IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

HARMONY LICENSING LLC, Plaintiff, v. **CIPHERLAB USA, INC.,** Defendant.	Civil Action No.: 2:20-cv-320 **TRIAL BY JURY DEMANDED**

COMPLAINT FOR INFRINGEMENT OF PATENT

Now comes Plaintiff, Harmony Licensing LLC ("Plaintiff" or "Harmony"), by and through undersigned counsel, and respectfully alleges, states, and prays as follows:

NATURE OF THE ACTION

1. This is an action for patent infringement under the Patent Laws of the United States, Title 35 United States Code ("U.S.C.") to prevent and enjoin Defendant CipherLab USA, Inc. (hereinafter "Defendant"), from infringing and profiting, in an illegal and unauthorized manner, and without authorization and/or consent from Plaintiff from U.S. Patent No. RE42,219 ("the '219 Patent" or the "Patent-in-Suit"), which is attached hereto as Exhibit A and incorporated herein by reference, and pursuant to 35 U.S.C. §271, and to recover damages, attorney's fees, and costs.

THE PARTIES

2. Plaintiff is a Texas limited liability company with its principal place of business at 5570 FM 423 – Suite 250-2066, Frisco, Texas 75034.

3. Upon information and belief, Defendant is a corporation organized under the laws of Texas, having a principal place of business at 2552 Summit Avenue – Suite 400, Plano, Texas 75074. Upon information and belief, Defendant may be served with process c/o Chin-Jung Wu, its

Registered Agent, 2552 Summit Avenue – Suite 400, Plano, Texas 75074.

JURISDICTION AND VENUE

4. This is an action for patent infringement in violation of the Patent Act of the United States, 35 U.S.C. §§1 *et seq*.

5. The Court has subject matter jurisdiction over this action pursuant to 28 U.S.C. §§1331 and 1338(a).

6. This Court has personal jurisdiction over Defendant by virtue of its systematic and continuous contacts with this jurisdiction and its residence in this District, as well as because the injury to Plaintiff and the cause of action alleged by Plaintiff has risen in this District, as alleged herein.

7. Defendant is subject to this Court's specific and general personal jurisdiction pursuant to its substantial business in this forum, including: (i) committing at least a portion of the infringements alleged herein in this judicial District; (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 this forum state and in this judicial District; and (iii) being incorporated in this District.

8. Venue is proper in this judicial district pursuant to 28 U.S.C. §1400(b), because Defendant resides in this district. See *TC Heartland v. Kraft Foods Group Brands LLC,* 137 S. Ct. 1514 (2017); *In re Google, LLC*, No. 2019-126, 2020 U.S. App. LEXIS 4588 (Fed. Cir. Feb. 13, 2020).

FACTUAL ALLEGATIONS

9. On March 15, 2011, the United States Patent and Trademark Office ("USPTO") duly and legally issued the '219 Patent, entitled "MULTIPLE-INPUT MULTIPLE-OUTPUT

(MIMO) SPREAD SPECTRUM SYSTEM AND METHOD" after a full and fair examination. The '219 Patent is attached hereto as Exhibit A and incorporated herein as if fully rewritten.

10. Plaintiff is presently the owner of the '219 Patent, having received all right, title and interest in and to the '219 Patent from the previous assignee of record. Plaintiff possesses all rights of recovery under the '219 Patent, including the exclusive right to recover for past infringement.

11. To the extent required, Plaintiff has complied with all marking requirements under 35 U.S.C. § 287.

12. The invention claimed in the '219 Patent provides a system and method for transmitting a plurality of spread-spectrum signals over a communications channel having fading. The plurality of spread-spectrum signals is radiated by a plurality of antennas, with each antenna preferably spaced by one-quarter wavelength. A plurality of receiver antennas receives the plurality of spread-spectrum signals and a plurality of fading spread-spectrum signals. Each receiver antenna is coupled to a plurality of matched filters having a respective plurality of impulse responses matched to the chip-sequence signals of the plurality of spread spectrum signals. A RAKE and space-diversity combiner combines, for each respective chip-sequence signal, a respective plurality of detected spread-spectrum signals and a respective multiplicity of detected-multipath-spread spectrum signals, to generate a plurality of combined signals. The symbol amplitudes can be measured and erasure decoding employed to improve performance.

13. Claim 1 of the '219 Patent claims:

> 1. A multiple-input-multiple-output (MIMO) method for receiving data having symbols, with the data having symbols demultiplexed into a plurality of subchannels of data, with the plurality of subchannels of data spread-spectrum processed with a plurality of chip-sequence signals, respectively, with each chip-sequence signal different from other chip-sequence signals in the plurality of chip-sequence signals, thereby generating a plurality of spread-spectrum subchannel

signals, respectively, with the plurality of spread-spectrum-subchannel signals radiated, using radio waves, from a plurality of antennas as a plurality of spread spectrum signals, respectively, with the plurality of spread spectrum signals passing through a communications channel having multipath, thereby generating, from the plurality of spread-spectrum signals, at least a first spread-spectrum signal having a first channel of data arriving from a first path of the multipath, and a second spread-spectrum signal having a second channel of data arriving from a second path of the multipath, comprising the steps of:

receiving the first spread-spectrum signal and the second spread-spectrum signal with a plurality of receiver antennas;

detecting, at each receiver antenna of the plurality of receiver antennas, the first spread-spectrum signal as a first plurality of detected spread-spectrum signals, respectively;

detecting, at each receiver antenna of the plurality of receiver antennas, the second spread-spectrum signal as a second plurality of detected spread-spectrum signals, respectively;

combining, from each receiver antenna of the plurality of receiver antennas, each of the first plurality of detected spread-spectrum signals, thereby generating a first combined signal; and

combining, from each receiver antenna of the plurality of receiver antennas, each of the second plurality of detected spread-spectrum signals, thereby generating a second combined signal.

14. Claim 25 of the ‘219 Patent claims:

25. A multiple input multiple output (MIMO) method improvement, for transmitting data having symbols, over a communications channel, comprising the steps of:

demultiplexing the data into a plurality of subchannels of data;

spread-spectrum processing the plurality of subchannels of data, with the plurality of subchannels of data spread-spectrum processed with a plurality of chip sequence signals, respectively, with each chip-sequence signal different from other chip-sequence signals in the plurality of chip-sequence signals, thereby generating a plurality of spread-spectrum-subchannel signals, respectively;

radiating from a plurality of antennas, using radio waves, the plurality of spread-spectrum-subchannel signals, over the communications channel, as a plurality of spread-spectrum signals, respectively;

imparting, from the communications channel, multipath on the plurality of spread-spectrum signals, thereby generating at least a first spread-spectrum signal having a first channel of data arriving from a first path of the multipath, and a second spread-spectrum signal having a second channel of data arriving from a second path of the multipath;

receiving the first spread-spectrum signal and the second spread-spectrum signal with a plurality of receiver antennas;

detecting, at each receiver antenna of the plurality of receiver antennas, the first spread-spectrum signal and the second spread-spectrum signal, as a first

plurality of detected spread-spectrum signals and a second plurality of detected spread-spectrum signals, respectively;

combining, from each receiver antenna of the plurality of receiver antennas, each of the first plurality of detected spread-spectrum signals, thereby generating a first combined signal; and

combining, from each receiver antenna of the plurality of receiver antennas, each of the second plurality of detected spread-spectrum signals, thereby generating a second combined signal.

15. Defendant commercializes, inter alia, methods that perform all the steps recited in at least one claim of the '219 Patent. More particularly, Defendant commercializes, inter alia, methods that perform all the steps recited in Claims 1, and 25 of the '219 Patent. Specifically, Defendant makes, uses, sells, offers for sale, or imports a method that encompasses that which is covered by Claims 1 and 25 of the '219 Patent.

DEFENDANT'S PRODUCT(S)

16. Defendant offers products, such as the CipherLab RS30 (the "Accused Product") that, at least in internal testing and usages, practices a multiple-input-multiple-output (MIMO) method (e.g., MIMO antenna system for receiving data) for receiving data having symbols (e.g., data symbols such as QAM data symbols), with the data having symbols (e.g., high speed data stream symbols) demultiplexed into a plurality of subchannels (e.g., demultiplexing of data into multiple data subchannels) of data, with the plurality of subchannels (e.g., multiple data streams) of data spread-spectrum processed with a plurality of chip-sequence signals (e.g., spreading code), respectively, with each chip-sequence signal (e.g., spreading code) different from other chip-sequence signals (e.g., spreading code) in the plurality of chip-sequence signals (e.g., spreading code), thereby generating a plurality of spread-spectrum-subchannel signals (e.g., multiple spread-spectrum signals corresponding to multiple subchannels), respectively, with the plurality of spread-spectrum-subchannel signals radiated, using radio waves (e.g., EM waves), from a plurality of antennas (e.g., MIMO antenna system for data transmission) as a plurality of spread-spectrum

signals, respectively, with the plurality of spread-spectrum signals passing through a communications channel (e.g., radio waves) having multipath (e.g., a multipath fading environment) from the plurality of spread-spectrum signals, at least a first spread-spectrum signal (e.g., a spread-spectrum signal corresponding to a first spreading code) having a first channel (e.g., a first data stream) of data arriving from a first path of the multipath, and a second spread-spectrum signal (e.g., a spread-spectrum signal corresponding to a second spreading code) having a second channel (e.g., a second data stream) of data arriving from a second path of the multipath.

17. A non-limiting and exemplary claim chart comparing the Accused Product to Claims 1 and 25 of the '219 Patent is attached hereto as Exhibit B and is incorporated herein as if fully rewritten.

18. For example, as recited in one step of Claim 1, the Accused Product utilizes multiple input and multiple output antennas (multiple antennas within HSPA+ base station and devices) for sending and receiving multiple signals (cellular data) into a communication channel (Cellular communication channel). See Ex. B.

19. The Accused Product has HSPA+ capabilities. The accused product converts incoming data stream into data-symbols and divide it into multiple streams distinct from each other and incoming data stream. See Ex. B.

20. The Accused Product processes demultiplexed multiple data streams with multiple spreading codes, respectively; and thereby distributes each signal across the available bandwidth. The accused product generates multiple spread-spectrum subchannel signals correspond to multiple data streams. See Ex. B.

21. The Accused Product processes demultiplexed multiple data streams with multiple spreading codes, respectively; and thereby distributes each signal across the available bandwidth.

The Accused Product generates multiple spread-spectrum subchannel signals correspond to multiple data streams. The Accused Product receives signals irradiated through multiple antennas corresponding to data which has been processed with one or more codes (spreading codes) that distribute and increase the bandwidth of the data across the available bandwidth. See Ex. B.

22. Additionally, as recited in another step of Claim 1, the Accused Product practices receiving the first spread-spectrum signal (e.g., the spread-spectrum signal corresponding to the first spreading code) and the second spread-spectrum signal (e.g., the spread-spectrum signal corresponding to the second spreading code) with a plurality of receiver antennas (e.g., multiple antenna system of the accused product). See Ex. B.

23. As recited in another step of Claim 1, the Accused Product practices detecting, at each receiver antenna of the plurality of receiver antennas, the first spread-spectrum signal (e.g., spread-spectrum signal corresponding to a first spreading code) as a first plurality of detected spread-spectrum signals, respectively. See Ex. B.

24. The Accused Product receives signals at its multiple antennas. The accused product determines the presence of and recovers the first spread-spectrum signal (a first spread-spectrum signal corresponding to a first spreading code) received at each antenna port, with the first spread-spectrum signal (the first spread-spectrum signal corresponding to the first spreading code) being multipath signal. See Ex. B.

25. As recited in another step of Claim 1, the Accused Product practices detecting, at each receiver antenna of the plurality of receiver antennas, the second spread-spectrum signal (e.g., the spread-spectrum signal corresponding to the second spreading code) as a second plurality of detected spread-spectrum signals, respectively. See Ex. B.

26. As recited in another step of Claim 1, the Accused Product practices combining,

from each receiver antenna of the plurality of receiver antennas, each of the first plurality of detected spread-spectrum signals (e.g., the spread-spectrum signal corresponding to the first spreading code), thereby generating a first combined signal. See Ex. B.

27. Additionally, as recited in another step of Claim 1, the Accused Product practices combining, from each receiver antenna of the plurality of receiver antennas, each of the second plurality of detected spread-spectrum signals (e.g., the spread-spectrum signal corresponding to the second spreading code), thereby generating a second combined signal. See Ex. B.

28. As recited in one step of Claim 25, a system, at least in internal testing and usages, utilized by the Accused Product practices a multiple-input-multiple-output (MIMO) (e.g., MIMO antenna system) method improvement, for transmitting data having symbols (e.g., data symbols such as QAM symbols), over a communications channel (e.g., HSPA+ physical communication channel). See Ex. B.

29. The accused product utilizes multiple input and multiple output antennas (multiple antennas within HSPA+ base station and devices) for sending and receiving multiple signals (cellular data) into a communication channel (Cellular communication channel). See Ex. B.

30. Additionally, as recited in another step of Claim 25, the system, at least in internal testing and usages, utilized by the Accused Product practices demultiplexing the data (e.g., demultiplexing of data into multiple subchannels of data) into a plurality of subchannels of data. See Ex. B.

31. As recited in another step of Claim 25, the system, at least in internal testing and usages, utilized by the accused product practices spread-spectrum (e.g., spreading) processing the plurality of subchannels of data (e.g., demultiplexed multiple data streams), with the plurality of subchannels of data spread-spectrum processed with a plurality of chip-sequence signals (e.g.,

spreading code), respectively, with each chip-sequence signal different from other chip-sequence signals in the plurality of chip-sequence signals, thereby generating a plurality of spread-spectrum-subchannel signals, respectively. See Ex. B.

32. As recited in another step of Claim 25, the system, at least in internal testing and usages, utilized by the Accused Product practices radiating from a plurality of antennas (e.g., MIMO antenna system), using radio waves, the plurality of spread-spectrum-subchannel signals (e.g., spread-spectrum signals outputted after spreading the signals with multiple spreading codes), over the communications channel (e.g., HPSA+ physical communication channel), as a plurality of spread-spectrum signals (e.g., spread-spectrum signals outputted after spreading the signals with multiple spreading codes), respectively. See Ex. B.

33. As recited in another step of Claim 25, the system, at least in internal testing and usages, utilized by the Accused Product practices imparting, from the communications channel, multipath (e.g., a multipath fading environment) on the plurality of spread-spectrum signals, thereby generating at least a first spread-spectrum signal (e.g., a spread-spectrum signal with a first spreading code) having a first channel (e.g., a first data stream) of data arriving from a first path of the multipath, and a second spread-spectrum signal (e.g., a spread-spectrum signal with a second spreading code) having a second channel (e.g., a second data stream) of data arriving from a second path of the multipath.

34. As recited in another step of Claim 25, the Accused Product practices receiving the first spread-spectrum signal (e.g., the spread-spectrum signal corresponding to the first spreading code) and the second spread-spectrum signal (e.g., the spread-spectrum signal corresponding to the second spreading code) with a plurality of receiver antennas (e.g., multiple antenna system of the accused product). See Ex. B.

35. Additionally, as recited in another step of Claim 25, the Accused Product practices detecting, at each receiver antenna of the plurality of receiver antennas, the first spread-spectrum signal (e.g., the spread-spectrum signal corresponding to the first spreading code) and the second spread-spectrum signal (e.g., the spread-spectrum signal corresponding to the second spreading code), as a first plurality of detected spread-spectrum signals (e.g., the plurality of the spread-spectrum signal corresponding to the first spreading code received at both the antennas of the accused product) and a second plurality of detected spread-spectrum signals (e.g., e.g., the plurality of the spread-spectrum signal corresponding to the second spreading code received at both the antennas of the accused product), respectively. See Ex. B.

36. As recited in another step of Claim 25, the Accused Product practices combining, from each receiver antenna of the plurality of receiver antennas, each of the first plurality of detected spread-spectrum signals (e.g., the spread-spectrum signal corresponding to the first spreading code), thereby generating a first combined signal. See Ex. B.

37. As recited in another step of Claim 25, the Accused Product practices combining, from each receiver antenna of the plurality of receiver antennas, each of the second plurality of detected spread-spectrum signals (e.g., the spread-spectrum signal corresponding to the second spreading code), thereby generating a second combined signal. See Ex. B.

38. The elements described in the preceding paragraphs are covered by at least Claims 1 and 25 of the ‘219 Patent. Thus, Defendant’s use of the Accused Product is enabled by the method described in the ‘219 Patent.

INFRINGEMENT OF THE PATENT-IN-SUIT

39. Plaintiff realleges and incorporates by reference all of the allegations set forth in the preceding paragraphs.

40. In violation of 35 U.S.C. § 271, Defendant is now, and has been directly infringing the '219 Patent.

41. Defendant has had knowledge of infringement of the '219 Patent at least as of the service of the present Complaint.

42. Defendant has directly infringed and continues to directly infringe at least one claim of the '219 Patent by using, at least through internal testing or otherwise, the Accused Product without authority in the United States, and will continue to do so unless enjoined by this Court. As a direct and proximate result of Defendant's direct infringement of the '219 Patent, Plaintiff has been and continues to be damaged.

43. Defendant has induced others to infringe the '219 Patent, by encouraging infringement, knowing that the acts Defendant induced constituted patent infringement, and its encouraging acts actually resulted in direct patent infringement.

44. By engaging in the conduct described herein, Defendant has injured Plaintiff and is thus liable for infringement of the '219 Patent, pursuant to 35 U.S.C. § 271.

45. Defendant has committed these acts of infringement without license or authorization.

46. As a result of Defendant's infringement of the '219 Patent, Plaintiff has suffered monetary damages and is entitled to a monetary judgment in an amount adequate to compensate for Defendant's past infringement, together with interests and costs.

47. Plaintiff will continue to suffer damages in the future unless Defendant's infringing activities are enjoined by this Court. As such, Plaintiff is entitled to compensation for any continuing and/or future infringement up until the date that Defendant is finally and permanently enjoined from further infringement.

48. Plaintiff reserves the right to modify its infringement theories as discovery progresses in this case; it shall not be estopped for infringement contention or claim construction purposes by the claim charts that it provides with this Complaint. The claim chart depicted in Exhibit B is intended to satisfy the notice requirements of Rule 8(a)(2) of the Federal Rule of Civil Procedure and does not represent Plaintiff's preliminary or final infringement contentions or preliminary or final claim construction positions.

DEMAND FOR JURY TRIAL

49. Plaintiff demands a trial by jury of any and all causes of action.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff prays for the following relief:

a. That Defendant be adjudged to have directly infringed the '219 Patent either literally or under the doctrine of equivalents;

b. An accounting of all infringing sales and damages including, but not limited to, those sales and damages not presented at trial;

c. That Defendant, its officers, directors, agents, servants, employees, attorneys, affiliates, divisions, branches, parents, and those persons in active concert or participation with any of them, be permanently restrained and enjoined from directly infringing the '219 Patent;

d. An award of damages pursuant to 35 U.S.C. §284, sufficient to compensate Plaintiff for the Defendant's past infringement and any continuing or future infringement up until the date that Defendant is finally and permanently enjoined from further infringement, including compensatory damages;

e. An assessment of pre-judgment and post-judgment interest and costs against Defendant, together with an award of such interest and costs, in accordance with 35 U.S.C. §284;

f. That Defendant be directed to pay enhanced damages, including Plaintiff's attorneys' fees incurred in connection with this lawsuit pursuant to 35 U.S.C. §285; and

g. That Plaintiff be granted such other and further relief as this Court may deem just and proper.

Dated: September 30, 2020

Respectfully submitted,

Together with:

SAND, SEBOLT & WERNOW CO., LPA

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(*pro hac vice forthcoming)*

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