorola Mobility LLC (“Motorola”), Lenovo (United States), Inc. (“LUS”), and Lenovo Global Technology (United States) Inc. (“LGTUS”) among others.<sup>3</sup> Lenovo describes LUS’s “principal activities” as “distribution of IT products as well as mobile phone, smartphone, and tablet, server and storage.”<sup>4</sup> Lenovo describes LGTUS’s “principal activities” as “provision of IT services and distribution of IT products.”<sup>5</sup> These are considered “principal subsidiaries” that are “significant to the results of the year or form a substantial portion of the net assets of the Group.”<sup>6</sup> Lenovo controls 100% of these and other subsidiaries.<sup>7</sup> Lenovo and its U.S.-based subsidiaries (which act as part of a global network of sales and manufacturing subsidiaries)

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<sup>2</sup> 2024 Annual Report, <https://doc.irasia.com/listco/hk/lenovo/annual/2024/ar2024.pdf> at 181.

<sup>3</sup> *Id.* at 263-266.

<sup>4</sup> *Id.* at 265.

<sup>5</sup> *Id.* at 263.

<sup>6</sup> *Id.* at 261.

<sup>7</sup> *Id.* at 263, 265-66.

operate as agents of one another and vicariously as parts of the same business group to work in concert together.<sup>8</sup>

5. Lenovo induces its subsidiaries, affiliates, retail partners and customers to use the Accused Instrumentalities in an infringing manner and in the placing of such products into the stream of commerce via established distribution channels knowing or understanding that such products would be sold and used in the United States, including in this District. Lenovo purposefully directed the Accused Instrumentalities into established distribution channels within this District and the U.S. nationally. For example, at the direction and control of Lenovo, U.S.-based subsidiaries make, use, import, offer to sell and/or sell the Accused Instrumentalities, and induce others to use the Accused Instrumentalities, in the State of Texas and this District.

6. The Lenovo group of companies—collectively known as “the Lenovo Group,” “the Group” or “Lenovo”—have a global reach and have a strong presence in the United States, with many people in the United States in management, design, engineering, marketing and supply chain. Officers or executives of Lenovo (and/or affiliates and subsidiaries acting in concert with Lenovo) regularly work from and reside in the United States, including in Texas. These officers or executives include, among others, Matt Zielinski, Ashley Gorakhpurwalla, Paul Rector, Matt Dobrodziej, Arthur Hu, Doug Fisher, Russell Griffin, Emily Ketchen, Tolga Kurtoglu, Annabelle Wang, and Shannon MacKay. Such officers are involved in the marketing, distribution, sale, import and use of the Accused Instrumentalities in the United States. Matt Zielinski, Ashley Gorakhpurwalla, Tolga Kurtoglu, Arthur Hu and Doug Fisher serve on the

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<sup>8</sup> *Id.* at 181.

Lenovo Executive Committee<sup>9</sup>, which makes strategic decisions for Lenovo and the Lenovo Group.<sup>10</sup>

7. Lenovo's global operations are split into different business groups that operate across Lenovo and its subsidiaries, including the Intelligent Devices Group ("IDG"), Infrastructure Solutions Group ("ISG")<sup>11</sup> and Solutions & Services Group ("SSG").<sup>12</sup> The IDG includes the PC and Smart Devices Group ("PCSD") and Mobile Business Group ("MBG").<sup>13</sup> Lenovo's recent Annual Report states "IDG is considered a *global operation* comprising PCSD business unit and MBG which oversees the world's widest portfolio of PCs, tablets, smartphones, monitors, and smart home/collaboration solutions."<sup>14</sup>

8. Upon information and belief, Motorola Mobility LLC ("Motorola") is part of Lenovo's MBG.<sup>15</sup> For example, Emily Ketchen Vice President and Chief Marketing Officer of the Intelligent Devices Group (IDG) and International Markets (ISO) at Lenovo according to her LinkedIn bio.<sup>16</sup> She "[l]ead[s] the global team that develops and drives marketing worldwide

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<sup>9</sup> <https://www.lenovo.com/us/en/about/who-we-are/our-leadership/>.

<sup>10</sup> 2023 Annual Report, <https://doc.irasia.com/listco/hk/lenovo/annual/2023/ar2023.pdf> at 199 ("The chief operating decision-maker, who is responsible for allocating resources and assessing performance of the operating segments, has been identified as the Lenovo Executive Committee (the "LEC") that makes strategic decisions.").

<sup>11</sup> Formerly known as the Data Center Group. See <https://news.lenovo.com/pressroom/press-releases/long-term-sustainable-growth-strategy-drives-record-results-for-second-consecutive-quarter/>.

<sup>12</sup> <https://www.lenovo.com/us/en/about/what-we-do/>; see also <https://news.lenovo.com/pressroom/press-releases/company-transformation-strategy-from-devices-to-solutions/>.

<sup>13</sup> <https://news.lenovo.com/pressroom/press-releases/long-term-sustainable-growth-strategy-drives-record-results-for-second-consecutive-quarter/>.

<sup>14</sup> <https://doc.irasia.com/listco/hk/lenovo/annual/2024/ar2024.pdf> at page 210.

<sup>15</sup> <https://news.lenovo.com/pressroom/press-releases/long-term-sustainable-growth-strategy-drives-record-results-for-second-consecutive-quarter/>.

<sup>16</sup> <https://www.linkedin.com/in/emilyketchen/>.

across B2C and B2B for PCSD and *Motorola*.”<sup>17</sup> Dan Dery, a former Vice President of Products at Lenovo, states that he was “responsible for Lenovo Mobile (Motorola) portfolio.”<sup>18</sup>

9. Upon information and belief, Lenovo splits its sales organization into two groups, the China GEO and an International Sales Organization (“ISO”) responsible for all global sales outside of China.<sup>19</sup> Matt Zielinski, an Executive Vice President of Lenovo, is also President of Lenovo’s ISO<sup>20</sup> and is based in Texas.<sup>21</sup>

10. Lenovo and its subsidiaries operate as a unitary business venture.<sup>22</sup> They are part of the same corporate structure and distribution chain for making, importing, offering to sell, selling, and/or using the Accused Instrumentalities, including in Texas generally and this District in particular. Lenovo and its subsidiaries share the same management<sup>23</sup>, common ownership, advertising platforms, facilities, distribution chains and platforms, and Accused Instrumentalities involving related technologies.<sup>24</sup> For example, Ashley Gorakhpurwalla is an Executive Vice

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<sup>17</sup> *Id.* (emphasis added).

<sup>18</sup> <https://www.linkedin.com/in/dandery/>.

<sup>19</sup> <https://news.lenovo.com/pressroom/press-releases/long-term-sustainable-growth-strategy-drives-record-results-for-second-consecutive-quarter/>.

<sup>20</sup> 2024 Annual Report, <https://doc.irasia.com/listco/hk/lenovo/annual/2024/ar2024.pdf>, at page 152.

<sup>21</sup> <https://www.linkedin.com/in/matthew-zielinski/>.

<sup>22</sup> 2023 Annual Report, <https://doc.irasia.com/listco/hk/lenovo/annual/2023/ar2023.pdf> at 65 (“We Are Lenovo” is Lenovo’s culture and the way Lenovo work together as one team.”), at 199 (“The chief operating decision-maker, who is responsible for allocating resources and assessing performance of the operating segments, has been identified as the Lenovo Executive Committee (the “LEC”) that makes strategic decisions.”); *see also* <https://tbri.com/special-reports/one-lenovo-creating-a-cohesive-global-technology-solutions-company-begins-with-unification/> (discussing “One Lenovo”).

<sup>23</sup> *E.g., id.* at 155- 158.

<sup>24</sup> The Lenovo Group collectively contributes to the US Lenovo Pension Plan. *See* 2024 Annual Report, <https://doc.irasia.com/listco/hk/lenovo/annual/2024/ar2024.pdf> at 158 (“The Lenovo Pension Plan consists of a tax-qualified plan and a non-tax-qualified (non-qualified) plan. The qualified plan is funded by the Group contributions to an irrevocable trust fund, which is held for the sole benefit of participants and beneficiaries.”). Lenovo (United States) Inc. and Motorola

President of Lenovo Group Ltd., member of the Executive Committee and also President of the ISG.<sup>25</sup> Likewise, Sergio Buniac is the Senior Vice President of MBG, part of IDG, and President of Motorola Mobility LLC.<sup>26</sup> He is also a member of Lenovo’s Executive Team, and his bio on Lenovo’s website states: “Sergio Buniac was appointed Lenovo MBG Vice President and Motorola President in February 2018. In this role, Buniac leads all facets of Lenovo’s Mobile business — including R&D, product, sales, strategy, and supply chain — across global markets.” Similarly, his LinkedIn bio states: “As Motorola’s President, I lead all facets of *Lenovo’s* Mobile business, including R&D, product, sales, strategy, and supply chain, across global markets, excluding China.”<sup>27</sup>

11. As another example, Lenovo’s Chief Technology Officer, Dr. Tolga Kurtoglu, “lead[s] Lenovo’s Research team, spearhead[s] its innovation ecosystem, ensure[s] alignment between the Group’s technological vision and overall business objectives, and serve[s] as a member on the Lenovo Executive Committee, the leadership team at Lenovo.”<sup>28</sup> In yet another example, Luca Rossi is an Executive Vice President of Lenovo and President of IDG in which “[h]e oversees Lenovo’s *global* business in PCs, smartphones, tablets, workstations, software, and solutions in enterprise metaverse, cybersecurity, and smart collaboration.”<sup>29</sup> He also serves on the Lenovo Executive Committee.<sup>30</sup> Similarly, Matt Zielinski is an Executive Vice President

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Mobility LLC employees participate in the same Lenovo Savings Plan (401K). 2022 Annual report, <https://doc.irasia.com/listco/hk/lenovo/annual/2022/ar2022.pdf>, at 155.

<sup>25</sup> <https://www.lenovo.com/us/en/about/who-we-are/our-leadership/> (Ashley Gorakhpurwalla bio).

<sup>26</sup> <https://www.lenovo.com/us/en/about/who-we-are/our-leadership> (Sergio Buniac bio).

<sup>27</sup> <https://www.linkedin.com/in/sergio-buniac-388974123/> (emphasis added).

<sup>28</sup> <https://news.lenovo.com/pressroom/press-releases/tolga-kurtoglu-new-chief-technology-officer/>.

<sup>29</sup> <https://www.lenovo.com/us/en/about/who-we-are/our-leadership/> (Luca Rossi bio).

<sup>30</sup> *Id.*

of Lenovo Group Limited, and President of the International Sales Organization of Lenovo, “responsible for driving revenue and profit growth across all Lenovo businesses while reinforcing a customer-centric culture. He is also a member of Lenovo Executive Committee. He leads the ISO geographies, namely Asia Pacific, Japan, EMEA, Latin America and North America.”<sup>31</sup>

12. Upon information and belief, Lenovo reports U.S. sales of the Accused Instrumentalities as its own.<sup>32</sup> Lenovo also advertises that it manufactures most of its products in its own facilities, rather than through third parties. For example, on its website, Lenovo states: “Ranked #8 in the Gartner Supply Chain Top 25, we serve more than 180 markets and manufacture the majority of our products in our own facilities. This hybrid model helps us bring new innovations to market efficiently while having greater control over product development and global supply chain for advantages in quality, security, and time-to-market.”<sup>33</sup> On May 28, 2024, Lenovo posted a press release on its website that Gartner ranked it #10 on their list of Supply Chain Top 25 for 2024 report.<sup>34</sup> In the press release, Lenovo stated: “Today, Lenovo’s *global* hybrid manufacturing network includes 30+ manufacturing sites spanning 10 markets in the 180 markets Lenovo does business in, including Argentina, Brazil, China, Germany, Hungary, India, Japan, Mexico, *and the US*. This ensures the supply chain remains resilient and can adapt to any disruption.”<sup>35</sup>

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<sup>31</sup> <https://doc.irasia.com/listco/hk/lenovo/annual/2023/ar2023.pdf> at 158.

<sup>32</sup> <https://doc.irasia.com/listco/hk/lenovo/annual/2023/ar2023.pdf> at 196, 210, 225. This appears to include Lenovo’s sales of TP-Link access points.

<sup>33</sup> <https://www.lenovo.com/us/en/about/what-we-do/>.

<sup>34</sup> <https://news.lenovo.com/pressroom/press-releases/gartner-supply-chain-top-25-for-2024/>.

<sup>35</sup> *Id.* (emphasis added).

13. Lenovo holds itself out as the entity that sells, offers to sell, imports and uses the Accused Instrumentalities in the United States, including Texas, and as the entity that induces customers to use the Accused Instrumentalities in an infringing manner. In promotional materials, manuals, guides, terms of use, sales agreements, warranties or similar documentation, Lenovo regularly omits which specific company in the Lenovo Group is responsible for the documents or associated products. In a 2022 investor presentation entitled “The Lenovo Story,” Lenovo stated that “One Lenovo creates cross-selling synergies from IDG, ISG and SSG.”<sup>36</sup>

14. Lenovo relies heavily on its resellers and channel partners to conduct business.<sup>37</sup> Globally, Lenovo has approximately 80,000 partners for its Intelligent Devices Group and 20,000 partners for its Infrastructure Solutions Group.<sup>38</sup> Lenovo channel partners account for more than 80 percent of Lenovo’s sales.<sup>39</sup> To promote channel sales, Lenovo launched “Lenovo 360” in 2021, which is the company’s global channel framework for partners. “The framework gives partners easy access to Lenovo’s portfolio of infrastructure, intelligent devices, services and solutions. It also enables partners to sell with ease through marketing, sales enablement

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<sup>36</sup> [https://investor.lenovo.com/en/ir/corporate\\_deck.pdf](https://investor.lenovo.com/en/ir/corporate_deck.pdf) at page 8.

<sup>37</sup> <https://www.crn.com/news/data-center/bold-commitment-lenovo-s-channel-first-initiative-puts-partners-front-and-center>; 2023 Annual Report at 12 (“In marketing, we use a “Global Might Local Fight” approach to build Lenovo’s global brand equity while generating local influence and demand in key markets.”).

<sup>38</sup> <https://www.crn.com/news/channel-programs/lenovo-unveils-forthcoming-partner-program-lenovo-360-to-unite-pc-and-data-center-businesses>.

<sup>39</sup> <https://www.lenovopartnerhub.com/en-GB/web/lenovo-global-site/getting-started>; <https://www.crn.com/news/data-center/lenovo-partners-can-make-a-lot-of-money-with-us-on-ai-compute-and-storage>; *see also* <https://www.crn.com/news/data-center/bold-commitment-lenovo-s-channel-first-initiative-puts-partners-front-and-center>.



resources and connects partners with subject matter experts and other partners in the ecosystem.”<sup>40</sup> Resellers may serve as principals or agents in a transaction.<sup>41</sup>

15. Lenovo also utilizes a network of Lenovo Authorized Service Providers for warranty service support.<sup>42</sup> Lenovo advertises numerous benefits and advantages associated with purchasing from an authorized Lenovo reseller on its website, stating:

Purchasing from an authorized Lenovo Reseller, listed on this site, offers several advantages. Our authorized resellers have been verified by us and are committed to selling genuine products with proper warranty coverage. They have a direct partnership with Lenovo, ensuring access to the latest models, updates, and customer support. Buying from authorized resellers also provides peace of mind, knowing that you are purchasing from a trusted source.<sup>43</sup>

16. This Court has personal jurisdiction over Lenovo at least because Lenovo and its subsidiaries are part of the same corporate structure and distribution chain for the Accused Instrumentalities and engage in coordinated and concerted action to direct the Accused Instrumentalities throughout the United States, including Texas and this District. Additionally, Lenovo alone and through its U.S.-based subsidiaries and partners, places Accused Instrumentalities into the stream of commerce via established distribution channels knowing or understanding that such products would be sold and used in the United States, including in this District. Lenovo has derived substantial revenue from infringing acts in the United States, including from the sale and use of the Accused Instrumentalities. Additionally, Lenovo, through its employees, subsidiaries, and resellers and channel partners, regularly conducts and transacts business, including infringing acts described herein, in this District.

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<sup>40</sup> <https://www.crn.com/events/lenovo-investing-1-2-billion-in-ai-as-it-eyes-edge-growth-via-partners>.

<sup>41</sup> 2024 Annual Report, <https://doc.irasia.com/listco/hk/lenovo/annual/2024/ar2024.pdf>, at 186-87.

<sup>42</sup> <https://support.lenovo.com/us/en/lenovo-service-provider>.

<sup>43</sup> <https://www.lenovo.com/us/en/shopping-faq/#wpc-authorized-resellers-tab>.

### **JURISDICTION AND VENUE**

17. This is an action for patent infringement arising under the Patent Laws of the United States, Title 35 of the United States Code.

18. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a). Upon information and belief, venue is proper in this judicial district under 28 U.S.C. §§ 1391 and 1400(b).

19. This Court has personal jurisdiction over Lenovo under the laws of the State of Texas, due at least to its substantial business in Texas and in this judicial district, directly or through intermediaries, including: (i) at least a portion of the infringements alleged herein; and (ii) regularly doing or soliciting business, engaging in other persistent courses of conduct and/or deriving substantial revenue from goods and services provided to individuals in the State of Texas and in this District.

20. Courts in Texas have concluded that Lenovo is subject to personal jurisdiction in the State of Texas and found that plaintiffs sufficiently alleged that Lenovo “acts in concert with its wholly owned subsidiaries to deliver the accused products into the Texas market under a stream of commerce theory.” *Truesight Comm’ns LLC v. Lenovo Grp. Ltd.*, No. 2:24-cv-00031-JRG, Dkt. 56 at 4 (E.D. Tex. Dec. 12, 2024 (quoting *Eirog Innovations Ltd. v. Lenovo Grp. Ltd.*, No. 2:24-CV-00239-JRG, 2024 WL 4519763, at \*4 (E.D. Tex. Oct. 17, 2024)); *see also Universal Connectivity Techs. Inc. v. Lenovo Grp. Ltd.*, No. 2:23-CV-00449-JRG, 2024 WL 4519760, at \*3 (E.D. Tex. Oct. 17, 2024; *ACQIS LLC v. Lenovo Grp. Ltd.*, 572 F. Supp. 3d 291, 307 (W.D. Tex. 2021); *AX Wireless LLC v. Lenovo Grp. Ltd.*, No. 22-cv-00280-RWS-RSP, Dkt. 110 (E.D. Tex. Sept. 6, 2023). Courts have further found jurisdiction under Fed. R. Civ. P. 4(k)(2). *Truesight*, No. 2:24-cv-00031-JRG, Dkt. 56 at 4; *Eirog*, 2024 WL 4519763, at \*6–7; *Universal Connectivity Techs.*, 2024 WL 4519760, at \*5–6.

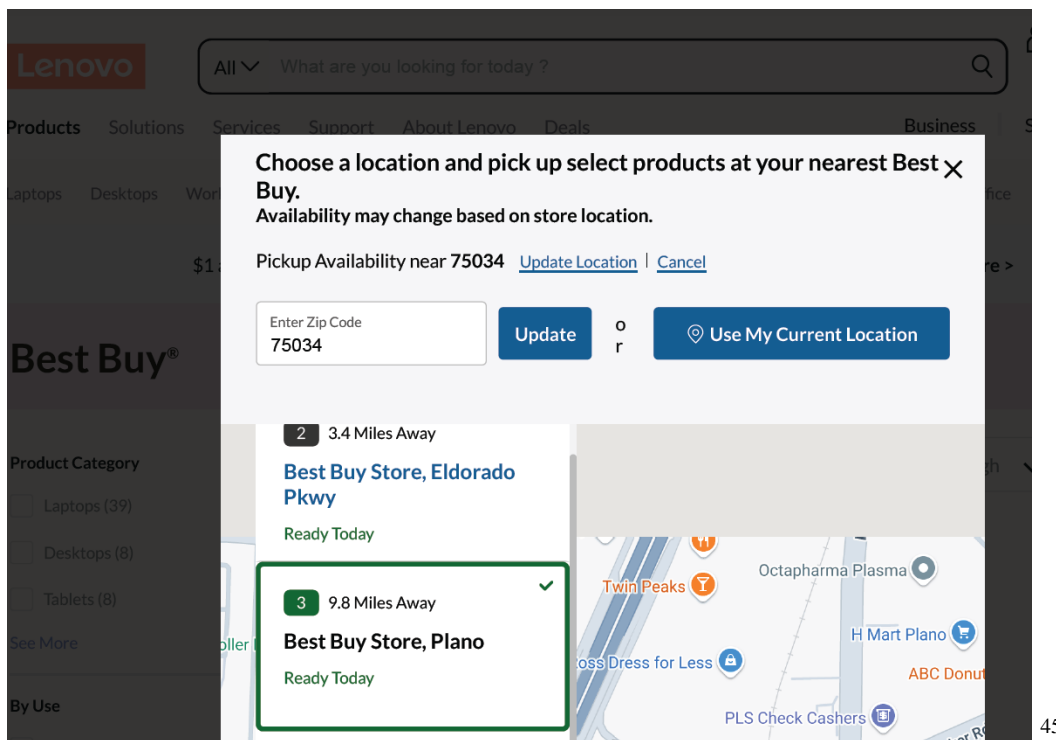
21. Lenovo induces its subsidiaries, affiliates, retail partners, and customers to make, use, sell, offer for sale, and/or import throughout the United States, including within this Judicial District, infringing products and placing such products into the stream of commerce via established distribution channels knowing or understanding that such products would be sold and used in the United States, including in the Eastern District of Texas. Lenovo also serves as an ecommerce platform for other brand partners, such as TP-Link and Logitech, among others.<sup>44</sup>

22. Additionally, Lenovo has authorized sellers and sales representatives that offer for sale and sell the infringing products throughout the State of Texas and to consumers throughout this District, including at the following locations in this District: Best Buy, 422 West Loop 281, Suite 100, Longview, Texas 75605; Costco Wholesale, 3650 West University Drive, McKinney, Texas 75071; Office Depot, 422 West Loop 281, Suite 300, Longview, Texas 75605; Target, 3092 North Eastman Road, Suite 100, Longview, Texas 75605; Wal-Mart, 1701 East End Boulevard North, Marshall, Texas 75670; Verizon, 500 E Loop 281, Longview, TX 75670; AT&T, 1712 E Grand Ave, Marshall, TX 75670; T-Mobile, 1806 E. End Blvd., N. Ste 100, Marshall, TX 75670.

23. For example, Lenovo sells and offers to sell the Accused Instrumentalities through its websites, Lenovo.com and Motorola.com, which may be accessed throughout the United States, the State of Texas, and this District, including through Lenovo's buy online pickup in store "BOPIS" partnership with Best Buy, where a customer can purchase Lenovo equipment through Lenovo's website and pick up the equipment at a local Best Buy store:

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<sup>44</sup> <https://news.lenovo.com/pressroom/press-releases/lenovo-adds-new-products-from-top-brands-on-lenovo-com-2/> ("TP-Link: Lenovo has teamed with TP-Link, a company globally-recognized for its computer network products, to provide an array of WiFi range extenders, smart security tech, and home automation devices.").



Upon information and belief, Lenovo is responsible for importing, making, marketing, distributing, offering for sale, and/or selling products and services, including those accused herein of infringement, in the United States (directly or through its wholly-owned subsidiaries or authorized resellers), including in this District. Lenovo places such infringing products into the stream of commerce via established distribution channels knowing or understanding that such products would be sold and used in the United States, including in the Eastern District of Texas. Lenovo, by itself and through its subsidiaries including Motorola, is also responsible for approving products and product literature concerning Motorola-branded Wi-Fi access points<sup>46</sup>

<sup>45</sup> <https://www.lenovo.com/us/en/d/bopis/tx-75231/>; *see also* <https://www.lenovo.com/us/en/shopping-faq/#wpc-pick-up-in-store-tab> (can also return items at Best Buy when BOPIS is used).

<sup>46</sup> [https://www.sec.gov/Archives/edgar/data/1467761/000165495420004635/zmtp\\_ex1019.htm](https://www.sec.gov/Archives/edgar/data/1467761/000165495420004635/zmtp_ex1019.htm).

and acquired a substantial amount of inventory from Minim in the 2023 timeframe that, upon information and belief, Lenovo sold in the United States<sup>47</sup>.

24. Lenovo routes business sales on its website through its network of national resellers, including companies like CDW<sup>48</sup>, which has an office in this District located at 5908 Headquarters Dr. Suite 400, Plano, TX 75024<sup>49</sup>.

25. Lenovo also advertises on its website that Pegasus Technology Solutions, LLC (“Pegasus”), located at 5550 Granite Pkwy Ste 100, Plano, Texas, United States, is an authorized reseller for business customers for both intelligent devices (authorized partner) and infrastructure solutions (gold partner).<sup>50</sup> Gold partners must have a minimum of \$3M annual revenue and 5 Lenovo certifications.<sup>51</sup> Pegasus also has a location in Frisco, TX.<sup>52</sup>

26. Similarly, Lenovo advertises Delcom Group, L.P. as an authorized reseller and IDG and ISG partner for businesses, which is located in this District at 2525b E Hwy 121 Ste 400, Lewisville, TX 75056.<sup>53</sup>

27. Lenovo deliberately works with local companies as part of its “Global Might Local Fight” marketing strategy “to build Lenovo’s global brand equity while generating local influence and demand in key markets.”<sup>54</sup>

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<sup>47</sup> <https://www.sec.gov/ix?doc=/Archives/edgar/data/1467761/000149315224003710/form8-k.htm>.

<sup>48</sup> <https://www.lenovo.com/us/en/landingpage/reseller-locator/>.

<sup>49</sup> <https://www.cdw.com/content/cdw/en/solutions/international/north-america-locations.html>

<sup>50</sup> <https://support.lenovo.com/us/en/lenovo-service-provider/>.

<sup>51</sup> [https://www.lenovo.com/content/dam/lenovo/dcg/north-america/en/non-solutions/others/brochures/lenovo-dc-program\\_faq\\_may-2018\\_us.pdf](https://www.lenovo.com/content/dam/lenovo/dcg/north-america/en/non-solutions/others/brochures/lenovo-dc-program_faq_may-2018_us.pdf).

<sup>52</sup> <https://www.pagasustechsolutions.com>.

<sup>53</sup> <https://support.lenovo.com/us/en/lenovo-service-provider/>; *see also* <http://www.delcomgroup.com>.

<sup>54</sup> 2023 Annual Report, <https://doc.irasia.com/listco/hk/lenovo/annual/2023/ar2023.pdf>, at page 12.

28. Lenovo provides detailed training courses for its resellers, which in nearly all cases are the same training courses it provides to its own employees.<sup>55</sup> In describing the Lenovo Certification Program, Lenovo states that it “confirms capability to represent Lenovo in specific areas.”<sup>56</sup> With respect to the training program, Lenovo states “The Lenovo Certified Data Center Sales Professional works as a Lenovo internal seller or business partner seller. This individual knows the Lenovo server, storage, and SDI portfolios. They can apply their knowledge and expertise and they can tell the Lenovo data center story. This individual also has knowledge of how to have a consultative business conversation and has led or assisted in closing at least one data center deal or opportunity from start to closure.”<sup>57</sup> Lenovo also provides a variety of incentives, resources and tools to its channel partners.<sup>58</sup>

29. Lenovo also identifies Authorized Service Providers on its website. According to Lenovo, Authorized Service Providers “are certified by Lenovo to deliver high-quality service and adhere to the company’s standards. They possess the expertise to handle various technical issues, whether it’s hardware-related or software-related. To find authorized service providers in your area, visit the Lenovo support website.”<sup>59</sup> Lenovo identifies Authorized Service Providers

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<sup>55</sup> <https://lenovopress.lenovo.com/sellertraining> (audience listed as employees and partners).

<sup>56</sup> <https://www.scribd.com/document/706848623/DCP316EM-TechnicalSales-Guide>; <https://www.lenovo.com/content/dam/lenovo/dcg/north-america/en/non-solutions/others/datasheets/Lenovo-Data-Center-Sales-Certification-Exam-Study-Guide-DCP-115C.pdf>.

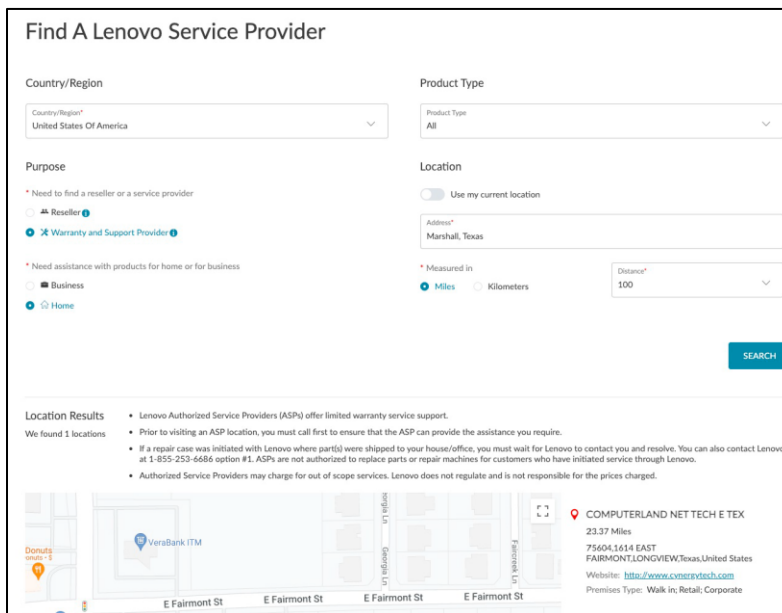
<sup>57</sup> <https://www.lenovo.com/content/dam/lenovo/dcg/north-america/en/non-solutions/others/datasheets/Lenovo-Data-Center-Sales-Certification-Exam-Study-Guide-DCP-115C.pdf> at 3.

<sup>58</sup> <https://news.lenovo.com/pressroom/press-releases/next-chapter-lenovo-360-accreditation-tiering-communities-tools-resources/>; <https://www.gochannelfirst.com/>; <https://www.lenovopartnerhub.com/documents/167360/29089810/na-US-Agreement-for-Resellers-Partner-Hub.pdf/7b70945f-14a7-d33b-159c-a2ea6f455049?t=1622135431887>; <https://www.lenovo.com/content/dam/lenovo/pcsd/north-america/en/lenovo-partner-network/presentations/lenovo-smb-channel-guide.pdf>.

<sup>59</sup> *Id.*

in this District, including Quality Hi-Tech LLC located at 550 N Central Expy. #3181, McKinney, TX 75070.<sup>60</sup>

30. Lenovo’s authorized sellers, sales representatives and authorized service providers (“Lenovo Agents”) that offer (including through demonstrations), sell and service Accused Instrumentalities through the State of Texas, including in this District, have fixed geographical locations. They are “regular” and “established” because they operate in a “steady, uniform, orderly, and methodical manner” and are sufficiently permanent. These locations are “of the defendant” because Lenovo has contractual rights with the Lenovo Agents in the United States.<sup>61</sup> Lenovo also ratifies these facilities through its advertising of them through its websites. See <https://support.lenovo.com/us/en/lenovo-service-provider>.



31. Upon information and belief, Lenovo has defined places and sets out the physical specifications for its exclusive and separate areas within the Lenovo’s Agents’ locations and

<sup>60</sup> *Id.*

<sup>61</sup> <https://www.lenovopartnerhub.com/documents/167360/29089810/na-US-Agreement-for-Resellers-Partner-Hub.pdf/7b70945f-14a7-d33b-159c-a2ea6f455049?t=1622135431887>.

retains control over their exclusiveness. The Lenovo Agents are Lenovo's agents for the purpose of conducting Lenovo's business in this District because Lenovo provides regular instructions directing the Lenovo Agents' performance of the repairing, refurbishing, warehousing, and packaging services that Lenovo offers to its customers.<sup>62</sup> Resellers are required to "provide the support necessary to maintain customer satisfaction and participate in customer satisfaction programs established by Lenovo," and "accurately present all Products and Services in accordance with the information Lenovo provides."<sup>63</sup> Additionally, resellers are required to "provide Product configuration, installation and post-installation support for the Products including serving as the primary contact for Product information, technical advice and operational advice."<sup>64</sup> Lenovo has the right to direct or control resellers actions. By entering into the resellers agreement, Lenovo consents to the reseller acting on Lenovo's behalf and the reseller consents to act on Lenovo's behalf.

32. Lenovo also has regular, physical presences of Lenovo employees in this District conducting Lenovo's business. Lenovo maintains a regular and established place of business at the Lenovo defined places and separate areas at the Lenovo Agents' locations by the regular, physical presence of its employees. Upon information and belief, Lenovo requires that certain

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<sup>62</sup> <https://www.lenovopartnerhub.com/documents/167360/29089810/na-US-Agreement-for-Resellers-Partner-Hub.pdf/7b70945f-14a7-d33b-159c-a2ea6f455049?t=1622135431887>; <https://www.lenovopartnerhub.com/documents/167360/29089810/na-MSP-T2-Reseller-Direct-Purchase-Attachment-US-5.13.2021.pdf/c2ee69ac-c209-918a-7e31-a49506374b60?t=1621600256892>.

<sup>63</sup> <https://www.lenovopartnerhub.com/documents/167360/29089810/na-MSP-T2-Reseller-Direct-Purchase-Attachment-US-5.13.2021.pdf/c2ee69ac-c209-918a-7e31-a49506374b60?t=1621600256892>.

<sup>64</sup> <https://www.lenovopartnerhub.com/documents/167360/29089810/na-US-Agreement-for-Resellers-Partner-Hub.pdf/7b70945f-14a7-d33b-159c-a2ea6f455049?t=1622135431887>.



employees be located in certain geographic areas including Texas, and store materials at their residence or in Texas for use in, among other things, performance of their jobs.

33. Lenovo provides “Hardware Maintenance Manuals” for the Accused Instrumentalities in the United States which bear a “Lenovo” copyright without specifying any particular Lenovo entity, and which are “delivered pursuant to a General Services Administration “GSA” contract. These manuals specify that they are “printed in China.” These English language manuals demonstrate Lenovo’s knowledge and intent for the Accused Products to be sold throughout the United States, including Texas.

34. As shown above, venue is proper in this District pursuant to 28 U.S.C. § 1400(b) because Defendant has regular and established physical places of business in this District and have committed acts of patent infringement in the District.

35. Venue is also proper in this District pursuant to 28 U.S.C. § 1391 because, among other things, Lenovo is not a resident in the United States, and thus may be sued in any judicial district pursuant to 28 U.S.C. § 1391(c)(3).

### **BACKGROUND**

36. Jerry D. Burchfiel is the inventor of U.S. Patent No. RE47,720 (“the ’720 patent”). A true and correct copy of the ’720 patent is attached as Exhibit 1.

37. The ’720 patent resulted from the pioneering efforts of Mr. Burchfiel (hereinafter “the Inventor”) in the area of spectrum management in wireless networking systems. These efforts resulted in the development of a method and apparatus for increasing the available spectrum in a wireless network by sharing existing allocated (and in-use) portions of the RF spectrum in a manner that will minimize the probability of interfering with existing legacy users in 2002. At the time of these pioneering efforts, there was increasing demand for spectrum-based services and devices to address decreasing wireless communications network bandwidth.

Moreover, managing interference levels was made particularly difficult by the greater density, mobility and variability of “next generation” (XG) radio frequency emitters. (*See* ’720 patent at 1:19-34.)

38. While the then-existing solutions for spectrum management to address increasing demand for spectrum-based services and devices sought to assign locally unoccupied portions of the RF spectrum to XG users, the FCC Spectrum Management Policy Task Force recommended that secondary users of a band are required to accept interference from primary users, and must cause no “harmful” interference to the primary users. The Task Force policy permitted secondary (e.g., unlicensed) users to radiate only enough power in an area of interest to raise the interference temperature in the band to a specified threshold  $T_0$  for the band, service, and locality, and would create an opportunity to “underlay” existing primary applications with low-power, low-impact opportunistic applications that operate below the threshold. (*See* ’720 patent at 1:35-53.)

39. However, the Spectrum Policy Task Force Report did not address how to build and configure networks and devices that comply with the proposed rules. Accordingly, the Inventor conceived of the inventions claimed in the ’720 patent as a way to describe tools, devices and applications XG users can build, configure and deploy in order to take advantage of the proposed spectrum policies. (*See* ’720 patent at 1:54-62.)

40. For example, the Inventor conceived of a node of a network communications system that could be configured to:

- (a) Continuously carry out real-time sensing and characterization of the local spectrum usage by (potentially interfering) narrowband and wideband emitters;

- (b) Dynamically and autonomously adapt (on a time scale of milliseconds) to the local spectrum environment by selecting and controlling the waveforms (power spectral density (PSD) and Media Access Control (MAC) protocols) that its network neighbors use when transmitting to this node;
- (c) Automatically carry out a closed loop power control algorithm with each neighbor to throttle back on unnecessarily high power levels, thereby enhancing Low Probability of Detection (LPD);
- (d) Apply transmission security (“TRANSEC”) parameters to the spread spectrum modulation process in order to enhance Low Probability of Intercept (LPI); and/or
- (e) Carry out packet forwarding (routing) in a way that balances aggregate network throughput against average end-to-end delay. (This results in real time traffic, e.g., voice, being sent with higher power, minimizing latency due to channel access delays at multiple hops, and bulk traffic being sent with lower power, minimizing network self-interference, maximizing spatial reuse of frequencies and enhancing LPI/LPD).

(See '720 patent at 2:12-38.)

41. The inventions of the '720 patent also provide a way to underlay new services on then-existing bandwidth allocations with minimal or no interference to, and from, existing legacy users, by underlaying spectrum-efficient megabit rate networking onto bands allocated for other purposes, while providing up to 30 times greater throughput than then-current spectrum management systems. (See '720 patent at 2:7-11.) For example, military networking could

underlay any narrowband-channelized spectrum where individual channels have less than 100% duty cycle, such as in commercial cellular, without interfering with existing legacy users of these bands. At the same time, the flexible hardware and software made possible by the inventions of the '720 patent will also operate in other frequencies without hardware modification when necessary, such as in overseas locations and in wartime. (*See id.* at 2:49-64.)

42. The inventions of the '720 patent address individual spectrum management devices and provide an integrated system concept for dynamic, adaptive, radio frequency spectrum assignment and use. The result is far greater spectrum efficiency, providing megabit/sec rate communications networks that can extend far beyond the capabilities of then-existing wireless networking systems and devices. (*See* '720 patent at 1:66-2:7.)

43. Moreover, the design of the highly advanced networking communications architecture described and claimed by the '720 patent combines dynamic spectrum management techniques with matching adaptive networking and full exploitation of multiple transceivers per communications node. The inventions of the '720 patent thus provide increased flexibility and scalability, and may be easily adapted for use with other forward-looking wireless communications systems and technologies. (*See* '720 patent at 2:39-48.)

44. The claims of the '720 patent do not merely recite the performance of some well-known business practice from the pre-Internet world along with the requirement to perform it on the Internet. Instead, the claims of the '720 patent recite inventive concepts that are deeply rooted in engineering technology, and overcome problems specifically arising out of how to design and develop tools, devices and applications that take advantage of the spectrum management policies proposed by the FCC Spectrum Management Policy Task Force. (*See* '720 patent at 1:54-62.)

45. In addition, as set forth, the claims of the '720 patent recite inventive concepts that improve the functioning spectrum management in wireless local area networking systems. The inventive concepts recited by the claims of the '720 patent are not merely routine or conventional use of wireless networking technology. Instead, the patented inventions disclosed and claimed in the '720 patent provide a new and novel solution to specific problems related to improving spectrum management in wireless networks in light of the rapidly increasing number and complexity of "next generation" (XG) radio frequency emitters in or around 2002. (*See* '720 patent at 1:19-34.)

46. And finally, the patented inventions disclosed and claimed in the '720 patent do not preempt all the ways of improving spectrum management in wireless networks, nor does the '720 patent preempt any other well-known or prior art technology.

47. Accordingly, the claims in the '720 patent recite a combination of elements sufficient to ensure that the claim in substance and in practice amounts to significantly more than a patent-ineligible abstract idea.

48. The Institute of Electrical and Electronics Engineers (IEEE) is a leading standards-development organization for the development of industrial standards (having developed over 900 active industry technical standards) in a broad range of disciplines, including electric power and energy, telecommunications, consumer electronics, biomedical technology and healthcare-information technology, information assurance, transportation, aerospace, and nanotechnology.

49. Today, IEEE is the world's largest association of technical professionals with more than 420,000 members in over 160 countries around the world. Its objectives are the

educational and technical advancement of electrical and electronic engineering, telecommunications, computer engineering, and allied disciplines.

50. The IEEE 802.11 standards, created by the IEEE, are a set of media access control (MAC) and physical layer (PHY) specifications for implementing wireless local area network (WLAN) computer communication in the 900 MHz and 2.4, 3.6, 5, and 60 GHz frequency bands.

51. The IEEE 802.11 standards are created and maintained by the IEEE LAN/MAN Standards Committee (IEEE 802). The base version of IEEE 802.11 was released in 1997 and has had subsequent amendments. The standard and amendments provide the basis for wireless network products using the Wi-Fi brand.

52. IEEE Std. 802.11-2016, commonly shortened to 802.11-2016, is a revision based on the IEEE 802.11-2012 wireless-networking standard, and further incorporates five amendments, including 802.11ac-2013 (commonly shortened to 802.11ac).

53. 802.11ac is an amendment to IEEE 802.11, published in December 2013, and builds on 802.11n. The goal of 802.11n was to improve network throughput over the two previous standards—802.11a and 802.11g—with a significant increase in the maximum net data rate from 54 Mbit/s to 600 Mbit/s (slightly higher gross bit rate, including, for example, error-correction codes, and slightly lower maximum throughput) with the use of four spatial streams at a channel width of 40 MHz.

54. Changes in 802.11ac compared to 802.11n include wider channels (80 or 160 MHz versus 40 MHz) in the 5 GHz band, more spatial streams (up to eight versus four), higher-order modulation (up to 256-QAM vs. 64-QAM), and the addition of Multi-user MIMO (MU-MIMO). While initial implementations supported 80 MHz channels, three spatial streams, and

256-QAM, in 80 MHz channels in the 5 GHz band, more recent devices support 160 MHz channels, four spatial streams, and MU-MIMO.

55. The 802.11ac standard has enabled increased efficiency, as evidenced by the fact that most high-end, Wi-Fi-enabled consumer electronics on the market are 802.11ac compliant. The majority of products adopting this technological advance are advertised as being compliant with the standard, and companies regularly list their product as compliant with this particular standard on trade group web sites (such as the Wi-Fi Alliance).

56. DL MU-MIMO is one of the advanced features specified in 802.11ac standard.

57. DL MU-MIMO is a required feature in the 802.11ax standard.

58. DL MU-MIMO is a required feature in the 802.11be standard.

**COUNT I – INFRINGEMENT OF U.S. PATENT NO. RE47,720**

59. The allegations set forth in the foregoing paragraphs 1 through 58 are incorporated into this First Claim for Relief.

60. On November 5, 2019, the '720 patent was duly and legally reissued by the United States Patent and Trademark Office under the title "Spectrum-Adaptive Networking."

61. USTA is the assignee and owner of the right, title and interest in and to the '720 patent, including the right to assert all causes of action arising under said patent and the right to any remedies for infringement of it.

62. The inventions claimed in the '720 patent relate to technologies for radio frequency spectrum management in a wireless local area network system. Such technologies are a required part of the very-high throughput ("VHT") beamforming protocols of the 802.11ac standard, subsequently incorporated into 802.11-2016. Accordingly, devices supporting the 802.11ac standard necessarily meet the claim limitations of the '720 patent.

63. Upon information and belief, Lenovo has and continues to directly infringe one or more claims of the '720 patent by using and causing to be used 802.11ac-compliant products (the "Accused Instrumentalities").

64. For example, Lenovo has used (including through internal testing), offers to sell and sells various 802.11ac-compliant access points (including backwards compatible) products, such as the TP-Link AX5400 Ceiling Mount Dual-Band Wi-Fi 6 Access Point<sup>65</sup>, TP-Link BE22000 Ceiling Mount Tri-Band Wi-Fi 7 Access Point<sup>66</sup>, TP-Link BE22000 Tri-Band Whole Home Mesh WiFi 7 System (1 Pack)<sup>67</sup>, TP-Link BE11000 Ceiling Mount Tri-Band Wi-Fi 7 Access Point<sup>68</sup>, TP-Link Archer A8 AC1900 Dual Band Gigabit WiFi Router<sup>69</sup>, TP-Link Archer AX10 AX1500 Smart Dual Band Wi-Fi 6 Router<sup>70</sup>, TP-Link EAP615-Wall Omada SDN AX1800 WiFi 6 in-Wall Access Point<sup>71</sup>, TP-Link AX1800 Indoor/Outdoor Dual-Band Wi-Fi 6 Access Point<sup>72</sup>, TP-Link Archer A54 AC1200 10/100 Mbps Dual Band WiFi Router<sup>73</sup>, TP-Link

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<sup>65</sup> [https://www.lenovo.com/us/lenovopro/en/p/accessories-and-software/wireless-and-networking/networking-dual-band/78244035#tech\\_specs](https://www.lenovo.com/us/lenovopro/en/p/accessories-and-software/wireless-and-networking/networking-dual-band/78244035#tech_specs).

<sup>66</sup> [https://www.lenovo.com/us/lenovopro/en/p/accessories-and-software/wireless-and-networking/networking-wireless-tri-band/78804832#tech\\_specs](https://www.lenovo.com/us/lenovopro/en/p/accessories-and-software/wireless-and-networking/networking-wireless-tri-band/78804832#tech_specs).

<sup>67</sup> <https://www.lenovo.com/us/lenovopro/en/p/accessories-and-software/wireless-and-networking/networking-wireless-tri-band/78804827>.

<sup>68</sup> <https://www.lenovo.com/us/lenovopro/en/p/accessories-and-software/wireless-and-networking/networking-wireless-tri-band/78804830>.

<sup>69</sup> [https://www.lenovo.com/us/lenovopro/en/p/accessories-and-software/wireless-and-networking/wireless-router/78157050#tech\\_specs](https://www.lenovo.com/us/lenovopro/en/p/accessories-and-software/wireless-and-networking/wireless-router/78157050#tech_specs).

<sup>70</sup> [https://www.lenovo.com/us/lenovopro/en/p/accessories-and-software/wireless-and-networking/wireless-router/78017534#tech\\_specs](https://www.lenovo.com/us/lenovopro/en/p/accessories-and-software/wireless-and-networking/wireless-router/78017534#tech_specs).

<sup>71</sup> <https://www.lenovo.com/us/lenovopro/en/p/accessories-and-software/wireless-and-networking/networking-dual-band/78157064>.

<sup>72</sup> <https://www.lenovo.com/us/lenovopro/en/p/accessories-and-software/wireless-and-networking/networking-dual-band/78244033>.

<sup>73</sup> <https://www.lenovo.com/us/lenovopro/en/p/accessories-and-software/wireless-and-networking/wireless-router/78157048>.



EAP225-Outdoor Omada SDN AC1200 Outdoor WiFi Access Point<sup>74</sup>, TP-Link AX3000 Ceiling Mount Dual-Band Wi-Fi 6 Access Point<sup>75</sup>, and TP-Link BE9300 Tri-Band Wi-Fi 7 Router<sup>76</sup>, among others. Lenovo, by itself and through its agents, including Motorola under its IDG, has also used (including through testing, internal business use, servicing and provisioning), offered for sale and/or sold Motorola-branded access points, including, but not limited to, Motorola B12, Motorola mb7220, mb7420, mb7621, mb8600, mb8611, mg7315, mg7540, mg7550, mg7700, mg8702, mg8725, mh7020, mh7021, mh7022, mh7023, mh7601, mh7603, ml2410, mr2600, mt7711, mt8733, Motorola Q11, Q14, Motorola R14, and Motorola SB3100, SB6121 Modems and/or Routers (collectively “Accused Access Points”).

65. Upon information and belief, one or more of the Accused Access Points support MU-MIMO.

66. Upon information and belief, one or more of the Accused Access Points support DL MU-MIMO.

67. Upon information and belief, one or more of the Accused Access Points support MU-MIMO beamforming.

68. Upon information and belief, one or more of the Accused Access Points support DL MU-MIMO beamforming.

69. Upon information and belief, one or more of the Accused Access Points support RTS and CTS.

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<sup>74</sup> <https://www.lenovo.com/us/lenovopro/en/p/accessories-and-software/wireless-and-networking/networking-dual-band/78015097>.

<sup>75</sup> [https://www.lenovo.com/us/lenovopro/en/p/accessories-and-software/wireless-and-networking/networking-dual-band/78244034#tech\\_specs](https://www.lenovo.com/us/lenovopro/en/p/accessories-and-software/wireless-and-networking/networking-dual-band/78244034#tech_specs).

<sup>76</sup> [https://www.lenovo.com/us/lenovopro/en/p/accessories-and-software/wireless-and-networking/wireless-router/78804828#tech\\_specs](https://www.lenovo.com/us/lenovopro/en/p/accessories-and-software/wireless-and-networking/wireless-router/78804828#tech_specs).

70. Upon information and belief, one or more of the Accused Access Points support the RTS and CTS procedures set forth in 802.11ac (including 802.11-2016 or 802.11ac second wave).

71. Upon information and belief, one or more of the Accused Access Points support VHT transmit.

72. Upon information and belief, one or more of the Accused Access Points support the VHT transmit specification set forth in 802.11ac (including 802.11-2016 or 802.11ac second wave)

73. Upon information and belief, one or more of the Accused Access Points support PHY transmit.

74. Upon information and belief, one or more of the Accused Access Points support the PHY transmit procedure set forth in 802.11ac (including 802.11-2016 or 802.11ac second wave).

75. Upon information and belief, one or more of the Accused Access Points support beamforming and use of Beamforming Feedback matrices.

76. Upon information and belief, one or more of the Accused Access Points support beamforming and use of Compressed Beamforming Feedback matrices.

77. Upon information and belief, one or more of the Accused Access Points support the VHT sounding protocol.

78. Upon information and belief, one or more of the Accused Access Points support the use of VHT Compressed Beamforming Report fields.

79. Upon information and belief, Lenovo has developed, tested, manufactured and used one or more 802.11ac compliant stations in the United States.

80. For example, Defendant makes and/or sells, and uses (through testing, internal use, servicing, and provisioning) at least the following products that qualify as Accused Instrumentalities: the Lenovo Tab P12/P12 Pro, IdeaPad Y700, IdeaPad 5G, and associated hardware and/or software.<sup>77</sup> Upon information and belief, Lenovo has also developed, tested, manufactured and used 802.11ac compliant (including backwards compatible) stations including, but not limited to: Motorola moto E7, moto E7 plus, edge+, edge 5G UW, moto g 5G, moto g 5G 2023, moto g PLAY, moto g power 5G, moto g pure, moto g stylus, moto g stylus 5G, razr, razr+, razr 2023, Edge 30, Edge 40 and ThinkPhone Smartphones, along with associated hardware and/or software, and related 802.11ac-compliant services (collectively the “Accused Stations”<sup>78</sup>).

81. Upon information and belief, one or more of the Accused Stations support MU-MIMO.

82. Upon information and belief, one or more of the Accused Stations support DL MU-MIMO.

83. Upon information and belief, one or more of the Accused Stations support MU-MIMO beamforming.

84. Upon information and belief, one or more of the Accused Stations support DL MU-MIMO beamforming.

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<sup>77</sup> See, e.g., [https://www.lenovo.com/us/en/p/tablets/android-tablets/lenovo-tab-series/lenovo-tab-p12/len10310018#tech\\_specs](https://www.lenovo.com/us/en/p/tablets/android-tablets/lenovo-tab-series/lenovo-tab-p12/len10310018#tech_specs); [https://psref.lenovo.com/syspool/Sys/PDF/IdeaPad/IdeaPad\\_5G\\_14Q8X05/IdeaPad\\_5G\\_14Q8X05\\_Spec.pdf](https://psref.lenovo.com/syspool/Sys/PDF/IdeaPad/IdeaPad_5G_14Q8X05/IdeaPad_5G_14Q8X05_Spec.pdf).

<sup>78</sup> This includes any Lenovo-branded smartphones that are compliant with 802.11ac or later backwards compatible versions of the 802.11 standard that are configured to support DL MU-MIMO which had that functionality tested in the United States by Lenovo or any of its subsidiaries.

85. Upon information and belief, one or more of the Accused Stations support RTS and CTS.

86. Upon information and belief, one or more of the Accused Stations support the RTS and CTS procedures set forth in 802.11ac (including 802.11-2016 or 802.11ac second wave).

87. Upon information and belief, one or more of the Accused Stations support VHT transmit.

88. Upon information and belief, one or more of the Accused Stations support the VHT transmit specification set forth in 802.11ac (including 802.11-2016 or 802.11ac second wave)

89. Upon information and belief, one or more of the Accused Stations support PHY transmit.

90. Upon information and belief, one or more of the Accused Stations support the PHY transmit procedure set forth in 802.11ac (including 802.11-2016 or 802.11ac second wave).

91. Upon information and belief, one or more of the Accused Stations are configured to transmit Beamforming Feedback matrices.

92. Upon information and belief, one or more of the Accused Stations are configured to transmit Compressed Beamforming Feedback matrices.

93. Upon information and belief, one or more of the Accused Stations support the VHT sounding protocol.

94. Upon information and belief, one or more of the Accused Stations support the use of VHT Compressed Beamforming Report fields.

95. Lenovo sells compatible WiFi modules for the Accused Instrumentalities via its Parts Lookup website (<https://support.lenovo.com/us/en/parts-lookup>). Upon information and belief, Lenovo tests the WiFi capabilities of the Accused Instrumentalities and performs the claimed methods to ensure compatibility and functionality or has caused others to do the same.

96. Upon information and belief, the Accused Instrumentalities perform a method for managing interference in a radio communications network, comprising the steps of: receiving at a first node in the radio communications network an instruction transmitted from a second node in the radio communications network to avoid using a plurality of frequencies to transmit to the second node; filtering a transmission signal to remove power from the transmission signal at each frequency in the plurality of frequencies to be avoided; transmitting the filtered transmission signal to the second node; separately from the receipt of the instruction, receiving a particular signal at the first node that is transmitted from the second node; generating a feedback based on a received power and one or more frequencies via which the particular signal is received; compressing the feedback; and transmitting the compressed feedback from the first node to the second node, for use by the second node in determining a transmit power with which the second node transmits to the first node via at least one antenna of a plurality of antennas, while simultaneously transmitting to one or more other nodes; wherein the filtered transmission signal is transmitted to the second node using an 802.11-based orthogonal frequency-division multiplexing (OFDM) protocol; wherein an update of the compressed feedback is repeatedly generated, compressed, and transmitted at time periods of less than one second; so that the transmit power is repeatedly updated based thereupon at time periods of less than one second.

97. Exemplary infringement analysis showing infringement of claims 53 and 95 of the '720 patent is set forth in Exhibit 2. This infringement analysis is necessarily preliminary, as

it is provided in advance of any discovery provided by Lenovo with respect to the '720 patent. USTA reserves all rights to amend, supplement and modify this preliminary infringement analysis. Nothing in the attached chart should be construed as any express or implied contention or admission regarding the construction of any term or phrase of the claims of the '720 patent.

98. The Accused Instrumentalities and their use infringed and continue to infringe at least claims 53 and 95 of the '720 patent during the pendency of the '720 patent.

99. On information and belief, the Accused Instrumentalities are used, marketed, provided to, and/or used by or for each of Defendants' partners, clients, customers, and end users across the country and in this District.

100. USTA provided notice of the '720 patent to Lenovo in a letter to John Stanley, General Counsel for Lenovo, dated November 9, 2022. The letter included a claim chart for claim 53 of the '720 patent. As indicated by correspondence acknowledging receipt of the notice letter, Lenovo admits to having received notice of the '720 patent at least as early as November 23, 2022.

101. Lenovo has knowingly and intentionally induced, and continues to induce, infringement of one or more claims of the '720 patent in violation of 35 U.S.C. § 271(b). At least as of November 23, 2022, Lenovo had knowledge of the '720 patent and the infringing nature of its products through, for example, the accompanying claim chart for claim 53. Despite this knowledge of the '720 patent, Lenovo continued, and continues, to actively encourage and instruct its subsidiaries, partners, customers and end users (for example, through user manuals and online instruction materials on its website) to use the Accused Instrumentalities in ways that directly infringe the '720 patent. Lenovo provides these instructions, user manuals, and other materials knowing and intending (or with willful blindness to the fact) that its subsidiaries,

partners, customers and end users will commit these infringing acts. Lenovo also continues to make, use, offer for sale, sell, and/or import the Accused Instrumentalities, despite its knowledge of the '720 patent, thereby specifically intending for and inducing its customers to infringe the '720 patent through the normal and customary use of the Accused Instrumentalities. This is further evidenced by the fact that DL-MIMO is a required feature for 802.11ax and 802.11be compliant devices.

102. USTA has been harmed by Lenovo's infringing activities.

### **JURY DEMAND**

Pursuant to Rule 38 of the Federal Rules of Civil Procedure, USTA demands a trial by jury on all issues triable as such.

### **PRAYER FOR RELIEF**

WHEREFORE, Plaintiff USTA demands judgment for itself and against Lenovo as follows:

- A. An adjudication that Lenovo has infringed the '720 patent;
- B. An award of damages to be paid by Lenovo adequate to compensate USTA for Lenovo's past infringement of the '720 patent, and any continuing or future infringement through the date such judgment is entered, including interest, costs, expenses and an accounting of all infringing acts including, but not limited to, those acts not presented at trial;
- C. A declaration that this case is exceptional under 35 U.S.C. § 285, and an award of USTA's reasonable attorneys' fees; and
- D. An award to USTA of such further relief at law or in equity as the Court deems just and proper.

Dated: December 20, 2024

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