

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

MOBILE TELECOMMUNICATIONS  
TECHNOLOGIES, LLC,

Plaintiff,

v.

LEAP WIRELESS INTERNATIONAL,  
INC. and CRICKET COMMUNICATIONS,  
INC.,

Defendant.

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Case No. 2:13-cv-885-JRG-RSP

JURY TRIAL REQUESTED

**FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff Mobile Telecommunications Technologies, LLC (“MTel”) by and through its undersigned attorneys, hereby pleads the following claims for patent infringement against Defendants Leap Wireless International, Inc. and Cricket Communications, Inc. (collectively, “Leap” or “Defendants”) and alleges as follows:

**THE PARTIES**

1. Plaintiff MTel is a Delaware limited liability company having a principal place of business at 1720 Lakepointe Drive, Suite 100, Lewisville, TX 75057. MTel is a wholly owned subsidiary of United Wireless Holdings, Inc. (“United Wireless”). In 2008, United Wireless, through another of its wholly owned subsidiaries, Velocita Wireless, LLC, purchased the SkyTel wireless network from Bell Industries, including assets related to SkyTel’s more than twenty year history as a wireless data company. Velocita Wireless, LLC, continued to operate the SkyTel wireless data network after the acquisition. As a result of that transaction, United Wireless gained ownership and control over the portfolio of intellectual property, including patents, developed over the years by several SkyTel-related entities, including Mobile

Telecommunication Technologies Corp. (“MTEL Corp.”), Destineer Corporation, and SkyTel Communications. United Wireless subsequently assigned certain of the patent assets, including the patents-in-suit, together with all rights of recovery related to those patent assets to its wholly owned subsidiary, MTel, which is the plaintiff here.

2. MTEL Corp. was a pioneer of two-way wireless data communications and launched the world’s first two-way wireless paging service, dubbed SkyTel 2-Way. The SkyTel paging operations and business are currently based out of Lewisville, Texas.

3. MTel asserts against Leap in this action U.S. Patent No. 5,590,403 (the “403 Patent”), U.S. Patent No. 5,659,891 (the “891 Patent”), and U.S. Patent No. 5,915,210 (the “210 Patent”) (collectively, the “asserted Patents” or the “Patents-in-Suit”).

4. To protect its intellectual property rights (and the interests of its eventual licensees), MTel extended an offer to Leap to license the patents-in-suit. Leap has not agreed to license the patents-in-suit.

5. MTel is informed and believes, and thereon alleges, that defendant Leap Wireless International, Inc. is a corporation organized and existing under the laws of Delaware having a principal place of business at 5887 Copley Drive, San Diego, CA 92111, and that defendant Cricket Communications, Inc. is a Delaware company and is a wholly-owned subsidiary of Leap Wireless International, Inc. also having a principal place of business at 5887 Copley Drive, San Diego, CA 92111.

6. MTel is informed and believes, and thereon alleges, that Leap uses 4G LTE networks and Wi-Fi networks operated by Sprint Corporation.

7. MTel is informed and believes, and thereon alleges, that Leap's 4G Long Term Evolution and Long Term Evolution-Advanced ("LTE") networks operate in the FCC licensed 1700MHz / 2100MHz, and 1900 MHz spectrums.

8. MTel is informed and believes, and thereon alleges, that Leap's LTE networks support or use transmission configurations in accordance with technical standards described in the 3rd Generation Partnership Project ("3GPP") Releases 8, 9, 10, and 11.

9. MTel is informed and believes, and thereon alleges, that Leap uses wireless networks based on IEEE 802.11 standards.

10. MTel is informed and believes, and thereon alleges, that Leap makes, uses, sells, or offers to sell access to its wireless 4G and Wi-Fi networks that use multiple input, multiple output ("MIMO") functionality, including but not limited to LTE, IEEE 802.11 communication technology, multicast capabilities, and certain subcarrier frequency structures.

11. MTel is informed and believes, and thereon alleges, that Leap uses transmission configurations in accordance with technical standards described in IEEE 802.11n, 3GPP LTE Release 8, 9, 10, and 11 Standards.

12. On information and belief, Leap uses techniques consistent with the multiple input multiple output ("MIMO") aspects of the LTE and IEEE standards (e.g. as described at <http://www.wi-fi.org/knowledge-center/white-papers/wi-fi-certified%E2%84%A2-n-longer-range-faster-throughput-multimedia-grade-wi> at 5-6:

A MIMO system has some number of transmitters (N) and receivers (M) . . . Signals from each of the N transmitters can reach each of the M receivers via a different path in the channel. A MIMO device with multiple antennas is capable of sending multiple spatial streams – spatially distinct data streams within the same channel. A MIMO device with multiple antennas is capable of receiving multiple spatial streams. Multipath helps decorrelate the received signals enabling transmission of multiple data streams through the same MIMO channel – a technique

called spatial multiplexing. MIMO can multiply data rate through a technique called spatial multiplexing - dividing a data stream into several branches and sending it as multiple parallel data streams simultaneously in the same channel.

MIMO can also be used to improve the robustness and range of 802.11n communications through a technique called spatial diversity. When the same data stream is transmitted across multiple spatial streams error rate can be reduced. An additional technique improving range and reliability called Space Time Block Coding (STBC) is also incorporated into Wi-Fi CERTIFIED n.)

13. MTel is informed and believes, and thereon alleges, that Leap's commercial wireless network has a nationwide footprint across the United States and its territories. To wit, Leap offers its 4G LTE service in at least 17 markets, including Austin and Houston in Texas.

14. MTel is informed and believes, and thereon alleges, that Leap offers for sale and sells wireless devices that allow its customers to access Leap's nationwide network using MIMO functionality, including but not limited to LTE and Wi-Fi networks, multicast capabilities, and certain subcarrier frequency structures. MTel is informed and believes, and thereon alleges, that Leap charges its customers a monthly fee for access to Leap's networks.

15. Leap has voluntarily and purposely placed these and other products and services into the stream of commerce with the expectation that they will be offered for sale and sold in Texas and in this judicial district.

#### **JURISDICTION AND VENUE**

16. This is an action for patent infringement under the patent laws of the United States of America, 35 U.S.C. §1 et seq. This Court has subject matter jurisdiction over the matters pleaded herein under 28 U.S.C. §§1331, 1338(a).

17. As detailed in paragraphs 6-15 above, Leap regularly and deliberately engaged in and continues to engage in activities that result in the making, using, selling, offering for sale, or importing of infringing products or processes in the State of Texas and in this judicial district.

These activities violate the United States patent rights MTel has under the asserted Patents. In addition, this Court has personal jurisdiction over Leap also because Leap conducts business in Texas and in this judicial district.

18. Venue is proper in this judicial district under 28 U.S.C. §1391(b), (c), and (d), and 28 U.S.C. §1400(b).

**FIRST CLAIM FOR RELIEF**

(Infringement of United States Patent No. 5,590,403)

19. MTel incorporates by reference paragraphs 1 through 18 as if set forth here in full.

20. The United States Patent and Trademark Office (“USPTO”) duly and lawfully issued the ’403 Patent, entitled “Method and System for Efficiently Providing Two Way Communication between a Central Network and Mobile Unit,” on December 31, 1996. MTel is the assignee of all right, title, and interest in and to the ’403 Patent and possesses the exclusive right of recovery, including the exclusive right to recover for past, present, and future infringement. Each and every claim of the ’403 Patent is valid and enforceable and each enjoys a statutory presumption of validity separate, apart, and in addition to the statutory presumption of validity enjoyed by every other of its claims. 35 U.S.C. §282. A true and correct copy of the ’403 Patent is attached hereto as Exhibit A.

21. MTel is informed and believes, and thereon alleges, that Leap’s use of products practicing the 802.11n standard, including Wi-Fi Mobile Hotspot devices, infringes literally and/or under the doctrine of equivalents the claims of the ’403 Patent. In addition to directly infringing the ’403 Patent, Leap induced the performance of the claimed methods, literally and/or under the doctrine of equivalents, by its customers and users of Leap’s 802.11n equipment. By providing its 802.11n compliant MIMO-enabled products, Leap contributed to its

users' and customers' infringement of one or more claims of the '403 Patent, literally and/or under the doctrine of equivalents.

22. MTel is informed and believes, and thereon alleges, that Leap uses the technique described and claimed in the '403 Patent consistent with the MIMO aspects of the standard (described at Wi-Fi Certified n: Longer Range, Faster Throughput, Multimedia-Grade Wi-Fi Networks, <http://www.wi-fi.org/knowledge-center/white-papers/wi-fi-certified%E2%84%A2-n-longer-range-faster-throughput-multimedia-grade-wi>:

A MIMO system has some number of transmitters (N) and receivers (M) . . . Signals from each of the N transmitters can reach each of the M receivers via a different path in the channel. A MIMO device with multiple antennas is capable of sending multiple spatial streams – spatially distinct data streams within the same channel. A MIMO device with multiple antennas is capable of receiving multiple spatial streams. Multipath helps decorrelate the received signals enabling transmission of multiple data streams through the same MIMO channel – a technique called spatial multiplexing. MIMO can multiply data rate through a technique called spatial multiplexing - dividing a data stream into several branches and sending it as multiple parallel data streams simultaneously in the same channel.

MIMO can also be used to improve the robustness and range of 802.11n communications through a technique called spatial diversity. When the same data stream is transmitted across multiple spatial streams error rate can be reduced. An additional technique improving range and reliability called Space Time Block Coding (STBC) is also incorporated into Wi-Fi CERTIFIED n.)

23. MTel is informed and believes, and thereon alleges, that Leap directly infringes one or more claims of the '403 Patent literally and/or under the doctrine of equivalents by making or using its nationwide wireless network, and/or by selling, or offering for sale access to its nationwide wireless network, including but not limited to its 4G LTE networks. In addition, Leap provided wireless devices that practice one or more claims of the '403 Patent by, among other things, using MIMO functionality consistent with the discussion above, dynamically

reassigning transmitters due to changing conditions within the network, or load balancing to achieve efficient coverage and capacity.

24. Those who use Leap's nationwide wireless network, including but not limited to Leap's 4G LTE and Wi-Fi networks, also direct infringe literally and/or under the doctrine of equivalents one or more of the claims of the '403 Patent.

25. Leap contributed to and induced infringement of one or more claims of the '403 Patent, literally or under the doctrine of equivalents, when Leap provided others with a subscription service to a Leap network that performs the methods of the '403 Patent. Leap also contributed to and induced infringement of one or more claims of the '403 Patent, literally or under the doctrine of equivalents, when Leap provided wireless devices that are compatible with such a network.

26. As a result of Leap's unlawful infringement of the '403 Patent, MTel has suffered damage. MTel is therefore entitled to recover from Leap damages adequate to compensate for such infringement.

#### Willful Infringement of the '403 Patent

27. MTel is informed and believes, and thereon alleges, that Leap's past and continuing infringement has been deliberate and willful because Leap knew or should have known of the risk of infringement. Counsel for MTel formally served Leap with notice of the '403 Patent by letter dated December 31, 2012 (sent via certified United States mail RRR from counsel for MTel to Leap and attached hereto as Exhibit D). All infringing activity since that time demonstrates a deliberate and conscious decision to infringe the '403 Patent or, at the very least, a reckless disregard of MTel's patent rights. Additionally, Leap did not make changes to its products or provide end users with instructions regarding how to avoid infringement, despite

Leap's actual knowledge of the '403 Patent. Leap's continuing to use infringing processes following receipt of the Notice Letter constitutes willful infringement for which MTel is entitled to up to treble damages as well as attorneys' fees and costs incurred in this action, along with prejudgment interest under 35 U.S.C. §§ 284, 285.

**SECOND CLAIM FOR RELIEF**

**(Infringement of United States Patent No. 5,659,891)**

28. MTel incorporates by reference paragraphs 1 through 27 as if set forth here in full.

29. The USPTO duly and lawfully issued the '891 Patent, entitled "Multicarrier Techniques in Bandlimited Channels," on August 19, 1997. MTel is the assignee of all right, title, and interest in and to the '891 Patent and possesses the exclusive right of recovery, including the exclusive right to recover for past, present, and future infringement. Each and every claim of the '891 Patent is valid and enforceable and each enjoys a statutory presumption of validity separate, apart, and in addition to the statutory presumption of validity enjoyed by every other of its claims. 35 U.S.C. §282. A true and correct copy of the '891 Patent is attached hereto as Exhibit B.

30. MTel is informed and believes, and thereon alleges, that Leap's LTE and Wi-Fi networks infringe one or more claims of the '891 Patent, literally and/or under the doctrine of equivalents, by, among other things, using techniques for structuring subcarrier signals.

31. MTel is informed and believes, and thereon alleges, that Leap induced and continues to induce the infringement of at least one claim of the '891 Patent, literally and/or under the doctrine of equivalents, in violation of 35 U.S.C. §271(b), by, among other things, actively, knowingly and/or recklessly aiding and abetting others, including the use by Leap's customers of Leap's 802.11n equipment and LTE networks, and through activities such as



marketing, all with the specific intent to induce others to directly use, without license or authority, processes that fall within the scope of at least one claim of the '891 Patent. MTel is informed and believes, and thereon alleges, that Leap charges its customers a monthly fee for access to Leap's networks.

32. MTel is informed and believes, and thereon alleges, that Leap contributed to and continues to contribute to the infringement of at least one claim of the '891 Patent, literally and/or under the doctrine of equivalents, in violation of 35 U.S.C. §271(c), by, among other things, providing its 802.11a,g, and n compliant products that embody a material part of the claimed inventions of the '891 Patent, knowing that such products are especially made or especially adapted for use in an infringement of these claims, and that they are not staple articles or commodities of commerce suitable for substantial non-infringing use.

33. MTel is informed and believes, and thereon alleges, that Leap contributes to and induces infringement by others, literally and/or under the doctrine of equivalents, when Leap encourages others to infringe by providing a subscription service to its LTE network that performs the methods of the '891 Patent, and when it provides wireless devices that are compatible with its network.

34. As a result of Leap's unlawful infringement of the '891 Patent, MTel has suffered and will continue to suffer damage. MTel is entitled to recover from Leap damages adequate to compensate for such infringement.

Willful Infringement of the '891 Patent

35. Leap has had knowledge of its alleged infringement of the '891 Patent at least since MTel filed its initial Complaint on Oct. 30, 2013.

36. Any infringing activity since that date demonstrates a deliberate and conscious decision to infringe the '891 Patent or, at the very least, a reckless disregard of MTel's patent rights. Leap continuing to make, use, offer to sell, sell, or import infringing products constitutes willful infringement for which MTel is entitled to up to treble damages as well as attorneys' fees and costs incurred in this action, along with prejudgment interest under 35 U.S.C. §§ 284, 285.

**THIRD CLAIM FOR RELIEF**

**(Infringement of United States Patent No. 5,915,210)**

37. MTel incorporates by reference paragraphs 1 through 35 as if set forth here in full.

38. The USPTO duly and lawfully issued the '210 Patent entitled, "Method and System for Providing Multicarrier Simulcast Transmission," on June 22, 1999. MTel is the assignee of all right, title, and interest in and to the '210 Patent and possesses the exclusive right of recovery, including the exclusive right to recover for past, present, and future infringement. Each and every claim of the '210 Patent is valid and enforceable and each enjoys a statutory presumption of validity separate, apart, and in addition to the statutory presumption of validity enjoyed by every other of its claims. 35 U.S.C. §282. A true and correct copy of the '210 Patent is attached hereto as Exhibit C.

39. MTel is informed and believes, and thereon alleges, that Leap directly infringed literally and/or under the doctrine of equivalents, one or more of the claims of the '210 Patent when Leap makes, uses, sells, or offers to sell access to its wireless 4G LTE, and Wi-Fi networks that use MIMO functionality, including but not limited to LTE, IEEE 802.11n communication technology, multicast capabilities, and certain subcarrier frequency structures.

40. MTel is informed and believes, and thereon alleges, that Leap directly infringed literally and/or under the doctrine of equivalents, one or more of the claims of the '210 Patent

when Leap makes, uses, sells, or offers for sale wireless devices that allow its customers access to Leap's nationwide network using MIMO functionality, including but not limited to LTE and Wi-Fi networks, multicast capabilities, and certain subcarrier frequency structures.

41. As a result of Leap's unlawful infringement of the '210 Patent, MTel has suffered damage. MTel is therefore entitled to recover from Leap damages adequate to compensate for such infringement.

**PRAYER FOR RELIEF**

WHEREFORE, Plaintiff MTel prays for entry of judgment against Leap as follows:

- A. That Leap has directly infringed each of the asserted Patents under 35 U.S.C. §271(a);
- B. That Leap has induced the infringement by others of the asserted '891 Patent and the asserted '403 Patent under 35 U.S.C. §271(b);
- C. That Leap has contributed to the infringement by others of the asserted '891 Patent and the asserted '403 Patent under 35 U.S.C. §271(c);
- D. That Leap provide to MTel an accounting of all gains, profits, savings, and advantages derived by Leap's direct or indirect infringement of the asserted Patents, and that MTel be awarded damages adequate to compensate for the wrongful infringement by Leap, in accordance with 35 U.S.C. §284;
- E. That the damages awarded to MTel with respect to the '403 Patent and the '891 Patent since the date of Leap's first notice of the respective Patent be increased up to three times, in view of Leap's willful infringement, in accordance with 35 U.S.C. §284;
- F. That this case be declared an exceptional one in favor of MTel under 35 U.S.C. §285, and that MTel be awarded its reasonable attorneys' fees and all other costs and expenses

incurred in connection with this civil action in accordance with 35 U.S.C. §285 and Rule 54(d) of the Federal Rules of Civil Procedure;

G. That Leap, its officers, agents, servants, employees, attorneys, and those persons in active concert or participation with any of them, be preliminarily and permanently restrained and enjoined from continuing to infringe the '891 Patent; and

H. That MTel receive all other or further relief as this Court may deem just or proper.

**DEMAND FOR JURY TRIAL**

Pursuant to Federal Rule of Civil Procedure 38(b), MTel hereby demands a trial by jury on all issues triable to a jury.

Dated: June 4, 2014

Respectfully Submitted,

/s/ Henning Schmidt

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**ATTORNEYS FOR PLAINTIFF**

**MOBILE TELECOMMUNICATIONS**

**TECHNOLOGIES, LLC**

**CERTIFICATE OF SERVICE**

The undersigned certifies that on this 4<sup>th</sup> day of June, 2014, all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document through the Court's CM/ECF system under Local Rule CV-5(a)(3). Any other counsel of record will be served by a facsimile transmission and/or first class mail.

/s/ Henning Schmidt

Henning Schmidt