**IN THE UNITED STATES DISTRICT COURT**
**FOR THE SOUTHERN DISTRICT OF NEW YORK**

| | |
|---|---|
| **Hydro Net LLC,**<br>Plaintiff,<br>v.<br>**Sharp Electronics Corporation,**<br>Defendant. | Case No. 21-cv-2780<br>Patent Case<br>Jury Trial Demanded |

## COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Hydro Net LLC ("Plaintiff"), through its attorneys, complains of Sharp Electronics Corporation ("Defendant"), and alleges the following:

## PARTIES

1. Plaintiff Hydro Net LLC is a corporation organized and existing under the laws of Texas that maintains its principal place of business at 2108 Dallas Pkwy, Ste 214 - 1020, Plano, TX 75093-4362.

2. Defendant Sharp Electronics Corporation is a corporation organized and existing under the laws of New York that maintains an established place of business at 100 Paragon Drive, Montvale, NJ 07645.

## JURISDICTION

3. This is an action for patent infringement arising under the patent laws of the United States, Title 35 of the United States Code.

4. This Court has exclusive subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

5. This Court has personal jurisdiction over Defendant because it has engaged in systematic and continuous business activities in this District and is incorporated in this District's state. As described below, Defendant has committed acts of patent infringement giving rise to this action within this District.

## VENUE

6. Venue is proper in this District under 28 U.S.C. § 1400(b) because Defendant has committed acts of patent infringement in this District, has an established place of business in this District, and is incorporated in this District's state. In addition, Plaintiff has suffered harm in this district.

## PATENT-IN-SUIT

7. Plaintiff is the assignee of all right, title and interest in United States Patent No. 7,187,706 (the "'706 Patent" or the "Patent-in-Suit"); including all rights to enforce and prosecute actions for infringement and to collect damages for all relevant times against infringers of the Patent-in-Suit. Accordingly, Plaintiff possesses the exclusive right and standing to prosecute the present action for infringement of the Patent-in-Suit by Defendant.

8. The '706 Patent is entitled "Handoff and source congestion avoidance spread-spectrum system and method," and issued 03/06/2007. The application leading to the '706 Patent was filed on 10/02/2001. A true and correct copy of the '706 Patent is attached hereto as Exhibit 1 and incorporated herein by reference.

9. The '706 Patent is valid and enforceable.

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

11. The invention claimed in the '706 Patent comprises an inventive method to a frequency division duplex (FDD) distributed-network that solves a computer centric problem.

12. Claim 1 of the '706 Patent recites a non-abstract method, a practical application, and/or an inventive step for a method to a frequency division duplex (FDD) distributed-network. See Ex. A.

13. Claim 1 of the '706 Patent states:

> "1. An improvement method to a frequency division duplex (FDD) distributed-network, spread-spectrum system comprising the steps of:
>
> transmitting, using radio waves, from a first base station (BS), located in, and part of, the FDD distributed network, a first BS-packet signal at a first frequency;
>
> receiving at a remote station (RS) the first BS-packet signal, thereby obtaining a first RS-received signal;
>
> transmitting, using radio waves, from a second base station a second BS-packet signal at a second frequency, with the second frequency different from the first frequency;
>
> receiving at said remote station the second BS-packet signal at the second frequency, thereby obtaining a second RS-received signal;
>
> monitoring at said remote station a first signal metric of the first RS-received signal, and a second signal metric of the second RS-received signal; and
>
> determining at said remote station that the first signal metric of the first RS-received signal falls below a threshold, and that the second signal metric of the second RS-received signal is above the threshold, and that the second base station has available capacity, thereby determining to change base stations." See Ex.A.

14. Claim 6 of the '706 Patent recites a non-abstract, a practical application, and/or an inventive step to a spread spectrum system. See Ex. A.

15. Claim 6 of the '706 Patent states:

> "6. An improvement to a spread-spectrum system comprising:
>
> a frequency division duplex (FDD), distributed network;
>
> a first base station (BS), located in, and part of, the FDD distributed network, for transmitting, using radio waves, a first BS-packet signal at a first frequency;

a second base station, located in, and part of, the FDD distributed network, for transmitting, using radio waves, a second BS-packet signal at a second frequency, with the second frequency different from the first frequency;

a remote station (RS) for receiving the first BS-packet signal and the second BS-packet signal, and thereby determining a first RS-received signal and a second RS-received signal, respectively; and

said remote station for determining that a first signal falls below a threshold and that a second signal metric of the second RS-received signal is above the threshold, and that the second base station has available capacity, thereby deciding to change base stations." See Ex.A.

16. Claim 10 of the '706 Patent recites a non-abstract, a practical application, and/or an inventive step to a spread spectrum system. See Ex. A.

17. Claim 10 of the '706 Patent states:

"10. An improvement to a spread spectrum system comprising:

a frequency division duplex (FDD), distributed network;

first base station (BS) means, located in, and part of, the FDD distributed network, for transmitting, using radio waves, a first BS-packet signal spread at a first frequency;

second base station means, located in, and part of, the FDD distributed network, for transmitting, using radio waves, a second BS-packet signal spread signal at a second frequency, with the second frequency different from the first frequency; and

remote station (RS) means for receiving the first BS-packet signal and the second BS-packet signal, and thereby determining a first RS-received signal and a second RS-received signal, respectively; the RS means for monitoring a first signal metric of the first BS-packet signal, RS means for determining that the first signal metric of falls below a threshold, and that the second signal metric is above the threshold, and that the second base station has available capacity, thereby determining to change base stations." See Ex.A.

18. Defendant commercializes, inter alia, methods that perform all the steps recited in at least one claim of the '706 Patent. More particularly, Defendant commercializes, inter alia, methods that perform all the steps recited in Claim 1 of the '706 Patent and commercializes a product that comprises all the elements of Claims 6 and 10. Specifically, Defendant makes, uses

(including through internal testing and usage), sells, offers for sale, or imports a method that encompasses that which is covered by at least Claim 1, 6, and 10 of the '706 Patent.

**COUNT 1: INFRINGEMENT OF THE '706 PATENT**

19. Plaintiff incorporates the above paragraphs herein by reference.

20. **Direct Infringement.** Defendant has been and continues to directly infringe one or more claims of the '706 Patent in at least this District by making, using, offering to sell, selling and/or importing, without limitation, at least the Defendant products identified in the charts incorporated into this Count below (among the "Exemplary Defendant Products") that infringe at least the exemplary claims of the '706 Patent also identified in the charts incorporated into this Count below (the "Exemplary '706 Patent Claims") literally or by the doctrine of equivalents. On information and belief, numerous other devices that infringe the claims of the '706 Patent have been made, used, sold, imported, and offered for sale by Defendant and/or its customers.

21. Defendant also has and continues to directly infringe, literally or under the doctrine of equivalents, the Exemplary '706 Patent Claims, by having its employees internally test and use these Exemplary Products.

22. The service of this Complaint upon Defendant constitutes actual knowledge of infringement as alleged here.

23. Despite such actual knowledge, Defendant continues to make, use, test, sell, offer for sale, market, and/or import into the United States, products that infringe the '706 Patent. On information and belief, Defendant has also continued to sell the Exemplary Defendant Products and distribute product literature and website materials inducing end users and others to use its products in the customary and intended manner that infringes the '706 Patent. Thus, on

information and belief, Defendant is contributing to and/or inducing the infringement of the '706 Patent.

24. Defendant continues to advertise and direct customers where to buy the Exemplary Defendant Products on its website. See https://www.sharpusa.com/ForHome/Mobile/Models/AQUOSCRYSTAL-306SH.aspx#panel-0. Last visited June 8, 2011.

25. Defendant offers products, such as the Exemplary Defendant Products (the "Accused Product"), that enables a method to a frequency division duplex (FDD) distributed-network. A non-limiting and exemplary claim chart comparing the Accused Product of Claim 1 of the '706 Patent is attached hereto as Exhibit 2 and is incorporated herein as if fully rewritten.

26. As recited in Claim 1, the Accused Product or a system, at least in internal testing and usage, utilized by the Accused Product is a part of a spread-spectrum system, that practices an improvement method to a frequency division duplex (FDD) distributed-network (e.g., a network comprising the accused product with LTE-FDD capability with its wireless tethering functionality, another product/device to which the accused product can communicate via wireless tethering, and several base stations). Further, the Accused Product has LTE-FDD and wireless tethering capabilities. See Exhibit 2.

27. As recited in one step of Claim 1, the Accused Product or the system, at least in internal testing and usage, utilized by the Accused Product practices transmitting, using radio waves, from a first base station (BS) (e.g., a serving cell for a user equipment), located in, and part of, the FDD distributed network, a first BS-packet signal (e.g., a reference signal) at a first frequency (e.g., a first frequency) and receiving at a remote station (RS) (e.g., the accused product) the first BS-packet signal (e.g., a reference signal), thereby obtaining a first RS-received

signal (e.g., a demodulated signal from a first reference signal received from the serving cell to determine RSRP value for inter-frequency cell reselection). See Exhibit 2.

28. As recited in another step of Claim 1, the Accused Product or the system, at least in internal testing and usage, utilized by the Accused Product practices transmitting, using radio waves, from a second base station (e.g., a cell other than the serving cell of a user equipment) a second BS-packet signal (e.g., a reference signal from a cell other than the serving cell) at a second frequency (e.g., inter-frequency cell reselection, a cell operates at different carrier frequency, i.e., reference signal frequency, than the serving cell of a user equipment), with the second frequency different from the first frequency and receiving at said remote station (e.g., the accused product) the second BS-packet signal (e.g., a reference signal from a cell other than the serving cell) at the second frequency, thereby obtaining a second RS-received signal (e.g., a demodulated signal from a reference signal received from a cell other than the serving cell to determine RSRP value for inter-frequency cell reselection). See Exhibit 2.

29. As recited in one step of Claim 1, the Accused Product or the system, at least in internal testing and usage, utilized by the Accused Product practices monitoring a first signal metric (e.g., a RSRP value of the reference signal of the serving cell) of the first RS-received signal (e.g., a demodulated signal from a first reference signal received from the serving cell to determine RSRP value for inter-frequency cell reselection), and a second signal metric (e.g., a RSRP value of the reference signal of the cell other than the serving cell) of the second RS-received signal (e.g., a demodulated signal from a second reference signal received from a cell other than the serving cell to determine RSRP value for inter-frequency cell reselection). See Exhibit 2.

30. As recited in another step of Claim 1, the Accused Product or the system, at least in internal testing and usage, utilized by the Accused Product practices determining that the first signal metric (e.g., a first RSRP value related to a first reference signal) of the first RS-received signal (e.g., a first reference signal received from the serving cell) falls below a threshold, and that the second signal metric (e.g., a second RSRP value related to a second reference signal) of the second RS-received signal (e.g., a second reference signal received from a cell other than the serving cell) is above the threshold, and that the second base station has available capacity (e.g., the accused product determines that a cell other than the serving cell is suitable cell), thereby determining to change base stations (e.g., inter-frequency cell reselection). See Exhibit 2.

31. As recited in Claim 6, the Accused Product or a system, at least in internal testing and usage, utilized by the Accused Product is or is part of a spread-spectrum system with LTE-FDD and wireless tethering capabilities. See Exhibit 2.

32. As recited in one part of Claim 6, the Accused Product or the system, at least in internal testing and usage, characterized by the Accused Product comprises a frequency division duplex (FDD), distributed network (e.g., a network comprising the accused product with LTE-FDD capability with its wireless tethering functionality, another product/device to which the accused product can communicate via wireless tethering, and several base stations). See Exhibit 2.

33. As recited in one part of Claim 6, the Accused Product or the system, at least in internal testing and usage, characterized by the Accused Product comprises a first base station (BS) (e.g., a serving cell for a user equipment), located in, and part of, the FDD distributed network, for transmitting, using radio waves, a first BS-packet signal (e.g., a reference signal) at a first frequency (e.g., a first frequency). See Exhibit 2.

34. As recited in one part of Claim 6, the Accused Product or the system, at least in internal testing and usage, characterized by the Accused Product comprises a second base station (e.g., a cell other than the serving cell of a user equipment), located in, and part of, the FDD distributed network, for transmitting, using radio waves, a second BS-packet signal (e.g., a reference signal) at a second frequency (e.g., inter-frequency cell reselection, a cell operates at different carrier frequency than the serving cell of a user equipment) , with the second frequency different from the first frequency. See Exhibit 2.

35. As recited in one part of Claim 6, the Accused Product or the system, at least in internal testing and usage, characterized by the Accused Product comprises a remote station (RS) (e.g., the accused product) for receiving the first BS-packet signal (e.g., a first reference signal from the serving cell) and the second BS-packet signal (e.g., a second reference signal from a cell other than the serving cell), and thereby determining a first RS-received signal (e.g., a demodulated signal from a first reference signal received from the serving cell to determine RSRP value for inter-frequency cell reselection) to determine and a second RS-received signal (e.g., a demodulated signal from a second reference signal received from a cell other than the serving cell to determine RSRP value for inter-frequency cell reselection), respectively. See Exhibit 2.

36. As recited in one part of Claim 6, the Accused Product or the system, at least in internal testing and usage, characterized by the Accused Product comprises the remote station for determining that a first signal (e.g., a first RSRP value related to a first reference signal) falls below a threshold and that a second signal metric (e.g., a second RSRP value related to a second reference signal) of the second RS-received signal (e.g., a second reference signal received from a cell other than the serving cell) is above the threshold, and that the second base station has

available capacity (e.g., the accused product determines that a cell other than the serving cell is suitable cell), thereby deciding to change base stations (e.g., inter-frequency cell reselection). See Exhibit 2.

37. As recited in Claim 10, the Accused Product or a system, at least in internal testing and usage, utilized by the Accused Product is or is part of a spread-spectrum system with LTE-FDD and wireless tethering capabilities. See Exhibit 2.

38. As recited in one part of Claim 10, the Accused Product or the system, at least in internal testing and usage, characterized by the Accused Product comprises a frequency division duplex (FDD), distributed network (e.g., a network comprising the accused product with LTE-FDD capability with its wireless tethering functionality, another product/device to which the accused product can communicate via wireless tethering, and several base stations). See Exhibit 2.

39. As recited in one part of Claim 10, the Accused Product or the system, at least in internal testing and usage, characterized by the Accused Product comprises a first base station (BS) (e.g., a serving cell for a user equipment), located in, and part of, the FDD distributed network, for transmitting, using radio waves, a first BS-packet signal (e.g., a reference signal) at a first frequency (e.g., a first frequency). See Exhibit 2.

40. As recited in one part of Claim 10, the Accused Product or the system, at least in internal testing and usage, characterized by the Accused Product comprises a second base station (e.g., a cell other than the serving cell of a user equipment), located in, and part of, the FDD distributed network, for transmitting, using radio waves, a second BS-packet signal (e.g., a reference signal) at a second frequency (e.g., inter-frequency cell reselection, a cell operates at

different carrier frequency than the serving cell of a user equipment) , with the second frequency different from the first frequency. See Exhibit 2.

41. As recited in one part of Claim 10, the Accused Product or the system, at least in internal testing and usage, characterized by the Accused Product comprises a remote station (RS) (e.g., the accused product) for receiving the first BS-packet signal (e.g., a first reference signal from the serving cell) and the second BS-packet signal (e.g., a second reference signal from a cell other than the serving cell), and thereby determining a first RS-received signal (e.g., a demodulated signal from a first reference signal received from the serving cell to determine RSRP value for inter-frequency cell reselection) to determine and a second RS-received signal (e.g., a demodulated signal from a second reference signal received from a cell other than the serving cell to determine RSRP value for inter-frequency cell reselection), respectively. The accused product practices determining that a first signal (e.g., a first RSRP value related to a first reference signal) falls below a threshold and that a second signal metric (e.g., a second RSRP value related to a second reference signal) of the second RS-received signal (e.g., a second reference signal received from a cell other than the serving cell) is above the threshold, and that the second base station has available capacity (e.g., the accused product determines that a cell other than the serving cell is suitable cell), thereby deciding to change base stations (e.g., inter-frequency cell reselection). See Exhibit 2.

42. The elements described in the preceding paragraphs are covered by at least Claims 1, 6, and 10 of the ‘706 Patent. Thus, Defendant’s manufacture, use, or sale of the Accused Product is enabled by the ‘706 Patent.

43. **Induced Infringement.** Upon information and belief, Defendant actively, knowingly, and intentionally has been and continues to induce infringement of the ’706 Patent,

literally or by the doctrine of equivalents, by selling Exemplary Defendant Products to their customers for use in end-user products in a manner that infringes one or more claims of the '706 Patent.

44. **Contributory Infringement.** Defendant actively, knowingly, and intentionally has been and continues materially contribute to their own customers' infringement of the '706 Patent, literally or by the doctrine of equivalents, by selling Exemplary Defendant Products to their customers for use in end-user products in a manner that infringes one or more claims of the '706 Patent. Moreover, the Exemplary Defendant Products are not a staple article of commerce suitable for substantial noninfringing use. *See, e.g., Lucent Techs., Inc. v. Gateway, Inc*., 580 F.3d 1301, 1321 (Fed. Cir. 2009) (holding that the "substantial non-infringing use" element of a contributory infringement claim applies to an infringing feature or component, and that an "infringing feature" of a product does not escape liability simply because the product as a whole has other non-infringing uses).

45. Defendants had knowledge that third parties, such as their customers, would infringe for a variety of reasons, such as the following:

a. By including in the Exemplary Products a component that can only infringe, the inference that infringement is intended is unavoidable and sufficient to satisfy the knowledge element of contributory infringement. *See Motiva Patents, LLC v. Sony Corp.,* 408 F. Supp. 3d 819 (E.D. Tex. 2019); *see also Ricoh Co. v. Quanta Computer Inc.,* 550 F.3d 1325, 1338 (Fed. Cir. 2008).

b. On information and belief, in conducting prior art searches and freedom to operate analyses, Defendant became apprised of the Patent-in-Suit. The Patent-in-Suit's inventor, Donald Schilling, holds dozens of patents related to CDMA/spread-spectrum

technology, a substantial foundational body of work with which Defendant should be aware.

c. To the extent defendants argue they were not aware of the Patent-in-Suit, defendants were willfully blind, which is alone sufficient to impute knowledge for contributory infringement, even in the absence of actual knowledge. *Warsaw Orthopedic, Inc. v. NuVasive, Inc.*, 824 F.3d 1344, 1347 (Fed. Cir. 2016).

46. Exhibit 2 includes charts comparing the Exemplary '706 Patent Claims to the Exemplary Defendant Products. As set forth in these charts, the Exemplary Defendant Products practice the technology claimed by the '706 Patent. Accordingly, the Exemplary Defendant Products incorporated in these charts satisfy all elements of the Exemplary '706 Patent Claims.

47. Plaintiff therefore incorporates by reference in its allegations herein the claim charts of Exhibit 2.

48. Plaintiff is entitled to recover damages adequate to compensate for Defendant's infringement.

## JURY DEMAND

49. Under Rule 38(b) of the Federal Rules of Civil Procedure, Plaintiff respectfully requests a trial by jury on all issues so triable.

## PRAYER FOR RELIEF

WHEREFORE, Plaintiff respectfully requests the following relief:

A. A judgment that the '706 Patent is valid and enforceable;

B. A judgment that Defendant has infringed, contributorily infringed, and/or induced infringement of one or more claims of the '706 Patent;

C. An accounting of all damages not presented at trial;

D. A judgment that awards Plaintiff all appropriate damages under 35 U.S.C. § 284 for Defendant's past infringement and, with respect to the '706 patent, any continuing or future infringement, up until the date such judgment is entered including pre- or post-judgment interest, costs, and disbursements as justified under 35 U.S.C. § 284;

E. And, if necessary, to adequately compensate Plaintiff for Defendant's infringement, an accounting:

i. that this case be declared exceptional within the meaning of 35 U.S.C. § 285 and that Plaintiff be awarded its reasonable attorneys' fees against Defendant that it incurs in prosecuting this action;

ii. that Plaintiff be awarded costs, and expenses that it incurs in prosecuting this action; and

iii. that Plaintiff be awarded such further relief at law or in equity as the Court deems just and proper.

Dated: June 11, 2021

Respectfully submitted,

/s/*Nicholas Loaknauth*
Loaknauth Law, P.C.
Nicholas Loaknauth
SDNY Bar No. NL0880
1460 Broadway
New York, New York 10036
Telephone: (212) 641-0745
Facsimile: (718) 301-1247
Email: nick@loaknauthlaw.com

Together with:

David W. deBruin (#4846)
Gawthrop Greeenwood, PC
3711 Kennett Pike, Suite 100
Wilmington, DE 19807
(302) 777-5353
ddebruin@gawthrop.com

**Counsel for Plaintiff**
**Hydro Net LLC**