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**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF UTAH, CENTRAL DIVISION**

WILSON ELECTRONICS, LLC, a Delaware  
limited liability company; and DOES 1-3

Plaintiff

v.

CELLPHONE-MATE, INC. d/b/a  
SURECALL, a California corporation;  
SHENZHEN SURECALL  
COMMUNICATION TECH. CO. LTD., an  
entity formed in the People's Republic of  
China which also does business as Shen Zhen  
Feng Mai Communications Co., Ltd;  
Cellphone-Mate SZ branch and Shenzhen  
Suke Communications; and DOES 1-3

Defendants.

**SECOND AMENDED COMPLAINT**

Case No. 2:17-cv-00305-DB-DBP

Judge Dee Benson

Magistrate Judge Dustin B. Pead

Plaintiff Wilson Electronics, LLC (hereinafter "Plaintiff" or "Wilson"), by and through its counsel, hereby files this Second Amended Complaint with Jury Demand against Defendant Cellphone-Mate, Inc. d/b/a SureCall; Shenzhen SureCall Communication Tech. Co. Ltd., an

entity formed in the People's Republic of China which also conducts business under the names Shen Zhen Feng Mai Communications Co., Ltd, Cellphone-mate SZ branch and Shenzhen Suke Communications; and Does 1-3.

## **SECOND AMENDED COMPLAINT**

Plaintiff complains and alleges as follows:

### **PARTIES, JURISDICTION, AND VENUE**

1. Wilson is a Delaware limited liability company having a principal place of business at 3301 E. Deseret Drive, St. George, Utah 84790.

2. Upon information and belief, Defendant SureCall ("SureCall") is a California corporation with its principal place of business at 48346 Milmont Drive, Fremont, California 94538.

3. Upon information and belief, Defendant Shenzhen SureCall Communication Tech. Co. Ltd. ("Shenzhen") is an entity formed in the People's Republic of China with its principal place of business at 3rd Floor, Building 9, Mabian Industrial Park, 72nd Zone, Xin'an Street, Bao'an District, Shenzhen City, Guangdong Province, China.

4. Upon information and belief, Shenzhen also conducts business under the names Shen Zhen Feng Mai Communications Co., Ltd, Cellphone-Mate SZ Branch and as Shenzhen Suke Communications.

5. Upon information and belief, Defendant Does 1-3 are other entities owned and controlled by SureCall and Shenzhen or under common control with SureCall and Shenzhen. Hereinafter SureCall, Shenzhen, and Does 1-3 shall be referred to as the "SureCall Defendants" or as "Defendants."

6. Plaintiff brings this action under U.S. patent laws, 35 U.S.C. §§ 1 et seq.

7. This Court has subject matter jurisdiction over this action under 28 U.S.C. §§ 1331 and 1338.

8. This Court has supplemental jurisdiction over any state law, or statutory and common law claims pursuant to 28 U.S.C. § 1367.

9. Upon information and belief, this Court has specific personal jurisdiction over the SureCall Defendants because the SureCall Defendants have purposefully directed their activities toward the state of Utah by selling its products—which infringe the patents at issue in this case—directly into the state of Utah, thereby also inducing and contributing to the infringement of the patents at issue.

10. Upon information and belief, Defendant SureCall maintains an office and employees in the state of Utah and has substantial, continuous contacts with the state of Utah. Accordingly, this Court has general personal jurisdiction over SureCall.

11. Upon information and belief, Shenzhen and Defendant Does 1-3, are Chinese entities that manufacture, import and sell into the United States, one or more products that infringe the patents at issue. Upon information and belief, Defendants Shenzhen and Does 1-3 have manufactured, sold and imported into the United States infringing products for the benefit of Defendant SureCall.

12. Upon information and belief, Shenzhen is not incorporated in the United States, but claims to have a branch office in the United States.

13. Venue is proper in this judicial district pursuant to 28 U.S.C. § 1391 because the SureCall Defendants conduct business in this district directly related to the patents and facts at

issue in this case, are subject to the court's personal jurisdiction in this case, and a substantial part of the infringing and wrongful activity giving rise to the Plaintiff's causes of action occurred in this judicial district and caused harm in this judicial district.

### **BACKGROUND**

14. In the past two decades, the proliferation of mobile electronic devices using cellular communications (e.g., mobile phones, tablets, laptops with air cards) has increased people's dependence on them for communication (e.g., phone calls, texts, e-mails), commerce (e.g., online shopping), and pleasure (e.g., mobile video games).

15. The increased dependence on these mobile electronic devices has also increased the importance of having reliable cellular signal coverage between the devices and base stations or cell sites (e.g., cell towers).

16. Modern base stations are designed to receive signals simultaneously from multiple mobile electronic devices, such as cell phones. The base station can operate optimally when the received signals are all approximately the same power level at the base station. A signal that is received with a relatively high amplitude, relative to other signals, can raise the noise floor of the amplifier at the base station and may cause the amplifier to saturate. This can reduce or disable the ability of the base station to amplify signals from any mobile devices. To reduce the chances of saturation of the amplifier, when a mobile electronic device, such as a cell phone, is close to the nearest cell site, the base station directs the device to transmit at a relatively low amplitude. This can reduce the amount of power used by the mobile electronic device, and also reduce the chances of saturation of an amplifier at the base station. Conversely, when a mobile electronic device is far from the nearest cell site, the cell site directs the device to

transmit at a much higher amplitude to allow the signal to be received at the base station with a similar power as signals from relatively close mobile electronic devices. But there are physical and other practical limits (e.g., battery life, heat) to the maximum cellular signal output of a mobile electronic device.

17. Moreover, cellular signals may be attenuated or otherwise diminished for a variety of reasons, including without limitation, attenuation and interference due to the cellular signals reflecting off of and traveling through natural topology (e.g., mountains) or man-made structures (e.g., cars, buildings) and a distance between a mobile electronic device and a cell site.

**Cellular Signal Boosters Improve Cellular Coverage and Reliability**

18. Cellular signal boosting systems (“boosters”), also referred to as repeaters, are designed to amplify signals between mobile electronic devices and cell sites to provide consistent connections between cell sites and the mobile electronic devices. Boosters increase the power of a received signal by using an electronic circuit called an amplifier. The amplification factor or “gain” of an amplifier is the measure of its ability to generate a more powerful output signal relative to its input signal. Some amplifiers have a fixed gain, while other amplifiers are capable of variable gain. Boosters typically have multiple amplifiers to enable simultaneous connections between mobile electronic devices and base stations over multiple different channels and/or for multiple cell sites operating at different frequencies.

19. A booster transmits the amplified cellular signals to a cell site or mobile electronic device via one or more antennas. Similarly, a booster receives cellular signals from a cell site or mobile electronic device via the one or more antennas.

20. Boosters can be used to amplify signals from a cell site and the cellular signal

output of mobile electronic devices. Weaker signals can be amplified more than relatively strong signals. For instance, when the strength of the received signal from a cell site is weak (which indicates that the distance between the cell site and the booster is great or significant attenuation has occurred), the amplification of the cellular signals from the cell site by the booster can be relatively high. The booster can also provide significant amplification to cellular signals from the device to ensure that the cellular signals are sent to the cell site with sufficient power to be received. Conversely, when the strength of the received signal from a cell site is strong (which indicates that the distance between the cell site and the booster is small), the amplification of the cellular signals from the cell site and device by the booster can be lower.

21. Some boosters use variable gain amplifiers with a fixed gain to generate an output signal with a selected amplitude and then attenuate the selected amplitude to a desired level to achieve the variable gain. A detector can measure the amplitude of the output signal, and this amplitude is compared with an amplitude of a reference signal. If the measured amplitude of the output signal is higher than the amplitude of the reference signal, the booster can attenuate the amplitude of the output signal so that it more closely resembles the reference signal amplitude. The level of attenuation can be higher or lower depending on the desired strength of the amplified output signal.

22. Many boosters use variable gain amplifiers to provide more or less amplification depending on the strength of the input signal, thus ensuring that the strength of the output signal remains relatively constant. These boosters utilize a technique known as automatic gain control (“AGC”).

23. In AGC, the output signal generated by the variable gain amplifier is used in a

feedback loop to, if necessary, adjust the gain (and/or attenuation) of the variable gain amplifier. A detector measures the amplitude of the output signal from the variable gain amplifier, and this amplitude is measured against the amplitude of a reference signal. If the amplitude of the output signal is higher than the reference signal amplitude, the booster will adjust the gain (or attenuation) of the variable gain amplifier to decrease the amplitude of the output signal. Conversely, if the amplitude of the output signal is lower than the reference signal amplitude, the booster will adjust the gain (or attenuation) of the variable gain amplifier to increase the amplitude of the output signal up to the max allowable gain.

**The FCC Has Set Standards and Regulations for Cellular Signal Boosters**

24. The Federal Communications Commission (“FCC”) has introduced a regulatory framework for signal boosters, including a Network Protection Standard that specifies the technical and operational requirements necessary to minimize the potential for interference from consumer signal boosters to wireless networks. Some of these requirements are codified in Title 47 of the Code of Federal Regulations, Chapter I, Subchapter B, Part 20, Section 20.21 (“FCC Booster Regulations”), copies of which are attached to this Second Amended Complaint as Exhibit 1.

25. An FCC certified booster must comply with the technical requirements in the FCC Booster Regulations. In order to obtain FCC certification, companies that manufacture and sell a booster submit a test report for each booster design demonstrating that the booster design meets the technical requirements of the FCC Booster Regulations. Specific test procedures are used to show that the booster meets the FCC Booster Regulations. The test report contains the results of acceptable measurement procedures published by the FCC and known as Knowledge

Database 935210 D03 (“FCC Booster Testing Procedures” or “KDB”), a copy of which is attached to this Second Amended Complaint as Exhibit 2.

26. The KDB test procedures correspond to specific FCC Booster Regulations recited in 47 C.F.R. § 20.21. The following table lists some specific FCC Booster Regulations and their corresponding KDB test procedures.

<b>FCC Booster Regulation</b>	<b>FCC Booster Testing Procedure</b>
47 C.F.R. § 20.21(e)(3) (“Frequency Bands”)	KDB 7.1 (“Authorized Frequency band verification test”)
47 C.F.R. § 20.21(e)(8)(i)(A) (“Noise Limits”)	KDB 7.7.1 (“Maximum transmitter noise power level”)
47 C.F.R. § 20.21(e)(8)(i)(B) (“Bidirectional Capability”)	KDB 7.2 (“Maximum power measurement test procedure”) KDB 7.3 (“Maximum booster gain computation”)
47 C.F.R. § 20.21(e)(8)(i)(C)(1) (“Booster Gain Limits”)	KDB 7.3 (“Maximum booster gain computation”) KDB 7.9 (“Variable booster gain test procedure”)
47 C.F.R. § 20.21(e)(8)(i)(D) (“Power Limits”)	KDB 7.2 (“Maximum power measurement test procedure”)
47 C.F.R. § 20.21(e)(8)(i)(F) (“Intermodulation Limits”)	KDB 7.4 (“Intermodulation-product test procedure”)
47 C.F.R. § 20.21(e)(8)(i)(I) (“Uplink Inactivity”)	KDB 7.8 (“Uplink inactivity test procedure”)
47 C.F.R. § 20.21(e)(8)(ii)(A) (“Anti-Oscillation”) 47 C.F.R. § 20.21(e)(5) (“Anti-Oscillation”)	KDB 7.11.2 (“Oscillation restart tests”); 7.11.3 (“Test procedure for measuring oscillation mitigation or shutdown”)

#### **Wilson’s Booster Related Patents**

27. Wilson is a pioneer in the development of boosters. Today, Wilson is an industry leader in developing, manufacturing, marketing, distributing, and selling cellular signal boosters for mobile, residential, commercial, and machine to machine (M2M) settings.

28. Wilson has been awarded and is the owner of many patents relating to and



covering its cellular signal boosters. Among the patents that Wilson has been awarded are the utility patents listed below (the “Patents-in-Suit”), attached as Exhibits 3-14 to this Second Amended Complaint.

<b><u>Patent Number</u></b>	<b><u>Title</u></b>
7,221,967 (the “’967 Patent”)	Enhanced Gain Selected Cell Phone Booster System
7,409,186 (the “’186 Patent”)	Detection and Elimination of Oscillation within Cellular Network Amplifiers
7,486,929 (the “’929 Patent”)	Processor Controlled Variable Gain Cellular Network Amplifiers with Oscillation Detection Circuit
7,729,669 (the “’669 Patent”)	Processor Controlled Variable Gain Cellular Network Amplifier
7,783,318 (the “’318 Patent”)	Cellular Network Amplifier with Automated Output Power Control
8,583,033 (the “’033 Patent”)	Oscillation Protected Amplifier Base Station Overload and Noise Floor Protection
8,639,180 (the “’180 Patent”)	Verifying and Mitigating Oscillation in Amplifiers
8,755,399 (the “’399 Patent”)	Common-Direction Duplexer
8,849,187 (the “’187 Patent”)	Radio Frequency Amplifier Noise Reduction System
8,874,030 (the “’030 Patent”)	Oscillation Detection and Oscillation Mitigation in Amplifiers
8,874,029 (the “’029 Patent”)	Verifying Oscillation in Amplifiers and the Mitigation Thereof
8,583,034 (the “’034 Patent”)	Verifying and Mitigating Oscillation in Amplifiers

29. In May 2016, Wilson offered SureCall a license to the following five patents: ‘033, ‘034, ‘180, ‘029, and the ‘030. The letter from Wilson’s counsel offering to license these

five patents (“License Offer”) enclosed copies of each of the patents. A copy of the License Offer is attached to this Second Amended Complaint as Exhibit 15. SureCall’s response to the offer in June 2016 identified five other patents owned by Wilson, including the ’186 Patent, the ’929 Patent, the ’669 Patent, the ’318 Patent, and the ’187 Patent.

30. Upon information and belief, given Wilson’s letter offer to license its patents to SureCall and SureCall’s response, SureCall has reviewed and is thus aware of each patent of the Patents-in-Suit.

31. From the middle of 2016 through the latter half of 2016, Wilson and SureCall discussed the possibility of Wilson licensing the Patents-in-Suit to SureCall.

**SureCall Infringes Wilson’s Patents**

32. The SureCall Defendants are in the business of making, using, selling, offering for sale, and/or importing into the United States cellular signal boosting systems, including boosters for use in residences, commercial offices, and automobiles.

33. SureCall’s products are sold through online retailers, where they are purchased by consumers throughout the United States, including the State of Utah.

34. One category of SureCall’s products are machine-to-machine (“M2M”) boosters designed to be connected to a modem or data card in a mobile or other electronic device. One of SureCall’s M2M boosters is called the “M2M 4G LTE Booster” (“4G LTE Booster”). A copy of the 4G LTE Booster Data Sheet is attached to this Second Amended Complaint as Exhibit 16.

35. Another one of SureCall’s products is a residential/commercial booster called the “Fusion5s,” which SureCall advertises on its website as a “Voice, Text & 4G LTE Cell Phone Signal Booster.” The Fusion5s Data Sheet is attached to this Second Amended Complaint as

Exhibit 17.

36. The 4G LTE Booster and the Fusion5s are representative of many other SureCall products that also infringe Wilson's patent rights, including at least the Fusion2Go, Fusion2Go 2.0 RV, Fusion2Go 3.0, Fusion2Go 3.0 Canada, Fusion2Go 3.0 RV Canada, Fusion2Go 3.0 V.2, Fusion2Go 3.0 Fleet, Fusion2Go RV, Fusion2Go Max, Flare, Flare 3.0, Flare 3.0 Canada, Dual Force, EZ 4G, EZ 4G Canada, EZBOOST 3G, EZBOOST 4G, EZ Call, Flex2Go, Flex2Go-RV, FlexPro, Force5, Force5 2.0, Force5 2.0 Industrial, Force7, Force5-50, Fusion2Go, Fusion4Home, Fusion4Home 3.0, Fusion4Home 3.1, Fusion4Home 3.0 Yagi Whip, Fusion4Hom 3.0 Canada, Fusion5, Fusion5s, Fusion5X, Fusion5x 2.0, Fusion5CA, Fusion7, FusionTrek, M2M Signal Booster, M2M-A, M2M-V, Mobile30, TriFlex-2Go-A, TriFlex-2Go-T, TriFlex-2Go-V, TriFlex-A, TriFlex-T, TriFlex-V, CM-Fusion5, N-Range 2.0 products. These products shall be referred to as the "Accused Products."

37. Upon information and belief, Shenzhen, Feng Mai and Does 1-3 manufacture, or have manufactured, one or more of the Accused Products and sell, have sold, or have imported those products to Defendant SureCall in the United States.

38. The SureCall Defendants have not obtained permission from Wilson to use any of the rights attendant to the Patents-in-Suit in connection with the Accused Products.

39. By reason of the SureCall Defendants' infringing acts, Wilson has suffered damage in an amount to be proven at trial. To the extent that any of the Patents-in-Suit are determined to be essential to complying with the FCC Booster Regulations, Wilson is entitled at least to monetary damages and/or a reasonably royalty adequate to compensate it for the SureCall Defendants' infringement under 35 U.S.C. § 284. To the extent any of the Patents-in-

Suit are not deemed essential to compliance with the FCC Booster Regulations, the harm to Wilson from the SureCall Defendants' infringing activities is not fully compensable by monetary damages, and Wilson will continue to suffer irreparable harm unless the infringing conduct is enjoined.

40. Upon information and belief, the SureCall Defendants acted in an objectively reckless manner with respect to Wilson's patent rights. Upon information and belief, the SureCall Defendants have made, sold, offered to sell, and/or imported into the United States their boosters knowing that it was highly likely that their acts would infringe the Patents-in-Suit. In addition, upon information and belief, the SureCall Defendants have knowingly copied certain product designs claimed in certain of the Patents-In-Suit. As a result, the SureCall Defendants have engaged in willful infringement of the Patents-in-Suit, and Wilson is therefore entitled to treble damages, interest, costs, and attorney's fees in accordance with 35 U.S.C. §§ 284 and 285.

**FIRST CAUSE OF ACTION  
(Infringement of the '967 Patent)**

41. Plaintiff hereby incorporates and realleges the preceding paragraphs of this Complaint.

42. Upon information and belief, at least one of the Accused Products infringe at least one claim of the '967 Patent.

43. Upon information and belief, by making, using, selling, offering for sale, and/or importing into the United States products, including at least the 4G LTE Booster, the SureCall Defendants have in the past, do now, and continue to directly infringe, contributorily infringe, and/or induce others to infringe the claims of the '967 patent literally and/or under the doctrine

of equivalents, in violation of 35 U.S.C. § 271.

44. Claim 1 of the '967 Patent recites:

A cell phone booster which is constructed to connect to a cell phone and to an antenna and which can boost a cell phone output signal that is generated by the cell phone for transmission by the antenna, wherein the booster includes a control that detects the strength of the cell phone output signal and that selects a level of amplification of the cell phone output signal that is delivered to the antenna, comprising:  
an amplifier which has an input coupled to said cell phone output, and which has an amplifier output, said amplifier having a constant gain which is in a linear region of the amplifier;  
an attenuator apparatus which is connected in series with said amplifier and which is switchable between at least first and second discrete attenuation levels;  
a switch arrangement controlled by said control which selects one of said attenuation levels of said attenuator apparatus in response to the strength of said cell phone output signal

45. A claim chart cross referencing the elements of Claim 1 with an explanation of the infringing aspects of the 4G LTE Booster—an exemplary infringing product—is attached to this Second Amended Complaint as Exhibit 18.

46. Upon information and belief, Defendants' customers and others are using the 4G LTE Booster and at no time has Wilson granted the SureCall Defendants' customers and other users of the 4G LTE Booster permission to practice the claims of the '967 Patent.

47. Accordingly, the SureCall Defendants' customers and users of the 4G LTE Booster have infringed and are directly infringing the '967 Patent.

48. Upon information and belief, Defendants knew about the '967 Patent. At least based on the parties' license discussions, upon information and belief, Defendant SureCall knew that its customers and other users, in using the 4G LTE Booster, were practicing the claims of the '967 Patent.

49. Upon information and belief, Defendant SureCall's booster product manuals

instruct customers and other users on how to use the 4G LTE Booster.

50. Upon information and belief, Defendant SureCall has induced and is inducing its customers and other users of the 4G LTE Booster to infringe claims of the '967 Patent.

51. Furthermore, upon information and belief, the processes employed by the 4G LTE Booster are material to practicing the '967 Patent and do not have a substantial non-infringing use.

52. Accordingly, Defendants have contributed and are contributing to the infringement of the '967 Patent.

53. By reason of Defendants' infringement of the claims of the '967 Patent alleged herein, Wilson has suffered damage in an amount to be proven at trial. To the extent that the '967 Patent is determined to be essential to complying with the FCC Booster Regulations, Wilson is entitled at least to monetary damages and/or a reasonably royalty adequate to compensate it for SureCall's infringement of the '967 Patent under 35 U.S.C. § 284. But to the extent that the '967 Patent is not deemed essential to compliance with the FCC Booster Regulations, the harm to Wilson from Defendants' infringing activities is not fully compensable by monetary damages, and Wilson will continue to suffer irreparable harm unless Defendants' infringing conduct is enjoined.

54. Upon information and belief, Defendants acted in an objectively reckless manner with respect to Wilson's patent rights. Upon information and belief, Defendants have made, sold, offered to sell, and/or imported into the United States their boosters knowing that it was highly likely that their acts would infringe the '967 Patent. As a result, Defendants have engaged in willful infringement of the '967 Patent, and Wilson is therefore entitled to treble damages,

interest, costs, and attorney's fees in accordance with 35 U.S.C. §§ 284 and 285.

**SECOND CAUSE OF ACTION  
(Infringement of the '186 Patent)**

55. Plaintiff hereby incorporates and realleges the preceding paragraphs of this Complaint.

56. Upon information and belief, at least one of the Accused Products infringe at least one claim of the '186 Patent.

57. Upon information and belief, by making, using, selling, offering for sale, and/or importing into the United States products, including at least the Fusion5s, the SureCall Defendants have in the past, now, and continue to directly infringe, contributorily infringe, and/or induce others to infringe the claims of the '186 patent literally and/or under the doctrine of equivalents, in violation of 35 U.S.C. § 271.

58. Claim 1 of the '186 Patent recites:

In a network amplifier, a method for substantially reducing oscillation, the method comprising:  
receiving a cellular signal at a first antenna of a network amplifier;  
applying a first amplification factor to the cellular signal;  
transmitting a resultant amplified cellular signal via a second antenna;  
measuring a first signal level of the cellular signal while the first amplification factor is being applied to the cellular signal;  
applying a second amplification factor to the cellular signal, the second amplification factor being less than the first amplification factor;  
measuring a second signal level of the cellular signal while the second amplification factor is being applied to the cellular signal; and  
reducing the first amplification factor by a predetermined amount in the event that the second signal level is significantly less than the first signal level

59. A claim chart cross referencing the elements of Claim 1 with an explanation of the infringing aspects of the Fusion5s—an exemplary infringing product—is attached to this

Second Amended Complaint as Exhibit 19.

60. Upon information and belief, the SureCall Defendants' customers and others are using the Fusion5s and at no time has Wilson granted the SureCall Defendants' customers and other users of the Fusion5s permission to practice the claims of the '186 Patent.

61. Accordingly, the SureCall Defendants' customers and users of the Fusion5s have infringed and are directly infringing the '186 Patent.

62. Plaintiff is informed and believes that Defendants knew about the '186 Patent. At least based on the parties' license discussions, upon information and belief, Defendant SureCall knew that its customers and other users, in using the Fusion5s, were practicing the claims of the '186 Patent.

63. Upon information and belief, SureCall's booster product manuals instruct customers and other users on how to use the Fusion5s.

64. Upon information and belief, SureCall has induced and is inducing its customers and other users of the Fusion5s to infringe claims of the '186 Patent.

65. Furthermore, upon information and belief, the processes employed by the Fusion5s are material to practicing the '186 Patent and do not have a substantial non-infringing use.

66. Accordingly, Defendants have contributed and are contributing to the infringement of the '186 Patent.

67. By reason of Defendants' infringement of the claims of the '186 Patent alleged herein, Wilson has suffered damage in an amount to be proven at trial. To the extent that the '186 Patent is determined to be essential to complying with the FCC Booster Regulations, Wilson is



entitled at least to monetary damages and/or a reasonable royalty adequate to compensate it for Defendants' infringement of the '186 Patent under 35 U.S.C. § 284. But to the extent that the '186 Patent is not deemed essential to compliance with the FCC Booster Regulations, the harm to Wilson from Defendants' infringing activities is not fully compensable by monetary damages, and Wilson will continue to suffer irreparable harm unless Defendants' infringing conduct is enjoined.

68. Upon information and belief, Defendants have acted in an objectively reckless manner with respect to Wilson's patent rights. Upon information and belief, Defendants have made, sold, offered to sell, and/or imported into the United States their boosters knowing that it was highly likely that their acts would infringe the '186 Patent. As a result, Defendants have engaged in willful infringement of the '186 Patent, and Wilson is therefore entitled to treble damages, interest, costs, and attorney's fees in accordance with 35 U.S.C. §§ 284 and 285.

**THIRD CAUSE OF ACTION  
(Infringement of the '929 Patent)**

69. Plaintiff hereby incorporates and realleges the preceding paragraphs of this Complaint.

70. Upon information and belief, at least one of the Accused Products infringe at least one claim of the '929 Patent.

71. Upon information and belief, by making, using, selling, offering for sale, and/or importing into the United States products, including at least the Fusion5s, the SureCall Defendants have in the past, do now, and continue to directly infringe, contributorily infringe, and/or induce others to infringe the claims of the '929 patent literally and/or under the doctrine

of equivalents, in violation of 35 U.S.C. § 271.

72. Claim 1 of the '929 Patent recites:

A network amplifier, comprising:

- a first antenna for communicating signals to and from a base station;
- a second antenna for communicating signals to and from a handset;
- a first variable gain module having an input coupled to the first antenna and an output coupled to the second antenna, the first variable gain module applying a first amplification factor to first signals received from the base station;
- a second variable gain module having an input coupled to the second antenna and an output coupled to the first antenna, the second variable gain module applying a second amplification factor to second signals received from the handset; and
- a control circuit coupled to the first and second variable gain modules, wherein the control circuit is configured to:
  - analyze at least one of the first signals and the second signals to detect the presence of an oscillation, and in the event that an oscillation is detected, set the first amplification factor and the second amplification factor for substantially reducing the oscillation; and
  - set the first amplification factor and the second amplification factor so that, in the event that oscillation is not detected, signals transmitted from the first antenna have sufficient power to be transmitted to the base station and signals transmitted from the second antenna have sufficient power to be transmitted to the handset

73. A claim chart cross referencing the elements of Claim 1 with an explanation of the infringing aspects of the Fusion5s—an exemplary infringing product—is attached to this Second Amended Complaint as Exhibit 20.

74. Upon information and belief, the SureCall Defendants' customers and others are using the Fusion5s and at no time has Wilson granted the SureCall Defendants' customers and other users of the Fusion5s permission to practice the claims of the '929 Patent.

75. Accordingly, the SureCall Defendants' customers and users of the Fusion5s have infringed and are directly infringing the '929 Patent.

76. Upon information and belief, Defendants knew about the '929 Patent. At least based on the parties' license discussions, upon information and belief, Defendant SureCall knew

that its customers and other users, in using the Fusion5s, were practicing the claims of the '929 Patent.

77. Upon information and belief, Defendant SureCall's booster product manuals instruct customers and other users on how to use the Fusion5s.

78. Upon information and belief, Defendant SureCall has induced and is inducing its customers and other users of the Fusion5s to infringe claims of the '929 Patent.

79. Furthermore, upon information and belief, the processes employed by the Fusion5s are material to practicing the '929 Patent and do not have a substantial non-infringing use.

80. Accordingly, Defendants have contributed and are contributing to the infringement of the '929 Patent.

81. By reason of Defendants' infringement of the claims of the '929 Patent alleged herein, Wilson has suffered damage in an amount to be proven at trial. To the extent that the '929 Patent is determined to be essential to complying with the FCC Booster Regulations, Wilson is entitled at least to monetary damages and/or a reasonably royalty adequate to compensate it for Defendants' infringement of the '929 Patent under 35 U.S.C. § 284. But to the extent that the '929 Patent is not deemed essential to compliance with the FCC Booster Regulations, the harm to Wilson from Defendants' infringing activities is not fully compensable by monetary damages, and Wilson will continue to suffer irreparable harm unless Defendants' infringing conduct is enjoined.

82. Upon information and belief, Defendants acted in an objectively reckless manner with respect to Wilson's patent rights. Upon information and belief, Defendants have made, sold,

offered to sell, and/or imported into the United States their boosters knowing that it was highly likely that their acts would infringe the '929 Patent. As a result, Defendants have engaged in willful infringement of the '929 Patent, and Wilson is therefore entitled to treble damages, interest, costs, and attorney's fees in accordance with 35 U.S.C. §§ 284 and 285.

**FOURTH CAUSE OF ACTION  
(Infringement of the '669 Patent)**

83. Plaintiff hereby incorporates and realleges the preceding paragraphs of this Complaint.

84. Upon information and belief, at least one of the Accused Products infringe at least one claim of the '669 Patent.

85. Upon information and belief, by making, using, selling, offering for sale, and/or importing into the United States products, including at least the Fusion5s, Defendants have in the past, do now, and continue to directly infringe, contributorily infringe, and/or induce others to infringe the claims of the '669 patent literally and/or under the doctrine of equivalents, in violation of 35 U.S.C. § 271.

86. Claim 1 of the '669 Patent recites:

A network amplifier, comprising:

- an antenna for receiving a downlink signal from a base station;
- a communication device for receiving an uplink signal from a handset;
- a first variable gain module connected with the communication device, wherein the first variable gain module applies a first amplification factor to the uplink signal to generate an adjusted uplink signal, the adjusted uplink signal transmitted to the base station via the antenna;
- a second variable gain module connected to the antenna, wherein the second gain module applies a second amplification factor to the downlink signal to generate an adjusted downlink signal, the adjusted downlink signal communicated to the handset via the communication device;
- a first detector that receives the downlink signal from the antenna and determines a

level of the downlink signal;  
a processor for executing computer-readable instructions; and  
one or more computer-readable media having stored thereon the computer-executable instructions that, when executed by the processor, cause the processor to determine a value of the first amplification factor, the value being a function of the level of the downlink signal, and being selected so that the adjusted uplink signal is transmitted with sufficient power to reach the base station

87. A claim chart cross referencing the elements of Claim 1 with an explanation of the infringing aspects of the Fusion5s—an exemplary infringing product—is attached to this Second Amended Complaint as Exhibit 21.

88. Upon information and belief, the SureCall Defendants' customers and others are using the Fusion5s and at no time has Wilson granted the SureCall Defendants' customers and other users of the Fusion5s permission to practice the claims of the '669 Patent.

89. Accordingly, the SureCall Defendants' customers and users of the Fusion5s have infringed and are directly infringing the '669 Patent.

90. Upon information and belief, Defendants knew about the '669 Patent. At least based on the parties' license discussions, upon information and belief, Defendant SureCall knew that its customers and other users, in using the Fusion5s, were practicing the claims of the '669 Patent.

91. Upon information and belief, SureCall's booster product manuals instruct customers and other users on how to use the Fusion5s.

92. Upon information and belief, Defendant SureCall has induced and is inducing its customers and other users of the Fusion5s to infringe claims of the '669 Patent.

93. Furthermore, upon information and belief, the Fusion5s is material to practicing the '669 Patent and does not have a substantial non-infringing use.

94. Accordingly, Defendants have contributed and are contributing to the infringement of the '669 Patent.

95. By reason of Defendants' infringement of the claims of the '669 Patent alleged herein, Wilson has suffered damage in an amount to be proven at trial. To the extent that the '669 Patent is determined to be essential to complying with the FCC Booster Regulations, Wilson is entitled at least to monetary damages and/or a reasonably royalty adequate to compensate it for Defendants' infringement of the '669 Patent under 35 U.S.C. § 284. But to the extent that the '669 Patent is not deemed essential to compliance with the FCC Booster Regulations, the harm to Wilson from Defendants' infringing activities is not fully compensable by monetary damages, and Wilson will continue to suffer irreparable harm unless Defendants' infringing conduct is enjoined.

96. Upon information and belief, Defendants have acted in an objectively reckless manner with respect to Wilson's patent rights. Upon information and belief, Defendants have made, sold, offered to sell, and/or imported into the United States their boosters knowing that it was highly likely that their acts would infringe the '669 Patent. As a result, Defendants have engaged in willful infringement of the '669 Patent, and Wilson is therefore entitled to treble damages, interest, costs, and attorney's fees in accordance with 35 U.S.C. §§ 284 and 285.

**FIFTH CAUSE OF ACTION  
(Infringement of the '318 Patent)**

97. Plaintiff hereby incorporates and realleges the preceding paragraphs of this Complaint.

98. Upon information and belief, at least one of the Accused Products infringe at least

one claim of the '318 Patent.

99. Upon information and belief, by making, using, selling, offering for sale, and/or importing into the United States products, including at least the Fusion5s, the SureCall Defendants have in the past, do now, and continue to directly infringe, contributorily infringe, and/or induce others to infringe the claims of the '318 patent literally and/or under the doctrine of equivalents, in violation of 35 U.S.C. § 271.

100. Claim 1 of the '318 Patent recites:

A network amplifier, comprising:

- a first variable gain module having an input configured to receive an uplink signal from a handset and configured to apply a first amplification factor to the uplink signal to generate an adjusted uplink signal to be transmitted to a base station;
  - a first detector configured to detect a level of the uplink signal;
  - a gain control module configured to control the first amplification factor of the first variable gain module for limiting the output of the first variable gain module to ensure that the level of the adjusted uplink signal does not exceed a first predetermined limit;
  - a first antenna configured to receive a downlink signal from the base station, the first antenna being coupled to an output of the first variable gain module and configured to transmit the adjusted uplink signal to a base station; and
  - a second gain module having an input coupled to the first antenna, the second gain module configured to apply a second amplification factor to the downlink signal, thereby generating an adjusted downlink signal to be communicated to the handset;
  - a second detector for detecting a level of the downlink signal,
- wherein the second gain module is a second variable gain module and is coupled to the gain control module, the gain control module further configured to ensure that the level of the adjusted downlink signal does not exceed a second predetermined limit,
- wherein the first and second amplification factors are controlled independently from one another by the gain control module, and
- wherein the first amplification factor is allowed to exceed the second amplification factor, and the first predetermined limit is established at a higher level than the second predetermined limit

101. A claim chart cross referencing the elements of Claim 1 with an explanation of

the infringing aspects of the Fusion5s—an exemplary infringing product—is attached to this Second Amended Complaint as Exhibit 22.

102. Upon information and belief, Defendants’ customers and others are using the Fusion5s and at no time has Wilson granted Defendants’ customers and other users of the Fusion5s permission to practice the claims of the ’318 Patent.

103. Accordingly, the SureCall Defendants’ customers and users of the Fusion5s have infringed and are directly infringing the ’318 Patent.

104. Upon information and belief, Defendants knew about the ’318 Patent. At least based on the parties’ license discussions, upon information and belief, Defendant SureCall knew that its customers and other users, in using the Fusion5s, were practicing the claims of the ’318 Patent.

105. Upon information and belief, SureCall’s booster product manuals instruct customers and other users on how to use the Fusion5s.

106. Upon information and belief, Defendant SureCall has induced and is inducing its customers and other users of the Fusion5s to infringe claims of the ’318 Patent.

107. Furthermore, upon information and belief, the Fusion5s is material to practicing the ’318 Patent and does not have a substantial non-infringing use.

108. Accordingly, Defendants have contributed and are contributing to the infringement of the ’318 Patent.

109. By reason of Defendants’ infringement of the claims of the ’318 Patent alleged herein, Wilson has suffered damage in an amount to be proven at trial. To the extent that the ’318 Patent is determined to be essential to complying with the FCC Booster Regulations, Wilson is



entitled at least to monetary damages and/or a reasonably royalty adequate to compensate it for Defendants' infringement of the '318 Patent under 35 U.S.C. § 284. But to the extent that the '318 Patent is not deemed essential to compliance with the FCC Booster Regulations, the harm to Wilson from Defendants' infringing activities is not fully compensable by monetary damages, and Wilson will continue to suffer irreparable harm unless Defendants' infringing conduct is enjoined.

110. Upon information and belief, Defendants acted in an objectively reckless manner with respect to Wilson's patent rights. Upon information and belief, Defendants have made, sold, offered to sell, and/or imported into the United States their boosters knowing that it was highly likely that their acts would infringe the '318 Patent. As a result, Defendants have engaged in willful infringement of the '318 Patent, and Wilson is therefore entitled to treble damages, interest, costs, and attorney's fees in accordance with 35 U.S.C. §§ 284 and 285.

**SIXTH CAUSE OF ACTION  
(Infringement of the '033 Patent)**

111. Plaintiff hereby incorporates and realleges the preceding paragraphs of this Complaint.

112. Upon information and belief, at least one of the Accused Products infringe at least one claim of the '033 Patent.

113. Upon information and belief, by making, using, selling, offering for sale, and/or importing into the United States products, including at least the Fusion5s, the SureCall Defendants have in the past, do now, and continue to directly infringe, contributorily infringe, and/or induce others to infringe the claims of the '033 patent literally and/or under the doctrine

of equivalents, in violation of 35 U.S.C. § 271.

114. Claim 19 of the '033 Patent recites:

A method for setting a gain of an amplifier operating in a network, the method comprising:  
measuring one of an input signal power to the amplifier or an output signal power from the amplifier;  
determining a first gain for reducing occurrences of self-oscillation of the amplifier based on one of the input signal power or the output signal power;  
determining a second gain based on a maximum output signal power from the amplifier based on an industry and/or government standard;  
determining a third gain for limiting an increase in a base station's noise floor; and  
setting the gain of the amplifier based on the first gain, the second gain, and the third gain

115. A claim chart cross referencing the elements of Claim 1 with an explanation of the infringing aspects of the Fusion5s—an exemplary infringing product—is attached to this Second Amended Complaint as Exhibit 23.

116. Upon information and belief, the SureCall Defendants' customers and others are using the Fusion5s and at no time has Wilson granted the SureCall Defendants' customers and other users of the Fusion5s permission to practice the claims of the '033 Patent.

117. Accordingly, the SureCall Defendants' customers and users of the Fusion5s have infringed and are directly infringing the '033 Patent.

118. Plaintiff is informed and believes that Defendants knew about the '033 Patent. At least based on the parties' license discussions, upon information and belief, Defendant SureCall knew that its customers and other users, in using the Fusion5s, were practicing the claims of the '033 Patent.

119. Upon information and belief, SureCall's booster product manuals instruct customers and other users on how to use the Fusion5s.

120. Upon information and belief, SureCall has induced and is inducing its customers and other users of the Fusion5s to infringe claims of the '033 Patent.

121. Furthermore, upon information and belief, the processes employed by the Fusion5s are material to practicing the '033 Patent and do not have a substantial non-infringing use.

122. Accordingly, Defendants have contributed and are contributing to the infringement of the '033 Patent.

123. By reason of Defendants' infringement of the claims of the '033 Patent alleged herein, Wilson has suffered damage in an amount to be proven at trial. To the extent that the '033 Patent is determined to be essential to complying with the FCC Booster Regulations, Wilson is entitled at least to monetary damages and/or a reasonably royalty adequate to compensate it for Defendants' infringement of the '033 Patent under 35 U.S.C. § 284. But to the extent that the '033 Patent is not deemed essential to compliance with the FCC Booster Regulations, the harm to Wilson from Defendants' infringing activities is not fully compensable by monetary damages, and Wilson will continue to suffer irreparable harm unless Defendants' infringing conduct is enjoined.

124. Upon information and belief, Defendants have acted in an objectively reckless manner with respect to Wilson's patent rights. Upon information and belief, Defendants have made, sold, offered to sell, and/or imported into the United States their boosters knowing that it was highly likely that their acts would infringe the '033 Patent. As a result, Defendants have engaged in willful infringement of the '033 Patent, and Wilson is therefore entitled to treble damages, interest, costs, and attorney's fees in accordance with 35 U.S.C. §§ 284 and 285.

**SEVENTH CAUSE OF ACTION  
(Infringement of the '180 Patent)**

125. Plaintiff hereby incorporates and realleges the preceding paragraphs of this Complaint.

126. Upon information and belief, at least one of the Accused Products infringe at least one claim of the '180 Patent.

127. Upon information and belief, by making, using, selling, offering for sale, and/or importing into the United States products, including at least the Fusion5s, the SureCall Defendants have in the past, do now, and continue to directly infringe, contributorily infringe, and/or induce others to infringe the claims of the '180 patent literally and/or under the doctrine of equivalents, in violation of 35 U.S.C. § 271.

128. Claim 10 of the '180 Patent recites:

A method of determining an oscillation amplification margin of a booster amplifier within a wireless network, the method comprising:  
amplifying a wireless signal within a wireless network received by a booster amplifier by an amplification factor;  
increasing the applied amplification factor by an amplification factor oscillation margin;  
checking for an oscillation of the booster amplification when the applied amplification factor is increased by the amplification factor oscillation margin;  
and  
adjusting the applied amplification factor based on whether the booster amplifier is oscillating when checked to maintain at least the amplification factor oscillation margin between the applied amplification factor and an oscillation amplification factor that causes oscillations in the booster amplifier

129. A claim chart cross referencing the elements of Claim 1 with an explanation of the infringing aspects of the Fusion5s—an exemplary infringing product—is attached to this Second Amended Complaint as Exhibit 24.

130. Upon information and belief, the SureCall Defendants' customers and others are using the Fusion5s and at no time has Wilson granted the SureCall Defendants' customers and other users of the Fusion5s permission to practice the claims of the '180 Patent.

131. Accordingly, the SureCall Defendants' customers and users of the Fusion5s have infringed and are directly infringing the '180 Patent.

132. Plaintiff is informed and believes Defendants knew about the '180 Patent. At least based on the parties' license discussions, upon information and belief, Defendant SureCall knew that its customers and other users, in using the Fusion5s, were practicing the claims of the '180 Patent.

133. Upon information and belief, SureCall's booster product manuals instruct customers and other users on how to use the Fusion5s.

134. Upon information and belief, SureCall has induced and is inducing its customers and other users of the Fusion5s to infringe claims of the '180 Patent.

135. Furthermore, upon information and belief, the processes employed by the Fusion5s are material to practicing the '180 Patent and do not have a substantial non-infringing use.

136. Accordingly, Defendants have contributed and are contributing to the infringement of the '180 Patent.

137. By reason of Defendants' infringement of the claims of the '180 Patent alleged herein, Wilson has suffered damage in an amount to be proven at trial. To the extent that the '180 Patent is determined to be essential to complying with the FCC Booster Regulations, Wilson is entitled at least to monetary damages and/or a reasonably royalty adequate to compensate it for

Defendants' infringement of the '180 Patent under 35 U.S.C. § 284. But to the extent that the '180 Patent is not deemed essential to compliance with the FCC Booster Regulations, the harm to Wilson from Defendants' infringing activities is not fully compensable by monetary damages, and Wilson will continue to suffer irreparable harm unless Defendants' infringing conduct is enjoined.

138. Upon information and belief, Defendants have acted in an objectively reckless manner with respect to Wilson's patent rights. Upon information and belief, Defendants have made, sold, offered to sell, and/or imported into the United States their boosters knowing that it was highly likely that their acts would infringe the '180 Patent. As a result, Defendants have engaged in willful infringement of the '180 Patent, and Wilson is therefore entitled to treble damages, interest, costs, and attorney's fees in accordance with 35 U.S.C. §§ 284 and 285.

**EIGHTH CAUSE OF ACTION  
(Infringement of the '399 Patent)**

139. Plaintiff hereby incorporates and realleges the preceding paragraphs of this Complaint.

140. Upon information and belief, at least one of the Accused Products infringe at least one claim of the '399 Patent.

141. Upon information and belief, by making, using, selling, offering for sale, and/or importing into the United States products, including at least the Fusion5s, the SureCall Defendants have in the past, do now, and continue to directly infringe, contributorily infringe, and/or induce others to infringe the claims of the '399 patent literally and/or under the doctrine of equivalents, in violation of 35 U.S.C. § 271.

142. Claim 1 of the '399 Patent recites:

A common-direction duplexer comprising:

- a common port;
- a first-band port;
- a second-band port;
- a first filter communicatively coupled between the common port and the first-band port, the first filter configured to pass a first frequency range and filter out a second frequency range and a third frequency range, the first frequency range including a first uplink band associated with Band 12 of a 700 Megahertz (MHz) Third Generation Partnership Project (3GPP) standard,
- the second frequency range including a second uplink band associated with Band 13 of a 700 MHz 3GPP standard, and
- the third frequency range being spectrally between the first frequency range and the second frequency range and including a first downlink band and a second downlink band, the first downlink band being associated with Band 12 of the 700 MHz 3GPP standard and the second downlink band being associated with Band 13 of the 700 MHz 3GPP standard; and
- a second filter communicatively coupled between the common port and the second-band port, the second filter configured to pass through the second frequency range and filter out the first frequency range and the third frequency range

143. A claim chart cross referencing the elements of Claim 1 with an explanation of the infringing aspects of the Fusion5s—an exemplary infringing product—is attached to this Second Amended Complaint as Exhibit 25.

144. Upon information and belief, Defendants' customers and others are using the Fusion5s and at no time has Wilson granted Defendants' customers and other users of the Fusion5s permission to practice the claims of the '399 Patent.

145. Accordingly, the SureCall Defendants' customers and users of the Fusion5s have infringed and are directly infringing the '399 Patent.

146. Upon information and belief, Defendants knew about the '399 Patent. At least based on the parties' license discussions, upon information and belief, Defendant SureCall knew

that its customers and other users, in using the Fusion5s, were practicing the claims of the '399 Patent.

147. Upon information and belief, Defendant SureCall's booster product manuals instruct customers and other users on how to use the Fusion5s.

148. Upon information and belief, Defendant SureCall has induced and is inducing its customers and other users of the Fusion5s to infringe claims of the '399 Patent.

149. Furthermore, upon information and belief, the Fusion5s is material to practicing the '399 Patent and does not have a substantial non-infringing use.

150. Accordingly, Defendants have contributed and are contributing to the infringement of the '399 Patent.

151. By reason of Defendants' infringement of the claims of the '399 Patent alleged herein, Wilson has suffered damage in an amount to be proven at trial. Wilson is entitled at least to monetary damages and/or a reasonably royalty adequate to compensate it for Defendants' infringement of the '399 Patent under 35 U.S.C. § 284. In addition, the harm to Wilson from Defendants' infringing activities is not fully compensable by monetary damages, and Wilson will continue to suffer irreparable harm unless Defendants' infringing conduct is enjoined.

152. Upon information and belief, Defendants acted in an objectively reckless manner with respect to Wilson's patent rights. Upon information and belief, Defendants have made, sold, offered to sell, and/or imported into the United States their boosters knowing that it was highly likely that their acts would infringe the '399 Patent. Upon information and belief, Defendants knowingly copied aspects of product designs contained in the '399 Patent. Specifically, after Wilson launched its products containing a common-direction duplexer, Defendants changed the



design of their products to include a common-direction duplexer in violation of the '399 Patent. As a result, the Defendants have engaged in willful infringement of the '399 Patent, and Wilson is therefore entitled to treble damages, interest, costs, and attorney's fees in accordance with 35 U.S.C. §§ 284 and 285.

**NINTH CAUSE OF ACTION  
(Infringement of the '187 Patent)**

153. Plaintiff hereby incorporates and realleges the preceding paragraphs of this Complaint.

154. Upon information and belief, at least one of the Accused Products infringe at least one claim of the '187 Patent.

155. Upon information and belief, by making, using, selling, offering for sale, and/or importing into the United States products, including at least the Fusion5s, the SureCall Defendants have in the past, do now, and continue to directly infringe, contributorily infringe, and/or induce others to infringe the claims of the '187 patent literally and/or under the doctrine of equivalents, in violation of 35 U.S.C. § 271.

156. Claim 1 of the '187 Patent recites:

A booster amplifier to reduce an effect of amplified thermal noise in a wireless network, the booster amplifier comprising:  
a first preamplifier that receives a first input and provides a first output;  
an amplifier chain including one or more amplifiers, wherein an input to the amplifier chain includes the first output of the first preamplifier and the amplifier chain generates an output of the booster amplifier that is transmitted in the wireless network;  
a second preamplifier that receives the first input and provides a second output, wherein the second preamplifier is not located in a signal path coupled to the output of the booster amplifier;  
a broadband detector that takes samples of the second output of the second preamplifier and that generates a DC level for each sample;

a memory that stores the DC levels of a first plurality of samples previously taken by the broadband detector; and  
control circuitry that determines whether a data signal is present at an input of the booster amplifier by comparing an analysis of the DC levels of a second plurality of samples taken by the broadband detector with an analysis of the DC levels of the first plurality of samples previously taken by the broadband detector and stored in the memory, wherein the control circuitry directs that a gain of the first preamplifier or one or more of the one or more amplifiers of the amplifier chain be decreased when the data signal is determined to not be present at the input of the booster amplifier

157. A claim chart cross referencing the elements of Claim 1 with an explanation of the infringing aspects of the Fusion5s—an exemplary infringing product—is attached to this Second Amended Complaint as Exhibit 26.

158. Upon information and belief, the SureCall Defendants' customers and others are using the Fusion5s and at no time has Wilson granted the SureCall Defendants' customers and other users of the Fusion5s permission to practice the claims of the '187 Patent.

159. Accordingly, the SureCall Defendants' customers and users of the Fusion5s have infringed and are directly infringing the '187 Patent.

160. Plaintiff is informed and believes that Defendants knew about the '187 Patent. At least based on the parties' license discussions, upon information and belief, Defendant SureCall knew that its customers and other users, in using the Fusion5s, were practicing the claims of the '187 Patent.

161. Upon information and belief, SureCall's booster product manuals instruct customers and other users on how to use the Fusion5s.

162. Upon information and belief, SureCall has induced and is inducing its customers and other users of the Fusion5s to infringe claims of the '187 Patent.

163. Furthermore, upon information and belief, the Fusion5s is material to practicing the '187 Patent and does not have a substantial non-infringing use.

164. Accordingly, Defendants have contributed and are contributing to the infringement of the '187 Patent.

165. By reason of Defendants' infringement of the claims of the '187 Patent alleged herein, Wilson has suffered damage in an amount to be proven at trial. To the extent that the '187 Patent is determined to be essential to complying with the FCC Booster Regulations, Wilson is entitled at least to monetary damages and/or a reasonably royalty adequate to compensate it for Defendants' infringement of the '187 Patent under 35 U.S.C. § 284. But to the extent that the '187 Patent is not deemed essential to compliance with the FCC Booster Regulations, the harm to Wilson from Defendants' infringing activities is not fully compensable by monetary damages, and Wilson will continue to suffer irreparable harm unless Defendants' infringing conduct is enjoined.

166. Upon information and belief, Defendants have acted in an objectively reckless manner with respect to Wilson's patent rights. Upon information and belief, Defendants have made, sold, offered to sell, and/or imported into the United States their boosters knowing that it was highly likely that their acts would infringe the '187 Patent. As a result, Defendants have engaged in willful infringement of the '187 Patent, and Wilson is therefore entitled to treble damages, interest, costs, and attorney's fees in accordance with 35 U.S.C. §§ 284 and 285.

**TENTH CAUSE OF ACTION  
(Infringement of the '030 Patent)**

167. Plaintiff hereby incorporates and realleges the preceding paragraphs of this

Complaint.

168. Upon information and belief, at least one of the Accused Products infringe at least one claim of the '030 Patent.

169. Upon information and belief, by making, using, selling, offering for sale, and/or importing into the United States products, including at least the Fusion5s, the SureCall Defendants have in the past, do now, and continue to directly infringe, contributorily infringe, and/or induce others to infringe the claims of the '030 patent literally and/or under the doctrine of equivalents, in violation of 35 U.S.C. § 271.

170. Claim 1 of the '030 Patent recites:

A method for handling parasitic oscillation in an amplifier operating in a wireless network, the method comprising:  
sampling a signal amplified in an amplifier operating in a wireless network a plurality of times to obtain a plurality of samples;  
determining a signal ratio for the signal based on the plurality of samples;  
determining whether a parasitic oscillation is occurring in the amplifier based on the signal ratio; and  
mitigating the parasitic oscillation occurring in the amplifier.

171. A claim chart cross referencing the elements of Claim 1 with an explanation of the infringing aspects of the Fusion5s—an exemplary infringing product—is attached to this Second Amended Complaint as Exhibit 27.

172. Upon information and belief, the SureCall Defendants' customers and others are using the Fusion5s and at no time has Wilson granted the SureCall Defendants' customers and other users of the Fusion5s permission to practice the claims of the '030 Patent.

173. Accordingly, the SureCall Defendants' customers and users of the Fusion5s have infringed and are directly infringing the '030 Patent.

174. Plaintiff is informed and believes that Defendants knew about the '030 Patent. Defendant SureCall knew that its customers and other users, in using the Fusion5s, were practicing the claims of the '030 Patent.

175. Upon information and belief, SureCall's booster product manuals instruct customers and other users on how to use the Fusion5s.

176. Upon information and belief, SureCall has induced and is inducing its customers and other users of the Fusion5s to infringe claims of the '030 Patent.

177. Furthermore, upon information and belief, the Fusion5s is material to practicing the '030 Patent and does not have a substantial non-infringing use.

178. Accordingly, Defendants have contributed and are contributing to the infringement of the '030 Patent.

179. By reason of Defendants' infringement of the claims of the '030 Patent alleged herein, Wilson has suffered damage in an amount to be proven at trial. To the extent that the '030 Patent is determined to be essential to complying with the FCC Booster Regulations, Wilson is entitled at least to monetary damages and/or a reasonably royalty adequate to compensate it for Defendants' infringement of the '030 Patent under 35 U.S.C. § 284. But to the extent that the '030 Patent is not deemed essential to compliance with the FCC Booster Regulations, the harm to Wilson from Defendants' infringing activities is not fully compensable by monetary damages, and Wilson will continue to suffer irreparable harm unless Defendants' infringing conduct is enjoined.

180. Upon information and belief, Defendants have acted in an objectively reckless manner with respect to Wilson's patent rights. Upon information and belief, Defendants have

made, sold, offered to sell, and/or imported into the United States their boosters knowing that it was highly likely that their acts would infringe the '030 Patent. As a result, Defendants have engaged in willful infringement of the '030 Patent, and Wilson is therefore entitled to treble damages, interest, costs, and attorney's fees in accordance with 35 U.S.C. §§ 284 and 285.

**ELEVENTH CAUSE OF ACTION  
(Infringement of the '029 Patent)**

181. Plaintiff hereby incorporates and realleges the preceding paragraphs of this Complaint.

182. Upon information and belief, at least one of the Accused Products infringe at least one claim of the '029 Patent.

183. Upon information and belief, by making, using, selling, offering for sale, and/or importing into the United States products, including at least the Fusion5s, the SureCall Defendants have in the past, do now, and continue to directly infringe, contributorily infringe, and/or induce others to infringe the claims of the '029 patent literally and/or under the doctrine of equivalents, in violation of 35 U.S.C. § 271.

184. Claim 1 of the '029 Patent recites:

A method, comprising:

- sampling a signal in a booster amplifier a plurality of times to obtain a plurality of samples of the signal, the booster amplifier configured to apply again to the signal and to operate in a wireless network;
- determining a signal power ratio for the signal based on the plurality of samples;
- comparing the signal power ratio to a threshold, wherein the threshold is based on power ratio values of a compressed signal output by self-oscillating amplifiers in the wireless network; and
- determining that an amplifier within the booster amplifier is self-oscillating in response to the signal power ratio being below the threshold.

185. A claim chart cross referencing the elements of Claim 1 with an explanation of

the infringing aspects of the Fusion5s—an exemplary infringing product—is attached to this Second Amended Complaint as Exhibit 28.

186. Upon information and belief, the SureCall Defendants' customers and others are using the Fusion5s and at no time has Wilson granted the SureCall Defendants' customers and other users of the Fusion5s permission to practice the claims of the '029 Patent.

187. Accordingly, the SureCall Defendants' customers and users of the Fusion5s have infringed and are directly infringing the '029 Patent.

188. Plaintiff is informed and believes that Defendants knew about the '029 Patent. Defendant SureCall knew that its customers and other users, in using the Fusion5s, were practicing the claims of the '029 Patent.

189. Upon information and belief, SureCall's booster product manuals instruct customers and other users on how to use the Fusion5s.

190. Upon information and belief, SureCall has induced and is inducing its customers and other users of the Fusion5s to infringe claims of the '029 Patent.

191. Furthermore, upon information and belief, the Fusion5s is material to practicing the '029 Patent and does not have a substantial non-infringing use.

192. Accordingly, Defendants have contributed and are contributing to the infringement of the '029 Patent.

193. By reason of Defendants' infringement of the claims of the '029 Patent alleged herein, Wilson has suffered damage in an amount to be proven at trial. To the extent that the '029 Patent is determined to be essential to complying with the FCC Booster Regulations, Wilson is entitled at least to monetary damages and/or a reasonably royalty adequate to

compensate it for Defendants' infringement of the '029 Patent under 35 U.S.C. § 284. But to the extent that the '029 Patent is not deemed essential to compliance with the FCC Booster Regulations, the harm to Wilson from Defendants' infringing activities is not fully compensable by monetary damages, and Wilson will continue to suffer irreparable harm unless Defendants' infringing conduct is enjoined.

194. Upon information and belief, Defendants have acted in an objectively reckless manner with respect to Wilson's patent rights. Upon information and belief, Defendants have made, sold, offered to sell, and/or imported into the United States their boosters knowing that it was highly likely that their acts would infringe the '029 Patent. As a result, Defendants have engaged in willful infringement of the '029 Patent, and Wilson is therefore entitled to treble damages, interest, costs, and attorney's fees in accordance with 35 U.S.C. §§ 284 and 285.

**TWELTH CAUSE OF ACTION  
(Infringement of the '034 Patent)**

195. Plaintiff hereby incorporates and realleges the preceding paragraphs of this Complaint.

196. Upon information and belief, at least one of the Accused Products infringe at least one claim of the '034 Patent.

197. Upon information and belief, by making, using, selling, offering for sale, and/or importing into the United States products, including at least the Fusion5s, the SureCall Defendants have in the past, do now, and continue to directly infringe, contributorily infringe, and/or induce others to infringe the claims of the '034 patent literally and/or under the doctrine of equivalents, in violation of 35 U.S.C. § 271.

198. Claim 1 of the '034 Patent recites:



A method of detecting oscillations of a booster amplifier in a wireless network, the method comprising:

sampling power of a wireless signal in a booster amplifier within a wireless network a plurality of times over a period to obtain a plurality of power samples of the wireless signal;

determining a power ratio of the wireless signal using the plurality of power samples of the wireless signal;

comparing the power ratio of the wireless signal to a threshold power ratio that is based on a configuration of the wireless network;

when the comparison of the power ratio of the wireless signal to the threshold power ratio indicates oscillation of the booster amplifier, the method further comprising:

sampling the wireless signal in the booster amplifier to obtain a second power sample after reducing an amplification factor applied by the booster amplifier to the wireless signal; and comparing the second power sample to at least one of the plurality of power samples.

199. A claim chart cross referencing the elements of Claim 1 with an explanation of the infringing aspects of the Fusion5s—an exemplary infringing product—is attached to this Second Amended Complaint as Exhibit 29.

200. Upon information and belief, the SureCall Defendants' customers and others are using the Fusion5s and at no time has Wilson granted the SureCall Defendants' customers and other users of the Fusion5s permission to practice the claims of the '034 Patent.

201. Accordingly, the SureCall Defendants' customers and users of the Fusion5s have infringed and are directly infringing the '034 Patent.

202. Plaintiff is informed and believes that Defendants knew about the '034 Patent. Defendant SureCall knew that its customers and other users, in using the Fusion5s, were practicing the claims of the '034 Patent.

203. Upon information and belief, SureCall's booster product manuals instruct customers and other users on how to use the Fusion5s.

204. Upon information and belief, SureCall has induced and is inducing its customers and other users of the Fusion5s to infringe claims of the '034 Patent.

205. Furthermore, upon information and belief, the Fusion5s is material to practicing the '034 Patent and does not have a substantial non-infringing use.

206. Accordingly, Defendants have contributed and are contributing to the infringement of the '034 Patent.

207. By reason of Defendants' infringement of the claims of the '034 Patent alleged herein, Wilson has suffered damage in an amount to be proven at trial. To the extent that the '034 Patent is determined to be essential to complying with the FCC Booster Regulations, Wilson is entitled at least to monetary damages and/or a reasonably royalty adequate to compensate it for Defendants' infringement of the '034 Patent under 35 U.S.C. § 284. But to the extent that the '034 Patent is not deemed essential to compliance with the FCC Booster Regulations, the harm to Wilson from Defendants' infringing activities is not fully compensable by monetary damages, and Wilson will continue to suffer irreparable harm unless Defendants' infringing conduct is enjoined.

208. Upon information and belief, Defendants have acted in an objectively reckless manner with respect to Wilson's patent rights. Upon information and belief, Defendants have made, sold, offered to sell, and/or imported into the United States their boosters knowing that it was highly likely that their acts would infringe the '034 Patent. As a result, Defendants have engaged in willful infringement of the '034 Patent, and Wilson is therefore entitled to treble damages, interest, costs, and attorney's fees in accordance with 35 U.S.C. §§ 284 and 285.

209. A copy of the test report submitted by SureCall showing the 4G LTE Booster's compliance with the FCC Booster Regulations is attached to this Second Amended Complaint as Exhibit 30.

210. A copy of the test report submitted by SureCall showing the Fusion5s' compliance with the FCC Booster Regulations is attached to this Second Amended Complaint as Exhibits 31-1, 31-2, and 31-3.

### **PRAYER FOR RELIEF**

**WHEREFORE**, Plaintiff respectfully requests that the Court enter judgment in its favor and award Plaintiff relief as follows:

A. A judgment that Defendants are liable to Plaintiff for infringing the claims of the Patents-in-Suit either directly and/or by the doctrine of equivalents;

B. A judgment that Defendants are liable to Plaintiff for contributory infringement and/or induced infringement of the Patents-in-Suit.

C. To the extent that any of the Patents-in-Suit are determined not to be essential to complying with the FCC Booster Regulations, an order temporarily, preliminarily, and permanently enjoining Defendants, its officers, directors, agents, servants, affiliates, employees, subsidiaries, divisions, branches, parents, attorneys, representatives, and all others acting in concert or participation with any of them, from infringing the Patents-in-Suit under 35 U.S.C. § 283;

D. To the extent that any of the Patents-in-Suit are determined to be essential to complying with the FCC Booster Regulations, an order awarding Plaintiff monetary damages,

including lost profits and/or a reasonable royalty, along with prejudgment interest, in an amount to be determined by the Court in accordance with 35 U.S.C. § 284;

E. An order finding that Defendants willfully infringed the Patents-in-Suit, that this is an exceptional case, and award Plaintiff enhanced damages, costs, and attorney's fees in accordance with 35 U.S.C. § 285 or other applicable law;

F. Such other and further relief as shall seem just and proper to the Court under the circumstances.

**JURY DEMAND**

Plaintiff demands that all claims and causes of action raised in this Second Amended Complaint be tried to a jury to the fullest extent possible under the United States and Utah Constitutions.

DATED this 30th day of September, 2019.

**THORPE NORTH & WESTERN LLP**

/s/ Jed H. Hansen

Mark Bettilyon

Jed H. Hansen

Peter M. de Jonge

*Attorneys for Wilson Electronics, LLC*

**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that a true and correct copy of the foregoing **SECOND AMENDED COMPLAINT** was filed electronically with the Clerk of Court using the CM/ECF system, which automatically sent notification of such filing to the following:

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DATED this 30th day of September, 2019.

/s/ Kaelynn Moultrie  
Kaelynn Moultrie