

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

STC.UNM,

Plaintiff,

v.

TP-LINK TECHNOLOGIES CO., LTD.,

Defendant.

CIVIL ACTION NO. 6:19-cv-262

JURY TRIAL DEMANDED

**PLAINTIFF'S ORIGINAL COMPLAINT FOR
PATENT INFRINGEMENT AND JURY DEMAND**

Plaintiff STC.UNM files this Original Complaint for Patent Infringement and Jury Demand against Defendant TP-Link Technologies Co., Ltd. Plaintiff alleges infringement of United States Patent Numbers 8,249,204 (“204 Patent”), 8,565,326 (“326 Patent”), and 8,265,096 (“096 Patent”) as follows:

I. PARTIES

1. Plaintiff STC.UNM is a New Mexico nonprofit research park corporation formed, owned, and controlled entirely by the Board of Regents of the University of New Mexico (“UNM”).

2. UNM is a public educational institution based in Albuquerque, New Mexico and serves as the State of New Mexico’s flagship research institution. UNM serves over 25,000 students and comprises over 1,700 faculty members across its main campus in Albuquerque and branch campuses in Gallup, Los Alamos, Rio Rancho, Taos, and Los Lunas, New Mexico.

3. Over the past 20 years, UNM researchers have disclosed over 1,700 new inventions resulting in the issue of over 500 United States patents.

4. STC.UNM’s mission includes nurturing inventions researched and developed at UNM, promoting technological collaboration between UNM and other universities and research institutes, and thereby catalyzing economic development in the State of New Mexico.

5. STC.UNM furthers its mission by licensing and, if necessary, enforcing its inventions and reinvesting proceeds into continued research and development at and technological collaboration with UNM, for the benefit of and for the State of New Mexico and the United States.

6. STC.UNM's is located at the UNM Lobo Rainforest Building, 101 Broadway Boulevard, Suite 1100, Albuquerque, New Mexico 87102.

7. Plaintiff STC.UNM, UNM, and the Board of Regents of UNM are arms of the State of New Mexico and enjoy sovereign immunity under common law, statutes, and constitutions of the United States and the State of New Mexico including, but not limited to, the Eleventh Amendment of the United States Constitution and Article 12 of the New Mexico Constitution. *See Regents of University of New Mexico v. Knight*, 321 F.3d 1111 (Fed. Cir. 2003); *STC.UNM v. Quest Diagnostics Inc.*, CIV 17-1123 MV/KBM, 2019 WL 1091390, at *1 (D.N.M. Mar. 8, 2019).

8. By filing this lawsuit or prosecuting this action, Plaintiff STC.UNM does not waive, either expressly or implicitly, its sovereign immunity, the sovereign immunity of UNM or its Board of Regents, or the sovereign immunity enjoyed by any arm of the State of New Mexico under the laws of the United States or the State of New Mexico, to any *inter partes* review, *ex parte* reexamination, or other post-grant proceeding at the United States Patent and Trademark Office or its Patent Trial and Appeal Board, to any other administrative actions or proceedings whatsoever, to any noncompulsory counterclaims, or to any other federal or state proceedings whatsoever, whether initiated by Defendant or an entity other than Defendant.

9. Defendant TP-Link Technologies Co., Ltd. is a Chinese company with an address at South Building, No. 5 Keyuan Road, Central Zone, Science & Technology Park, Nanshan, Shenzhen, People's Republic of China, Postcode: 518057.

II. JURISDICTION

10. This action arises under the Patent Laws of the United States, 35 U.S.C. § 1, *et seq.*,

including 35 U.S.C. §§ 271, 281, 283, 284, and 285. This is a patent infringement lawsuit over which this Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

11. This United States District Court for the Western District of Texas has general and specific personal jurisdiction over Defendant because Defendant is present in and transacts and conducts business in and with residents of this District and the State of Texas.

12. STC.UNM's causes of action arise, at least in part, from Defendant's contacts with and activities in this District and the State of Texas.

13. Defendant has committed acts of infringing the '204 Patent, the '096 Patent, and the '326 Patent within this District and the State of Texas by making, using, selling, offering for sale, and/or importing in or into this District and elsewhere in the State of Texas products made by practicing the claimed method of the '204 Patent, the '096 Patent, and the '326 Patent. Defendant, directly and through intermediaries, makes, uses, sells, offers for sale, ships, distributes, advertises, promotes, and/or otherwise commercializes such infringing products in this District and the State of Texas. Defendant regularly conducts and solicits business in, engages in other persistent courses of conduct in, and/or derives substantial revenue from goods and services provided to residents of this District and the State of Texas.

III. VENUE

14. Venue is proper for Defendant in this District because venue in a patent infringement action against a foreign defendant is proper in any judicial district. *Brunette Mach. Works, Ltd. v. Kochum Indus., Inc.*, 406 U.S. 706, 711-714 (1972), cited by *TC Heartland LLC v. Kraft Foods Grp. Brands LLC*, 137 S. Ct. 1514, 1520 n.2 (2017).

15. STC.UNM does not waive its sovereign immunity as to any venue, including district courts and administrative tribunals, other than this Court, namely the United States District Court for the Western District of Texas, Waco Division.

IV. UNITED STATES PATENT NUMBER 8,249,204

16. United States Patent Number 8,249,204 is titled “Apparatus and method for channel state information feedback.” The ’204 Patent issued from United States Patent Application Number 12/339,000, which was filed on December 18, 2008 and claims priority to United States Provisional Patent Application Number 61/079,980, which was filed on July 11, 2008. The ’204 Patent was issued on August 21, 2012. A true and correct copy of the ’204 Patent is attached as Exhibit A.

17. The ’204 Patent claims patent-eligible subject matter and is valid and enforceable.

18. The ’204 Patent’s named inventors are Wen-Rong Wu, Tzu-Han Hsu, Jen-Yuan Hsu, and Pang-An Ting.

19. The ’204 Patent’s original patentee was the Industrial Technology Research Institute (“ITRI”), which acquired exclusive ownership of the patented invention by written assignments from Wen-Rong Wu, Tzu-Han Hsu, Jen-Yuan Hsu, and Pang-An Ting, recorded in the U.S. Patent & Trademark Office on or about February 26, 2009.

20. Thereafter, ITRI conveyed to Sino Matrix Technology, Inc. (“SMT”) all rights, title, and interest in and to the ’204 Patent, including the right to sue and recover for past infringements, by written assignment recorded in the U.S. Patent & Trademark Office (“USPTO”) on or about March 14, 2018.

21. Thereafter, SMT conveyed to Plaintiff all rights, title, and interest in and to the ’204 Patent, including the right to sue and recover for past infringements, by written assignment recorded in the USPTO on or about September 11, 2018.

22. Defendant is not licensed to the ’204 Patent, either expressly or implicitly, nor does it enjoy or benefit from any rights in or to the ’204 Patent whatsoever.

V. UNITED STATES PATENT NUMBER 8,265,096

23. United States Patent Number 8,265,096 is titled “Method for Constructing Frame

Structures.” The ’096 Patent issued from United States Patent Application Number 12/168,855, which was filed on July 7, 2008 and claims priority to United States Provisional Patent Application Number 60/929,798, which was filed on July 12, 2007, and United States Provisional Patent Application Number 60/973,157, which was filed on September 17, 2007. The ’096 Patent issued on September 11, 2012. A true and correct copy of the ’096 Patent is attached as Exhibit B.

24. The ’096 Patent claims patent-eligible subject matter and is valid and enforceable.

25. The ’096 Patent’s named inventors are Yan-Xiu Zheng, Ren-Jr Chen, Chang-Lung Hsiao, and Pang-An Ting.

26. The ’096 Patent’s original patentee was ITRI, which acquired exclusive ownership of the patented invention by written assignments from Yan-Xiu Zheng, Ren-Jr Chen, Chang-Lung Hsiao, and Pang-An Ting, recorded in the U.S. Patent & Trademark Office on or about April 16, 2009.

27. Thereafter, ITRI conveyed to SMT all rights, title, and interest in and to the ’096 Patent, including the right to sue and recover for past infringements, by written assignment recorded in the USPTO on or about March 14, 2018.

28. Thereafter, SMT conveyed to Plaintiff all rights, title, and interest in and to the ’096 Patent, including the right to sue and recover for past infringements, by written assignment recorded in the USPTO on or about September 11, 2018.

29. Defendant is not licensed to the ’096 Patent, either expressly or implicitly, nor does it enjoy or benefit from any rights in or to the ’096 Patent whatsoever.

VI. UNITED STATES PATENT NUMBER 8,565,326

30. United States Patent Number 8,565,326 is titled “System and Method for Bit Allocation and Interleaving.” The ’326 Patent issued from United States Patent Application Number 12/425,004, which was filed on April 16, 2009 and claims priority to United States Provisional

Patent Application Number 61/079,104, which was filed on July 8, 2008. The '326 Patent issued on October 22, 2013. A true and correct copy of the '326 Patent is attached as Exhibit C.

31. The '326 Patent claims patent-eligible subject matter and is valid and enforceable.

32. The '326 Patent's named inventors are Chien-Yu Kao, Jen-Yuan Hsu, Pang-An Ting, and Chia-Lung Tsai.

33. The '326 Patent's original patentee was ITRI, which acquired exclusive ownership of the patented invention by written assignments from Chien-Yu Kao, Jen-Yuan Hsu, Pang-An Ting, and Chia-Lung Tsai, recorded in the U.S. Patent & Trademark Office on or about April 16, 2009.

34. Thereafter, ITRI conveyed to SMT all rights, title, and interest in and to the '326 Patent, including the right to sue and recover for past infringements, by written assignment recorded in the USPTO on or about March 14, 2018.

35. Thereafter, SMT conveyed to Plaintiff all rights, title, and interest in and to the '326 Patent, including the right to sue and recover for past infringements, by written assignment recorded in the USPTO on or about September 12, 2018.

36. Defendant is not licensed to the '326 Patent, either expressly or implicitly, nor does it enjoy or benefit from any rights in or to the '326 Patent whatsoever.

VII. THE ACCUSED INSTRUMENTALITIES

37. Defendant designs, manufactures, imports, uses, sells, offers for sale, and markets communications equipment, networking devices, wireless receivers, and wireless routers, including the following "Accused Instrumentalities": Archer T1U, Archer T4UH, Archer T4U, Archer T2UH, Archer T2U, Deco M9, and Deco M5.

38. Defendant's Accused Instrumentalities are adapted to operate in and with wireless telecommunications networks that at least comply with the requirements of the IEEE 802.11ac wireless networking standard (referred to as "Wireless Telecommunications Networks").

**VIII. DIRECT, INDUCED, AND CONTRIBUTORY INFRINGEMENT
OF THE '204 PATENT**

39. Defendant's Accused Instrumentalities capable of operation on a Wireless Telecommunications Network comprise mobile stations that communicate with base stations via communication channels. Channel state information or "CSI" can be provided from a mobile station to base station. The mobile station is configured to estimate CSI by calculating responses for each communication channel and selecting channel taps from each calculated channel response. It can also compress the estimated CSI and send it as feedback to the base station. An exemplary chart illustrating this and how at least one claim of the '204 Patent covers an Accused Instrumentality is attached as Exhibit D.

40. Defendant has and continues to directly infringe the '204 Patent, literally and/or under the doctrine of equivalents, by making, using, selling, offering for sale, and/or importing in or into the United States one or more apparatuses that embody and practice at least claims 1, 11, and/or 12 of the '204 Patent in violation of 35 U.S.C. § 271(a), including but not limited to Defendant's Accused Instrumentalities capable of operation on a Wireless Telecommunications Network.

41. Defendant likewise has, with knowledge of the '204 Patent, and without authority, actively induced and continues to actively induce infringement of at least claims 1, 11, and/or 12 of the '204 Patent under 35 U.S.C. § 271(b), by intentionally inducing the infringing use, offer for sale, and/or sale of the Accused Instrumentalities by and with Wireless Telecommunication Networks and their operators and end-users. Each Accused Instrumentality is intended for use as a mobile station that communicates with base stations via communication channels and employ the patented provision of CSI from a mobile station to base station, configuration of the mobile station to estimate CSI by calculating responses for each communication channel and selecting channel taps from each calculated channel response, compression of the estimated CSI, and feedback to the base station. The Accused Instrumentalities are designed to be used by and with Wireless

Telecommunications Networks and their operators in an infringing manner that practices the '204 Patent. Similarly, the Accused Instrumentalities are configured to be used by end-users of the Wireless Telecommunications Networks in an infringing manner that practices the '204 Patent.

42. Defendant actively induces Wireless Telecommunications Network operators and end-users to practice the '204 Patent, without authority, by, *inter alia*, designing and introducing into the stream of commerce the Accused Instrumentalities, which are pre-configured to employ the patented provision of CSI from a mobile station to base station, configuration of the mobile station to estimate CSI by calculating responses for each communication channel and selecting channel taps from each calculated channel response, compression of the estimated CSI, and feedback to the base station. Defendant encourages infringing use of the Accused Instrumentalities by the Wireless Telecommunications Network operators and end-users by, for example, publishing manuals and promotional literature describing and instructing in the operation of the Accused Instrumentalities in an infringing manner. At the encouragement by and direction of Defendant, the Wireless Telecommunications Network operators sell and offer for sale Accused Instrumentalities to end-users to be used in an infringing manner. Such conduct results in induced infringements of at least claims 1, 11, and/or 12 of the '204 Patent when the Accused Instrumentalities are used for their intended purpose.

43. Defendant likewise is liable for contributory infringement. Defendant, with knowledge of the '204 Patent, and without authority, has offered to sell, sold, and/or imported into the United States the Accused Instrumentalities for use in practicing the patented apparatus and methods embodied in at least claims 1, 11, and/or 12, which use constitutes a material part of the claimed invention. Defendant offered to sell, sold, and/or imported into the United States the Accused Instrumentalities knowing that each is especially made or adapted for use in infringing the '204 Patent, and that each is not a staple article or commodity of commerce suitable for substantial

noninfringing use as packaged, advertised, and/or sold because the Accused Instrumentalities are pre-configured by Defendant to employ the patented provision of CSI from a mobile station to base station, configuration of the mobile station to estimate CSI by calculating responses for each communication channel and selecting channel taps from each calculated channel response, compression of the estimated CSI, and feedback to the base station.

44. Defendant's direct, indirect, and contributory infringement of the '204 Patent has caused, and will continue to cause, substantial and irreparable damage to Plaintiff. Plaintiff is, therefore, entitled to an award of damages adequate to compensate for Defendant's infringement of the '204 Patent, but not less than a reasonable royalty, together with pre- and post-judgment interest and costs as fixed by the Court under 35 U.S.C. § 284.

**IX. DIRECT, INDUCED, AND CONTRIBUTORY INFRINGEMENT
OF THE '096 PATENT**

45. Defendant's Accused Instrumentalities capable of operation on a Wireless Telecommunications Network employ the patented frame structure for data transmission in which legacy communication format and very high throughput communication format are combined into a unitary frame structure. An exemplary chart illustrating this and how at least one claim of the '096 Patent covers an Accused Instrumentality is attached as Exhibit E.

46. Defendant has and continues to directly infringe the '096 Patent, literally and/or under the doctrine of equivalents, by making, using, selling, offering for sale, and/or importing in or into the United States one or more apparatuses that embody and practice at least claim 8 of the '096 Patent in violation of 35 U.S.C. § 271(a), including but not limited to Defendant's Accused Instrumentalities capable of operation on a Wireless Telecommunications Network.

47. Defendant likewise, with knowledge of the '096 Patent, and without authority, has actively induced and continues to actively induce infringement of at least claim 8 of the '096 Patent under 35 U.S.C. § 271(b), by intentionally inducing the infringing use, offer for sale, and/or sale of

the Accused Instrumentalities by and with Wireless Telecommunication Networks and their operators and end-users. Each Accused Instrumentality employs the patented frame structure for data transmission in either the legacy format or the VHT format within a single frame. The Accused Instrumentalities are designed to be used by and with Wireless Telecommunications Networks and their operators in an infringing manner that practices the '096 Patent. Similarly, the Accused Instrumentalities are configured to be used by end-users of the Wireless Telecommunications Networks in an infringing manner that practices the '096 Patent.

48. Defendant actively induces Wireless Telecommunications Network operators and end-users to practice the '096 Patent, without authority, by, *inter alia*, designing and introducing into the stream of commerce the Accused Instrumentalities, which employ the patented frame structure for data transmission. Defendant encourages infringing use of the Accused Instrumentalities by the Wireless Telecommunications Network operators and end-users by, for example, publishing manuals and promotional literature describing and instructing in the operation of the Accused Instrumentalities in an infringing manner. At the encouragement by and direction of Defendant, the Wireless Telecommunications Network operators sell and offer for sale Accused Instrumentalities to end-users to be used in an infringing manner. Such conduct results in induced infringements of at least claim 8 of the '096 Patent when the Accused Instrumentalities are used for their intended purpose.

49. Defendant likewise is liable for contributory infringement. Defendant, with knowledge of the '096 Patent, and without authority, has offered to sell, sold, and/or imported into the United States the Accused Instrumentalities for use in practicing the patented apparatus and methods embodied in at least claim 8, which use constitutes a material part of the claimed invention. Defendant offered to sell, sold, and/or imported into the United States the Accused Instrumentalities knowing that each is especially made or adapted for use in infringing the '096

Patent, and that each is not a staple article or commodity of commerce suitable for substantial noninfringing use as packaged, advertised, and/or sold because the Accused Instrumentalities are pre-configured by Defendant to employ the patented frame structure for data transmission.

50. Defendant's direct, indirect, and contributory infringement of the '096 Patent has caused, and will continue to cause, substantial and irreparable damage to Plaintiff. Plaintiff is, therefore, entitled to an award of damages adequate to compensate for Defendant's infringement of the '096 Patent, but not less than a reasonable royalty, together with pre- and post-judgment interest and costs as fixed by the Court under 35 U.S.C. § 284.

**X. DIRECT, INDUCED, AND CONTRIBUTORY INFRINGEMENT
OF THE '326 PATENT**

51. Defendant's Accused Instrumentalities capable of operation on a Wireless Telecommunications Network employ the patented data transmission method claimed by the '326 Patent in which the transmission of data of variable length is circularly shifted to improve the speed of communications, where the shift is related to the number of space time streams and the modulation order. An exemplary chart illustrating this and how at least one claim of the '326 Patent covers an Accused Instrumentality is attached as Exhibit F.

52. Defendant has and continues to directly infringe the '326 Patent, literally and/or under the doctrine of equivalents, by making, using, selling, offering for sale, and/or importing in or into the United States one or more apparatuses that embody and practice at least claim 1 of the '326 Patent in violation of 35 U.S.C. § 271(a), including but not limited to Defendant's Accused Instrumentalities capable of operation on a Wireless Telecommunications Network.

53. Defendant likewise, with knowledge of the '326 Patent, and without authority, has actively induced and continues to actively induce infringement of at least claim 1 of the '326 Patent under 35 U.S.C. § 271(b), by intentionally inducing the infringing use, offer for sale, and/or sale of the Accused Instrumentalities by and with Wireless Telecommunication Networks and their

operators and end-users. Each Accused Instrumentality employs the patented data transmission method where the transmission of data of variable length is circularly shifted depending on the number of space time streams and the modulation order. The Accused Instrumentalities are designed to be used by and with Wireless Telecommunications Networks and their operators in an infringing manner that practices the '326 Patent. Similarly, the Accused Instrumentalities are configured to be used by end-users of the Wireless Telecommunications Networks in an infringing manner that practices the '326 Patent.

54. Defendant actively induces Wireless Telecommunications Network operators and end-users to practice the '326 Patent, without authority, by, *inter alia*, designing and introducing into the stream of commerce the Accused Instrumentalities, which employ the patented data transmission method. Defendant encourages infringing use of the Accused Instrumentalities by the Wireless Telecommunications Network operators and end-users by, for example, publishing manuals and promotional literature describing and instructing in the operation of the Accused Instrumentalities in an infringing manner. At the encouragement by and direction of Defendant, the Wireless Telecommunications Network operators sell and offer for sale Accused Instrumentalities to end-users to be used in an infringing manner. Such conduct results in induced infringements of at least claim 1 of the '326 Patent when the Accused Instrumentalities are used for their intended purpose.

55. Defendant likewise is liable for contributory infringement. Defendant, with knowledge of the '326 Patent, and without authority, has offered to sell, sold, and/or imported into the United States the Accused Instrumentalities for use in practicing the patented apparatus and methods embodied in at least claim 1, which use constitutes a material part of the claimed invention. Defendant offered to sell, sold, and/or imported into the United States the Accused Instrumentalities knowing that each is especially made or adapted for use in infringing the '326 Patent, and that each is not a staple article or commodity of commerce suitable for substantial

noninfringing use as packaged, advertised, and/or sold because the Accused Instrumentalities are pre-configured by Defendant to employ the patented data transmission method.

56. Defendant's direct, indirect, and contributory infringement of the '326 Patent has caused, and will continue to cause, substantial and irreparable damage to Plaintiff. Plaintiff is, therefore, entitled to an award of damages adequate to compensate for Defendant's infringement of the '326 Patent, but not less than a reasonable royalty, together with pre- and post-judgment interest and costs as fixed by the Court under 35 U.S.C. § 284.

XI. JURY DEMAND

57. Plaintiff STC.UNM hereby demands a trial by jury for all causes of action.

XII. PRAYER FOR RELIEF

58. Plaintiff requests the following relief:

A. A judgment that Defendant has directly infringed either literally and/or under the doctrine of equivalents and continues to directly infringe the '204 Patent, the '096 Patent, and the '326 Patent;

B. A judgment that Defendant has induced infringement and continues to induce infringement of the '204 Patent, the '096 Patent, and the '326 Patent;

C. A judgment that Defendant has contributorily infringed and continues to contributorily infringe the '204 Patent, the '096 Patent, and the '326 Patent;

D. A judgment and order requiring Defendant to pay Plaintiff damages under 35 U.S.C. § 284, including treble damages for willful infringement as provided by 35 U.S.C. § 284, and supplemental damages for any continuing post-verdict infringement through entry of the final judgment with an accounting as needed;

E. A judgment that this is an exceptional case within the meaning of 35 U.S.C. § 285 and Plaintiff is therefore entitled to reasonable attorneys' fees.

F. A judgment and order requiring Defendant to pay Plaintiff pre-judgment and post-judgment interest on the damages awarded;

G. A judgment and order awarding a compulsory ongoing royalty;

H. A judgment granting a preliminary and permanent injunction that restrains and enjoins Defendant, its officers, directors, employees, agents, servants, parents, subsidiaries, successors, assigns, and all those in privity, concert or participation with them from directly or indirectly infringing the '204 Patent, the '096 Patent, and the '326 Patent; and

I. Such other and further relief as the Court deems just and equitable.

Dated: April 12, 2019

Respectfully submitted,

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