

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TYLER DIVISION**

CORE WIRELESS LICENSING)	
S.A.R.L.)	
)	CIVIL ACTION NO. 6:14-cv-751
Plaintiff,)	
)	JURY TRIAL DEMANDED
v.)	
)	
APPLE INC.,)	
)	
Defendant.)	
)	

**CORE WIRELESS LICENSING S.A.R.L.'S
FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff, Core Wireless Licensing S.à.r.l. (“Core Wireless”), for its First Amended Complaint against Defendant, Apple Inc. (“Apple”), alleges:

THE PARTIES

1. Core Wireless is a corporation duly organized and existing under the laws of the Grand Duchy of Luxembourg, having a principal place of business at 12, rue Jean Engling, L-1466 Luxembourg. Core Wireless has a regular and established place of business and does business relating to the patents-in-suit in connection with its wholly-owned subsidiary, Core Wireless Licensing Ltd. (“Core Wireless USA”), a corporation duly organized and existing under the laws of the State of Texas, having a principal place of business at 5601 Granite Parkway, Suite 1300, Plano, TX 75024, which is within the Eastern District of Texas. All pertinent documents and discovery relevant to this matter either reside at Core Wireless USA’s local address or will be produced at that address. Core Wireless is the owner of record of the patents involved in this action.

2. Defendant, Apple, is a corporation duly organized and existing under the laws of the State of California, having a principal place of business at 1 Infinite Loop, Cupertino, CA 95014. Apple’s registered agent, registered with the Texas Secretary of State’s Office, is CT Corp. System located at 1999 Bryan St., Suite 900, Dallas, TX 75201.

JURISDICTION

3. This is an action arising under the patent laws of the United States. Accordingly, this Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

4. This Court has personal jurisdiction over Apple because Apple does business in the State of Texas and in this judicial district and/or has infringed or caused infringement in the State of Texas and in this judicial district.

5. This Court has personal jurisdiction over Apple because Apple has established minimum contacts with the Eastern District of Texas. Apple manufactures (directly or indirectly through third party manufacturers) and/or assembles products that are and have been used, offered for sale, sold, and purchased in the Eastern District of Texas. Apple, directly and/or through its distribution network, places wireless mobile communication devices within the stream of commerce, which stream is directed at this district, with the knowledge and/or understanding that those products will be sold in the State of Texas, including in the Eastern District of Texas. Jurisdiction over Apple in this matter is also proper inasmuch as Apple has voluntarily submitted itself to the jurisdiction of the courts by commencing litigations within the State of Texas, by registering with the Texas Secretary of State's Office to do business in the State of Texas, and by appointing a registered agent. Therefore, the exercise of jurisdiction over Apple is appropriate under the applicable jurisdictional statutes and would not offend traditional notions of fair play and substantial justice.

VENUE

6. Venue is proper in this judicial district pursuant to 28 U.S.C. §§ 1391 and 1400(b) because Apple has committed, and continues to commit, acts of infringement, including providing wireless mobile communication devices that are used, offered for sale, sold, and have been purchased in the State of Texas, including in the Eastern District of Texas.

FACTUAL ALLEGATIONS

7. United States Patent No. 8,713,476 ("476"), entitled *Computing Device With Improved User Interface For Applications*, was duly and lawfully issued April 29, 2014. The '476 patent is a continuation of the application that matured into United States Patent No. 8,434,020 identified below. Core Wireless is the current owner of all rights, title, and interest in

and to the '476 patent. The '476 patent is valid and enforceable. A true and correct copy of the '476 patent is attached as Exhibit 1.

8. United States Patent No. 8,498,671 (“’671”), entitled *Mobile Telephone Device With User-Selectable Content Displayed And Updated During Idle Time*, was duly and lawfully issued July 30, 2013. Core Wireless is the current owner of all rights, title, and interest in and to the '671 patent. The '671 patent is valid and enforceable. A true and correct copy of the '671 patent is attached as Exhibit 2.

9. United States Patent No. 8,434,020 (“’020”), entitled *Computing Device With Improved User Interface For Applications*, was duly and lawfully issued April 30, 2013. Core Wireless is the current owner of all rights, title, and interest in and to the '020 patent. The '020 patent is valid and enforceable. A true and correct copy of the '020 patent is attached as Exhibit 3.

10. United States Patent No. 7,693,552 (“’552”), entitled *Text Messaging Device*, was duly and lawfully issued April 6, 2010. Core Wireless is the current owner of all rights, title, and interest in and to the '552 patent. The '552 patent is valid and enforceable. A true and correct copy of the '552 patent is attached as Exhibit 4.

11. United States Patent No. 7,072,667 (“’667”), entitled *Location Information Service For A Cellular Telecommunications Network*, was duly and lawfully issued July 4, 2006. Core Wireless is the current owner of all rights, title, and interest in and to the '667 patent. The '667 patent is valid and enforceable. A true and correct copy of the '667 patent is attached as Exhibit 5.

12. United States Patent No. 5,907,823 (“’823”), entitled *Method And Circuit Arrangement For Adjusting The Level Or Dynamic Range Of An Audio Signal*, was duly and

lawfully issued May 25, 1999. Core Wireless is the current owner of all rights, title, and interest in and to the '823 patent. A true and correct copy of the '823 patent is attached as Exhibit 6.

GENERAL ALLEGATIONS

13. Apple has directly and indirectly infringed and continues to directly and indirectly infringe each of the '476, '671, '020, '552, '667, and '823 patents (“patents-in-suit”) by engaging in acts constituting infringement under 35 U.S.C. § 271(a) and/or (b) including without limitation by one or more of making, using, selling and offering to sell, in this District and elsewhere in the United States, and importing into this District and elsewhere in the United States, Apple’s iPhone, iPad, and iPod products (“Apple’s Accused Products”).

14. Apple is doing business in the United States, and, more particularly, in the Eastern District of Texas by making, using, selling, importing, and/or offering for sale Apple’s Accused Products, including without limitation Apple’s iPhone, iPhone 3G, iPhone 3GS, iPhone 4, iPhone 4S, iPhone 5, iPhone 5C, iPhone 5S, iPhone 6, iPhone 6 Plus, iPad, iPad 2, third and fourth generation iPads, iPad Mini, iPad Mini 2, iPad Mini 3, iPad Air, iPad Air 2, iPod Touch (first, second, third, fourth, and fifth generations) that infringe one or more of the patent claims involved in this action.

15. Apple is responsible for the manufacture (directly or indirectly through third party manufacturers) of Apple’s Accused Products and markets, sells, and distributes Apple’s Accused Products in the United States and this District through its website,¹ retail store locations,² and

¹ See generally, <http://www.apple.com/shop> (last accessed July 23, 2015).

² See, e.g., Apple retail store location at Willow Bend, 6121 West Park Boulevard, Plano, TX 75093 (<http://www.apple.com/retail/willowbend/>), which is located in Collin County, which is within the Eastern District of Texas.

third-party distributors, including without limitation cellular service providers like AT&T³ and Verizon.⁴

FIRST COUNT
(Infringement of the '476 patent)

16. Core Wireless incorporates by reference the allegations set forth in Paragraphs 1-15 of this Amended Complaint as though fully set forth herein.

17. The '476 patent discloses novel user interface technologies whereby data associated with an application is accessible to a smartphone or tablet user from an application summary displayed while an application remains in an unlaunched state. For example, a user seeking to read a new message can access an application summary from a menu to view the message without launching the application. Before the '476 patent's inventions, a user seeking to access data associated with a particular application had to navigate through a hierarchical menu for the application while it was launched or memorize and input complex "shortcut" sequences. The '476 patent enables a user to more quickly and efficiently access data of interest to the user.

18. The limitations of the asserted apparatus claims of the '476 patent may be satisfied by hardware, software, and/or firmware, or any combination thereof, including without limitation a display or screen, processor(s), memory, and/or graphics processor(s) in Apple's Accused Products. The limitations of the asserted method claims of the '476 patent may be satisfied by hardware, software, and/or firmware, or any combination thereof that perform the recited steps, including without limitation a display or screen, processor(s), memory, and/or graphics processor(s) and software. For example, at least Apple's iOS operating system software

³ See, e.g., <http://www.att.com/cellphones/iphone/iphone-6.html#sku=sku7380579>.

⁴ See, e.g., <http://www.verizonwireless.com/smartphones/iphone-6/>.

enables functionalities claimed in the '476 patent and works in conjunction with the hardware contained in Apple's Accused Products to infringe the asserted claims of the '476 patent.⁵

19. Apple has had knowledge of the '476 patent since at least as early as September 10, 2014 when Core Wireless provided direct notice to Apple of its infringement of the '476 patent via the filing and service of Core Wireless's Original Complaint. Additionally, since at least March 6, 2015, Apple has had knowledge of Core Wireless's infringement contentions concerning the '476 patent, including without limitation the specific functionalities claimed by the '476 patent, the specific Apple Accused Products infringing the '476 patent, and a detailed claim-by-claim, element-by-element analysis of infringement by Apple's Accused Products.

20. In violation of 35 U.S.C. § 271(a), Apple is and has been infringing one or more claims of the '476 patent directly by making, using, offering to sell, and/or selling in the United States, and/or importing into the United States, without authority, products, including without limitation Apple's Accused Products, that are covered by or practice the inventions claimed in the '476 patent. Apple is infringing claims of the '476 patent literally and/or pursuant to the doctrine of equivalents.

21. In violation of 35 U.S.C. § 271(b), Apple is and has been infringing one or more of the '476 patent's claims indirectly by actively encouraging acts of direct infringement knowing that it is inducing the infringement of the '476 patent's claims by third parties, including without limitation manufacturers, resellers, and/or end-users of Apple's Accused Products, in this District, and elsewhere in the United States. Direct infringement is the result of activities performed by third parties in relation to Apple's Accused Products, including without

⁵ Appendix A and Exhibits A-X to Core Wireless's infringement contentions served March 6, 2015 identifies for Apple's Accused Products the particular hardware components contained in each product. The information disclosed in Appendix A and certain Exhibits is then cross-referenced in particular infringement charts for a particular patent where applicable.

limitation by end users enabled and encouraged by Apple to use Apple's Accused Products in their normal, customary way to infringe the '476 patent.

22. Apple actively induces third parties, including without limitation end-users of Apple's Accused Products, to infringe the '476 patent by, among other things, (i) enabling a user of Apple's Accused Products to access data from unlaunched applications via application summaries as disclosed and claimed in the '476 patent;⁶ (ii) providing instructions to end-users of Apple's Accused Products for using the functionalities claimed in the '476 patent,⁷ (iii) advertising the functionalities claimed in the '476 patent;⁸ and (iv) providing to third parties the hardware (e.g., display or screen, processor(s), memory, and/or graphics processor(s) contained in Apple's Accused Products) and software components (e.g., Apple's iOS operating system running on Apple's Accused Products) that may be required for or associated with infringement of the '476 patent's claims via the manufacture, marketing, sale, and/or distribution of Apple's Accused Products through Apple's website, retail store locations, and third-party distributors.

23. Apple's foregoing activities have been without authority and/or license from Core Wireless.

⁶ On March 6, 2015, Core Wireless served Apple with its infringement contentions pursuant to P.R. 3-1, which detail Apple's infringement of the asserted claims of the '476 patent.

⁷ See, e.g., **Exhibit 7**, attached hereto, is a true and correct copy of <https://help.apple.com/iphone/8/#/iphfccfd713b> ("Alerts...Alerts can also appear on the Lock screen. **Respond to an alert without leaving your current app.** Pull down on the alert when it appears at the top of your screen. **Note:** This feature works with text and email messages, calendar invitations, and more.") (emphasis in original) (last printed July 24, 2015); **Exhibit 8**, attached hereto, is a true and correct copy of <https://help.apple.com/iphone/8/#/iph6534c01bc> ("Notification Center Notification center collects your notifications in one place, so you can review them whenever you're ready...**Open Notification Center.** Swipe down from the top edge of the screen... **Set Notification options.** ... For example, choose to view a notification from the Lock screen.") (emphasis in original) (last printed July 24, 2015); see also at least **Exhibit 9**, which is a true and correct copy of a user manual for an iPad using iOS 4.3, at 130-131, 153; **Exhibit 10**, which is a true and correct copy of a user manual for an iPad using iOS 8.4, at 34-35, 54, 105-107, 110-111; **Exhibit 11**, which is a true and correct copy of a user manual for an iPhone using iOS 5.1, at 31; **Exhibit 12**, which is a true and correct copy of a user manual for an iPhone using iOS 8.4, at 35-36, 59.

⁸ See, e.g., **Exhibit 13**, attached hereto, is a true and correct copy of <https://support.apple.com/enus/HT201925> ("**Use Notifications** You can access your Alerts and Banners Notifications from any screen, including the Lock screen, Just swipe down from the top of the screen. You can also tap a notification in the Lock screen to open the related app.") (emphasis in original) (last printed July 24, 2015).

24. Apple has had direct and actual knowledge of the '476 patent and Core Wireless's infringement claims at least as of the filing of Core Wireless's Original Complaint in September 2014. Apple has also had direct and actual knowledge of Core Wireless's specific infringement contentions concerning the '476 patent since at least March 2015. Despite Apple's knowledge of the '476 patent and Core Wireless's infringement contentions, Apple continues to engage in the activities described above which enable and encourage third parties, including without limitation end-users of Apple's Accused Products, to access data from unlaunched applications via application summaries as disclosed and claimed in the '476 patent. Apple thereby specifically intends third parties, including without limitation end-users of Apple's Accused Products, to infringe the '476 patent.

25. Core Wireless is informed and believes that Apple intends to and will continue to directly infringe and induce infringement of the '476 patent's claims.

26. Apple's acts of infringement have caused damages to Core Wireless and Core Wireless is entitled to recover from Apple the damages sustained by Core Wireless as a result of Apple's wrongful acts in an amount subject to proof at trial.

SECOND COUNT
(Infringement of the '671 patent)

27. Core Wireless incorporates by reference the allegations set forth in Paragraphs 1-15 of this First Amended Complaint as though fully set forth herein.

28. The '671 patent discloses technologies for allowing a mobile device user to define the kinds of information available from outside sources (i.e., information not contained on the mobile device itself) that the user wants to see displayed on an idle screen of a mobile device and wherein that user-defined information is updated for the user. One of the key features of the '671 patent's invention is the ability for a user to define and control the information the user

wants to see on an idle screen of a mobile device and quickly view that information without engaging in a multi-stage navigation process.

29. The limitations of the asserted apparatus claims of the '671 patent may be satisfied by hardware, software, and/or firmware, or any combination thereof, including without limitation a display or screen, processor(s), memory, transceiver(s), and/or graphics processor(s) in Apple's Accused Products. The limitations of the asserted method claims of the '671 patent may be satisfied by hardware, software, and/or firmware, or any combination thereof that perform the recited steps, including without limitation a display or screen, processor(s), memory, transceiver(s), and/or graphics processor(s) and software. For example, at least Apple's iOS operating system software enables functionalities claimed in the '671 patent and works in conjunction with the hardware contained in Apple's Accused Products to infringe the asserted claims of the '476 patent.

30. Apple has had knowledge of the '671 patent since at least as early as September 10, 2014 when Core Wireless provided direct notice to Apple of its infringement of the '671 patent via the filing and service of Core Wireless's Original Complaint. Additionally, since at least March 6, 2015, Apple has had knowledge of Core Wireless's infringement contentions concerning the '671 patent, including without limitation the specific functionalities claimed by the '671 patent, the specific Apple Accused Products infringing the '671 patent, and a detailed claim-by-claim, element-by-element analysis of Apple's infringement.

31. In violation of 35 U.S.C. § 271(a), Apple is and has been infringing one or more claims of the '671 patent directly by making, using, offering to sell, and/or selling in the United States, and/or importing into the United States, without authority, products, including without limitation Apple's Accused Products, that are covered by or practice the inventions claimed in

the '671 patent. Apple is infringing claims of the '671 patent literally and/or pursuant to the doctrine of equivalents.

32. In violation of 35 U.S.C. § 271(b), Apple is and has been infringing one or more of the '671 patent's claims indirectly by actively encouraging acts of direct infringement knowing that it is inducing the infringement of the '671 patent's claims by third parties, including without limitation manufacturers, resellers, and/or end-users of Apple's Accused Products, in this District, and elsewhere in the United States. Direct infringement is the result of activities performed by third parties in relation to Apple's Accused Products, including without limitation by end users enabled and encouraged by Apple to use Apple's Accused Products in their normal, customary way to infringe the '671 patent.

33. Apple actively induces third parties, including without limitation end-users of Apple's Accused Products, to infringe the '671 patent by, among other things, (i) enabling a user of Apple's Accused Products to define and control information displayed on an idle screen as disclosed and claimed in the '671 patent;⁹ (ii) providing instructions to end-users of Apple's Accused Products for using the functionalities claimed in the '671 patent;¹⁰ (iii) advertising the

⁹ On March 6, 2015, Core Wireless served Apple with its infringement contentions pursuant to P.R. 3-1, which detail Apple's infringement of the asserted claims of the '671 patent.

¹⁰ See, e.g., **Exhibit 7** ("Alerts Alerts let you know about important events. They can appear briefly at the top of the screen, or remain in the center of the screen until you acknowledge them. ... Alerts can also appear on the Lock screen.") (emphasis in original); **Exhibit 8** ("Get Government Alerts...For example, in the United States, iPhone can receive presidential alerts, and you can turn AMBER and Emergency Alerts ... on or off...") (emphasis in original); *id.* ("**Notification Center** Notification center collects your notifications in one place, so you can review them whenever you're ready. ...

Set Today options. To choose what information appears, tap the Edit key at the end of your information on the Today tab. Tap + or - to add or remove information. ...

Set Notification options. Go to Settings > Notifications. Tap an app to set its notification options. For example, choose to view a notification from the Lock screen. ...

Note: To include traffic conditions for your commute in the Today tab, make sure Frequent Locations is turned on in Settings > Privacy > Location Services > System Services > Frequent Locations. ...

Choose whether to show Today and Notifications View on a locked screen. Go to Settings > Touch ID & Passcode (iPhone models with Touch ID) or Settings > Passcode (other models), then choose whether to allow access when locked.") (emphasis in original); **Exhibit 13** ("**Turn off and change Notifications settings.** If you have an app that could potentially send frequent notifications (like Mail with high-traffic email accounts or Twitter

functionalities claimed in the '671 patent;¹¹ and (iv) providing to third parties the hardware (e.g., display or screen, processor(s), memory, transceiver(s), and/or graphics processor(s) contained in Apple's Accused Products) and software components (e.g., iOS operating system running on Apple's Accused Products) that may be required for or associated with infringement of the '671 patent's claims via the manufacture, marketing, sale, and/or distribution of the Accused Products through its website, retail store locations, and third-party distributors.

34. Apple's foregoing activities have been without authority and/or license from Core Wireless.

35. Apple has had direct and actual knowledge of the '671 patent and Core Wireless's infringement claims at least as of the filing of Core Wireless's Original Complaint in September 2014. Apple has also had direct and actual knowledge of Core Wireless's specific infringement contentions concerning the '671 patent since at least March 2015. Despite Apple's knowledge of the '671 patent and Core Wireless's infringement contentions, Apple continues to engage in the activities described above which enable and encourage third parties, including without limitation end-users of Apple's Accused Products, to define and control information displayed on an idle screen as disclosed and claimed in the '671 patent. Apple thereby specifically intends third parties, including without limitation end-users of Apple's Accused Products, to infringe the '671 patent.

36. Core Wireless is informed and believes that Apple intends to and will continue to directly infringe and induce infringement of the '671 patent's claims.

apps), your iOS device could wake frequently to display the notification, and affect battery life. ... You can also customize what you see in your Today view.") (emphasis in original). *See also* at least **Exhibit 9** at 130-131, 153; **Exhibit 10** at 34-35, 105-107, 110-111; **Exhibit 11** at 31; **Exhibit 12** at 35-36.

¹¹ *See, e.g.,* **Exhibit 13**; **Exhibit 14**, attached hereto, is a true and correct copy of <https://support.apple.com/en-us/HT204003> (detailing Passbook application including configuration and display of information) (last printed July 24, 2015); **Exhibit 15**, attached hereto, is a true and correct copy of <https://support.apple.com/en-us/HT202743> (detailing enabling and disabling of U.S. government alerts) (last printed July 24, 2015).

37. Apple's acts of infringement have caused damages to Core Wireless and Core Wireless is entitled to recover from Apple the damages sustained by Core Wireless as a result of Apple's wrongful acts in an amount subject to proof at trial.

THIRD COUNT
(Infringement of the '020 patent)

38. Core Wireless incorporates by reference the allegations set forth in Paragraphs 1-15 of this First Amended Complaint as though fully set forth herein.

39. The '020 patent, which shares a common specification with the '476 patent, discloses novel user interface technologies whereby functions associated with an application are accessible to a smartphone or tablet user from an application summary window displayed while an application remains in an unlaunched state. For example, a user seeking to reply to a new message can access an application summary window from a main menu which is displayed when the application is unlaunched, select a "reply" function, and launch the application for replying. Before the '020 patent's inventions, a user seeking to access functions associated with a particular application had to navigate through a hierarchical menu for the application while it was launched or memorize and input complex "shortcut" sequences. The '020 patent enables a user to more quickly and efficiently access functions of interest to the user.

40. The limitations of the asserted apparatus claims of the '020 patent may be satisfied by hardware, software, and/or firmware, or any combination thereof, including without limitation a display or screen, processor(s), memory, and/or graphics processor(s) in Apple's Accused Products. The limitations of the asserted method claims of the '020 patent may be satisfied by hardware, software, and/or firmware, or any combination thereof that perform the recited steps, including without limitation a display or screen, processor(s), memory, and/or graphics processor(s) and software. For example, at least Apple's iOS operating system software

enables functionalities claimed in the '020 patent and works in conjunction with the hardware contained in Apple's Accused Products to infringe the asserted claims of the '020 patent.

41. Apple has had knowledge of the '020 patent since at least as early as September 10, 2014 when Core Wireless provided direct notice to Apple of its infringement of the '020 patent via the filing and service of Core Wireless's Original Complaint. Additionally, since at least March 6, 2015, Apple has had knowledge of Core Wireless's infringement contentions concerning the '020 patent, including without limitation the specific functionalities claimed by the '020 patent, the specific Apple Accused Products infringing the '020 patent, and a detailed claim-by-claim, element-by-element analysis of infringement by Apple's Accused Products.

42. In violation of 35 U.S.C. § 271(a), Apple is and has been infringing one or more claims of the '020 patent directly by making, using, offering to sell, and/or selling in the United States, and/or importing into the United States, without authority, products, including without limitation Apple's Accused Products, that are covered by or practice the inventions claimed in the '020 patent. Apple is infringing claims of the '020 patent literally and/or pursuant to the doctrine of equivalents.

43. In violation of 35 U.S.C. § 271(b), Apple is and has been infringing one or more of the '020 patent's claims indirectly by actively encouraging acts of direct infringement knowing that it is inducing the infringement of the '020 patent's claims by third parties, including without limitation manufacturers, resellers, and/or end-users of Apple's Accused Products, in this District, and elsewhere in the United States. Direct infringement is the result of activities performed by third parties in relation to Apple's Accused Products, including without limitation by end users enabled and encouraged by Apple to use Apple's Accused Products in their normal, customary way to infringe the '020 patent.

44. Apple actively induces third parties, including without limitation end-users of Apple's Accused Products, to infringe the '020 patent by, among other things, (i) enabling a user of Apple's Accused Products to access functions from unlaunched applications via application summary windows as disclosed and claimed in the '020 patent;¹² (ii) providing instructions to end-users of Apple's Accused Products for using the functionalities claimed in the '020 patent;¹³ (iii) advertising the functionalities claimed in the '020 patent;¹⁴ and (iv) providing to third parties the hardware (e.g., display or screen, processor(s), memory, and/or graphics processor(s) contained in Apple's Accused Products) and software components (e.g., Apple's iOS operating system running on Apple's Accused Products) that may be required for or associated with infringement of the '020 patent's claims via the manufacture, marketing, sale, and/or distribution of the Accused Products through its website, retail store locations, and third-party distributors.

45. Apple's foregoing activities have been without authority and/or license from Core Wireless.

46. Apple has had direct and actual knowledge of the '020 patent and Core Wireless's infringement claims at least as of the filing of Core Wireless's Original Complaint in September 2014. Apple has also had direct and actual knowledge of Core Wireless's specific infringement contentions concerning the '020 patent since at least March 2015. Despite Apple's knowledge of the '020 patent and Core Wireless's infringement contentions, Apple continues to engage in the

¹² On March 6, 2015, Core Wireless served Apple with its infringement contentions pursuant to P.R. 3-1, which detail Apple's infringement of the asserted claims of the '020 patent.

¹³ See, e.g., **Exhibit 7** ("Alerts...Alerts can also appear on the Lock screen. **Respond to an alert without leaving your current app.** Pull down on the alert when it appears at the top of your screen. **Note:** This feature works with text and email messages, calendar invitations, and more.") (emphasis in original) (last printed July 24, 2015); **Exhibit 8** ("**Notification Center** Notification center collects your notifications in one place, so you can review them whenever you're ready...**Open Notification Center.** Swipe down from the top edge of the screen... **Set Notification options.** ... For example, choose to view a notification from the Lock screen.") (emphasis in original) (last printed July 24, 2015); see also at least **Exhibit 9** at 130-131, 153; **Exhibit 10** at 34-35, 105-107; **Exhibit 11** at 31; **Exhibit 12** at 35-36.

¹⁴ See, e.g., **Exhibit 13** ("**Use Notifications** You can access your Alerts and Banners Notifications from any screen, including the Lock screen, Just swipe down from the top of the screen. You can also tap a notification in the Lock screen to open the related app.") (emphasis in original).

activities described above which enable and encourage third parties, including without limitation end-users of Apple's Accused Products, to access functions from unlaunched applications via application summary windows as disclosed and claimed in the '020 patent. Apple thereby specifically intends third parties, including without limitation end-users of Apple's Accused Products, to infringe the '020 patent.

47. Core Wireless is informed and believes that Apple intends to and will continue to directly infringe and induce infringement of the '020 patent's claims.

48. Apple's acts of infringement have caused damages to Core Wireless and Core Wireless is entitled to recover from Apple the damages sustained by Core Wireless as a result of Apple's wrongful acts in an amount subject to proof at trial.

FOURTH COUNT
(Infringement of the '552 patent)

49. Core Wireless incorporates by reference the allegations set forth in Paragraphs 1-15 of this First Amended Complaint as though fully set forth herein.

50. The '552 patent is directed to the creation of text messages in an ideogram-based language, for example, Chinese or Japanese, by making phonetic inputs using a conventional keypad. Ideogram-based languages are comprised of thousands of ideograms and multiple ideograms may have the same or very similar pronunciations but represent completely unrelated words. Due to the similarity in pronunciation for unrelated words in ideogram-based languages, the '552 patent's inventions allow a user to select ideogrammatic representations for words from a list corresponding to a particular phonetic input. To enable a user to select the desired ideogram for incorporation into a text message, the '552 patent discloses the provision of further information in the language of interest to help the user select the intended ideogram.

51. The limitations of the asserted apparatus claims of the '552 patent may be satisfied by hardware, software, and/or firmware, or any combination thereof, including without limitation a display or screen, processor(s), memory, and/or graphics processor(s) in Apple's Accused Products. The limitations of the asserted method claims of the '552 patent may be satisfied by hardware, software, and/or firmware, or any combination thereof that perform the recited steps, including without limitation a display or screen, processor(s), memory, and/or graphics processor(s) and software. For example, at least Apple's iOS operating system software enables functionalities claimed in the '552 patent and works in conjunction with the hardware contained in Apple's Accused Products to infringe the asserted claims of the '552 patent.

52. Apple has had knowledge of the '552 patent since at least as early as September 10, 2014 when Core Wireless provided direct notice to Apple of its infringement of the '552 patent via the filing and service of Core Wireless's Original Complaint. Additionally, since at least March 6, 2015, Apple has had knowledge of Core Wireless's infringement contentions concerning the '552 patent, including without limitation the specific functionalities claimed by the '552 patent, the specific Apple Accused Products infringing the '552 patent, and a detailed claim-by-claim, element-by-element analysis of infringement by Apple's Accused Products.

53. In violation of 35 U.S.C. § 271(a), Apple is and has been infringing one or more claims of the '552 patent directly by making, using, offering to sell, and/or selling in the United States, and/or importing into the United States, without authority, products, including without limitation Apple's Accused Products, that are covered by or practice the inventions claimed in the '552 patent. Apple is infringing claims of the '552 patent literally and/or pursuant to the doctrine of equivalents.

54. In violation of 35 U.S.C. § 271(b), Apple is and has been infringing one or more of the '552 patent's claims indirectly by actively encouraging acts of direct infringement knowing that it is inducing the infringement of the '552 patent's claims by third parties, including without limitation manufacturers, resellers, and/or end-users of Apple's Accused Products, in this District, and elsewhere in the United States. Direct infringement is the result of activities performed by third parties in relation to Apple's Accused Products, including without limitation by end users enabled and encouraged by Apple to use Apple's Accused Products in their normal, customary way to infringe the '552 patent.

55. Apple actively induces third parties, including without limitation end-users of Apple's Accused Products, to infringe the '552 patent by, among other things, (i) enabling a user of Apple's Accused Products to select in ideogram-based languages the desired ideogram for incorporation into a text message as disclosed and claimed in the '552 patent;¹⁵ (ii) providing instructions to end-users of Apple's Accused Products for using the functionalities claimed in the '552 patent;¹⁶ (iii) advertising the functionalities claimed in the '552 patent;¹⁷ and (iv) providing

¹⁵ On March 6, 2015, Core Wireless served Apple its infringement contentions pursuant to P.R. 3-1, which detail Apple's infringement of the asserted claims of the '552 patent.

¹⁶ See, e.g., **Exhibit 16**, attached hereto, is a true and correct copy of <https://help.apple.com/iphone/8/#iphadaaeb5f> (last printed July 24, 2015) ("International keyboards let you type text in many different languages, including Asian languages and languages written from right to left... On a Chinese, Japanese, or Arabic keyboard: Suggested characters or candidates appear at the top of the keyboard. Tap a candidate to enter it, or swipe left to see more candidates. **Use the extended suggested candidate list.** Tap the up arrow on the right to view the full candidate list.") (emphasis in original) (last printed July 24, 2015); **Exhibit 17**, attached hereto, is a true and correct copy of <https://help.apple.com/iphone/8/#iphadaaf178> (last printed July 24, 2015) ("You can use keyboards to enter some languages in different ways. A few examples are Chinese Cangjie and Wubihua, Japanese Kana, and Facemarks... **Build Chinese characters from the component Cangjie keys.** As you type, suggested characters appear. Tap a character to choose it, or continue typing up to five components to see more options... **Type Japanese kana.** Use the Kana keypad to select syllables. For more syllable options, drag the list to the left or tap the arrow key. **Type Japanese romaji.** Use the Romaji keyboard to type syllables. Alternative choices appear along the top of the keyboard; tap one to type it. For more syllable options, tap the arrow key and select another syllable or word from the window.") (emphasis in original) (last printed July 24, 2015); **Exhibit 18**, attached hereto, is a true and correct copy of https://support.apple.com/kb/PH3582?viewlocale=en_US&locale=en_US (last printed July 24, 2015); **Exhibit 19**, attached hereto, is a true and correct copy of https://support.apple.com/kb/PH3551?viewlocale=en_US&locale=en_US (last printed July 24, 2015); see also at least **Exhibit 9** at 174-175, 177; **Exhibit 10** at 154-156; **Exhibit 11** at 167-172; **Exhibit 12** at 177-179.

¹⁷ See, e.g., **Exhibit 17**.

to third parties the hardware (e.g., display or screen, processor(s), memory, and/or graphics processor(s) contained in Apple's Accused Products) and software components (e.g., Apple's iOS operating system running on Apple's Accused Products) that may be required for or associated with infringement of the '552 patent's claims via the manufacture, marketing, sale, and/or distribution of the Accused Products through its website, retail store locations, and third-party distributors.

56. Apple's foregoing activities have been without authority and/or license from Core Wireless.

57. Apple has had direct and actual knowledge of the '552 patent and Core Wireless's infringement claims at least as of the filing of Core Wireless's Original Complaint in September 2014. Apple has also had direct and actual knowledge of Core Wireless's specific infringement contentions concerning the '552 patent since at least March 2015. Despite Apple's knowledge of the '552 patent and Core Wireless's infringement contentions, Apple continues to engage in the activities described above which enable and encourage third parties, including without limitation end-users of Apple's Accused Products, to select in ideogram-based languages the desired ideogram for incorporation into a text message by providing further information as disclosed and claimed in the '552 patent. Apple thereby specifically intends third parties, including without limitation end-users of Apple's Accused Products, to infringe the '552 patent.

58. Core Wireless is informed and believes that Apple intends to and will continue to directly infringe and induce infringement of the '552 patent's claims.

59. Apple's acts of infringement have caused damages to Core Wireless and Core Wireless is entitled to recover from Apple the damages sustained by Core Wireless as a result of Apple's wrongful acts in an amount subject to proof at trial.

FIFTH COUNT
(Infringement of the '667 patent)

60. Core Wireless incorporates by reference the allegations set forth in Paragraphs 1-15 of this Amended Complaint as though fully set forth herein.

61. The '667 patent is directed to using cellular location-based services on a mobile device without pre-registration for the services by a user. The '667 patent's inventions allow greater access to and sharing of location-based information between mobile device users.

62. The limitations of the asserted apparatus claims of the '667 patent may be satisfied by hardware, software, and/or firmware, or any combination thereof, including without limitation a display or screen, processor(s), memory, transceiver(s), and/or graphics processor(s) in Apple's Accused Products. The limitations of the asserted method claims of the '667 patent may be satisfied by hardware, software, and/or firmware, or any combination thereof that perform the recited steps, including without limitation a display or screen, processor(s), memory, and/or graphics processor(s) and software. For example, at least Apple's iOS operating system and Maps application software enables functionalities claimed in the '667 patent and works in conjunction with the hardware contained in Apple's Accused Products to infringe the asserted claims of the '667 patent.

63. Apple has had knowledge of the '667 patent since at least as early as September 10, 2014 when Core Wireless provided direct notice to Apple of its infringement of the '667 patent via the filing and service of Core Wireless's Original Complaint. Additionally, since at least March 6, 2015, Apple has had knowledge of Core Wireless's infringement contentions concerning the '667 patent, including without limitation the specific functionalities covered by the '667 patent, the specific Apple Accused Products infringing the '667 patent, and a detailed claim-by-claim, element-by-element analysis of infringement by Apple's Accused Products.

64. In violation of 35 U.S.C. § 271(a), Apple is and has been infringing one or more claims of the '667 patent directly by making, using, offering to sell, and/or selling in the United States, and/or importing into the United States, without authority, products, including without limitation Apple's Accused Products, that are covered by or practice the inventions claimed in the '667 patent. Apple is infringing claims of the '667 patent literally and/or pursuant to the doctrine of equivalents.

65. In violation of 35 U.S.C. § 271(b), Apple is and has been infringing one or more of the '667 patent's claims indirectly by actively encouraging acts of direct infringement knowing that it is inducing the infringement of the '667 patent's claims by third parties, including without limitation manufacturers, resellers, and/or end-users of Apple's Accused Products, in this District, and elsewhere in the United States. Direct infringement is the result of activities performed by third parties in relation to Apple's Accused Products, including without limitation by end users enabled and encouraged by Apple to use Apple's Accused Products in their normal, customary way to infringe the '667 patent.

66. Apple actively induces third parties, including without limitation end-users of Apple's Accused Products, to infringe the '667 patent by, among other things, (i) enabling a user of Apple's Accused Products to use cellular location-based services on a mobile device without pre-registration as disclosed and claimed in the '667 patent;¹⁸ (ii) providing instructions to end-users of Apple's Accused Products for using the functionalities claimed in the '667 patent;¹⁹ (iii)

¹⁸ On March 6, 2015, Core Wireless served Apple with its infringement contentions pursuant to P.R. 3-1, which detail Apple's infringement of the asserted claims of the '667 patent.

¹⁹ See, e.g., **Exhibit 20**, attached hereto, is a true and correct copy of <https://help.apple.com/iphone/8/#iph87085d3a> ("Get directions Note: To get directions, iPhone must be connected to the Internet. To get directions involving your current location, Location Services must also be on.") (last printed July 24, 2015); **Exhibit 21**, attached hereto, is a true and correct copy of <https://help.apple.com/iphone/8/#iph3dd5f9be> ("Privacy settings let you see and control which apps and system services have access to Location Services... Location Services lets location-based apps such as Reminders, Maps, and Camera gather and use data indicating your location. Your approximate location is determined using available information from cellular network data...") (last printed July 24, 2015); **Exhibit 22**,

advertising the functionalities claimed in the '667 patent;²⁰ and (iv) providing to third parties the hardware (e.g., display or screen, processor(s), memory, transceiver(s), and/or graphics processor(s) contained in Apple's Accused Products) and software components (e.g., Apple's iOS operating system and Apple Maps running on Apple's Accused Products) that may be required for or associated with infringement of the '667 patent's claims via the manufacture, marketing, sale, and/or distribution of the Accused Products through its website, retail store locations, and third-party distributors.

67. Apple's foregoing activities have been without authority and/or license from Core Wireless.

68. Apple has had direct and actual knowledge of the '667 patent and Core Wireless's infringement claims at least as of the filing of Core Wireless's Original Complaint in September 2014. Apple has also had direct and actual knowledge of Core Wireless's specific infringement contentions concerning the '667 patent since at least March 2015. Despite Apple's knowledge of the '667 patent and Core Wireless's infringement contentions, Apple continues to engage in the activities described above which enable and encourage third parties, including without limitation end-users of Apple's Accused Products, to use cellular location-based services on a mobile device without pre-registration as disclosed and claimed in the '667 patent. Apple thereby

attached hereto, is a true and correct copy of <https://support.apple.com/en-us/HT203033> ("With your permission, Location Services allows apps and websites (including Maps, Camera, Weather, and other apps) to use information from cellular, Wi-Fi, Global Positioning System (GPS) networks, and Bluetooth to determine your approximate location.") (last printed July 24, 2015); **Exhibit 23**, attached hereto, is a true and correct copy of <https://support.apple.com/en-us/HT201674> (describing location services in iOS 4) (last printed July 24, 2015); **Exhibit 24**, attached hereto, is a true and correct copy of <https://support.apple.com/en-us/HT202339> (describing location services in iOS 5) (last printed July 24, 2015); **Exhibit 25**, attached hereto, is a true and correct copy of <https://support.apple.com/en-us/HT202588> (describing location services in iOS 6) (last printed July 24, 2015); **Exhibit 26**, attached hereto, is a true and correct copy of <https://support.apple.com/en-us/HT201357> (describing location services in iOS 7) (last printed July 24, 2015). *See also* at least **Exhibit 9** at 97-99; **Exhibit 10** at 41-42; **Exhibit 11** at 160; **Exhibit 12**, at 36, 43, 98.

²⁰ *See, e.g., Exhibits 20–26.*

specifically intends third parties, including without limitation as end-users of Apple's Accused Products, to infringe the '667 patent.

69. Core Wireless is informed and believes that Apple intends to and will continue to directly infringe and induce infringement of the '667 patent's claims.

70. Apple's acts of infringement have caused damages to Core Wireless and Core Wireless is entitled to recover from Apple the damages sustained by Core Wireless as a result of Apple's wrongful acts in an amount subject to proof at trial.

SIXTH COUNT
(Infringement of the '823 patent)

71. Core Wireless incorporates by reference the allegations set forth in Paragraphs 1-15 of this First Amended Complaint as though fully set forth herein.

72. The '823 patent discloses novel noise-reduction technology that improves the intelligibility of voice communications between users of mobile devices. Wireless voice communications are subject to interference and noise related to both the distant, transmitting end device (known as the "far end"), and the receiving end device (known as the "near end"). A transmitted far-end signal may carry interference and noise from various sources. Acoustic noise in the environment of the near-end device may also affect the intelligibility of the received signal. A key innovation of the '823 patent is to adjust the level and/or dynamic range of a sought-after speech signal in response to inputs including: 1) the level of the speech signal itself, 2) the noise from the far-end device, and 3) the noise in the environment of the near-end device. The result is a cellular phone conversation with less noise and clearer speech.

73. The limitations of the asserted apparatus claims of the '823 patent may be satisfied by incorporating hardware, software, and/or firmware, or any combination thereof, including without limitation microphones, processor(s), transceiver(s), and/or audio processor

products made by Apple and/or provided by third-party audio components manufacturers Audience, Inc. and/or Cirrus Logic, Inc. The limitations of the asserted method claims of the '823 patent may be satisfied by incorporating hardware, software, and/or firmware, or any combination thereof that perform the recited steps, including without limitation microphones, processor(s), transceiver(s), and/or audio processor products made by Apple and/or provided by third-party audio components manufacturers Audience, Inc. and/or Cirrus Logic, Inc. For example, at least a computer microchip sold by Audience works in conjunction with Audience and/or Apple software and/or firmware in Apple's Accused Products to infringe the asserted claims of the '823 patent.

74. Apple has had knowledge of the '823 patent since at least as early as September 10, 2014 when Core Wireless provided direct notice to Apple of its infringement of the '823 patent via the filing and service of Core Wireless's Original Complaint. Additionally, since at least March 6, 2015, Apple has had knowledge of Core Wireless's infringement contentions concerning the '823 patent, including without limitation the specific functionalities covered by the '823 patent, the specific Apple Accused Products infringing the '823 patent, and a detailed claim-by-claim, element-by-element analysis of infringement by Apple's Accused Products.

75. In violation of 35 U.S.C. § 271(a), Apple is and has been infringing one or more claims of the '823 patent directly by making, using, offering to sell, and/or selling in the United States, and/or importing into the United States, without authority, products, including without limitation Apple's Accused Products, that are covered by or practice the inventions claimed in the '823 patent. Apple is infringing claims of the '823 patent literally and/or pursuant to the doctrine of equivalents.

76. In violation of 35 U.S.C. § 271(b), Apple is and has been infringing one or more of the '823 patent's claims indirectly by actively encouraging acts of direct infringement knowing that it is inducing the infringement of the '823 patent's claims by third parties, including without limitation manufacturers, resellers, and/or end-users of Apple's Accused Products, in this District, and elsewhere in the United States. Direct infringement is the result of activities performed by third parties in relation to Apple's Accused Products, including without limitation by end users enabled and encouraged by Apple to use Apple's Accused Products in their normal, customary way to infringe the '823 patent.

77. Apple actively induces third parties, including without limitation end-users of Apple's Accused Products, to infringe the '823 patent by, among other things, (i) enabling a user of Apple's Accused Products to employ the noise-reduction functionalities disclosed and claimed in the '823 patent;²¹ (ii) providing instructions to end-users of Apple's Accused Products for using the functionalities claimed in the '823 patent;²² (iii) advertising the functionalities claimed in the '823 patent;²³ and (iv) providing to third parties the hardware (e.g., microphones, processor(s), transceiver(s), and/or audio processor products contained in Apple's Accused Products) and software components (e.g., Apple's and/or third party software and/or firmware operating on Apple's Accused Products) that may be required for or associated with

²¹ On March 6, 2015, Core Wireless served Apple its infringement contentions pursuant to P.R. 3-1, which detail Apple's infringement of the asserted claims of the '823 patent..

²² See, e.g., **Exhibit 27**, attached hereto, is a true and correct copy of <https://help.apple.com/iphone/8/#iphdaf4cc04c> ("iPhone uses ambient noise cancellation to reduce background noise. **Turn noise cancellation on or off.** Go to Settings > General > Accessibility > Phone Noise Cancellation.") (emphasis in original) (last printed July 24, 2015). See also at least **Exhibit 12** at 168.

²³ See, e.g., **Exhibit 28**, attached hereto, is a true and correct copy of <http://www.apple.com/pr/library/2010/06/07Apple-Presents-iPhone-4.html> ("iPhone 4 features a second microphone and advanced software to suppress unwanted background noise for improved call quality when in loud places,") (last printed July 24, 2015); **Exhibit 29**, attached hereto, is a true and correct copy of <http://www.apple.com/pr/library/2012/09/12Apple-Introduces-iPhone-5.html> ("iPhone 5 introduces new enhanced audio features including a new beam-forming, directional microphone system for higher quality sound, while background noise fades away with new noise canceling technology.") (last printed July 24, 2015).

infringement of the '823 patent's claims via the manufacture, marketing, sale, and/or distribution of the Accused Products through its website, retail store locations, and third-party distributors.

78. Apple's foregoing activities have been without authority and/or license from Core Wireless.

79. Apple has had direct and actual knowledge of the '823 patent and Core Wireless's infringement claims at least as of the filing of Core Wireless's Original Complaint in September 2014. Apple has also had direct and actual knowledge of Core Wireless's specific infringement contentions concerning the '823 patent since at least March 2015. Despite Apple's knowledge of the '823 patent and Core Wireless's infringement contentions, Apple continues to engage in the activities described above which enable and encourage third parties, including without limitation end-users of Apple's Accused Products, to use the noise reduction functionalities as disclosed and claimed in the '823 patent. Apple thereby specifically intends third parties, including without limitation end-users of Apple's Accused Products, to infringe the '823 patent.

80. Core Wireless is informed and believes that Apple intends to and will continue to directly infringe and induce infringement of the '823 patent's claims.

81. Apple's acts of infringement have caused damages to Core Wireless and Core Wireless is entitled to recover from Apple the damages sustained by Core Wireless as a result of Apple's wrongful acts in an amount subject to proof at trial.

DAMAGES

82. As a result of Apple's acts of infringement, Core Wireless has suffered actual and consequential damages; however, Core Wireless does not yet know the full extent of the infringement and its extent cannot be ascertained except through discovery and special accounting. To the fullest extent permitted by law, Core Wireless seeks recovery of damages at least for reasonable royalties, unjust enrichment, and benefits received by Apple as a result of

using the misappropriated technology. Core Wireless further seeks any other damages to which Core Wireless would be entitled to in law or in equity.

ATTORNEYS' FEES

83. Core Wireless is entitled to recover reasonable and necessary attorneys' fees under applicable law.

PRAYER FOR RELIEF

Core Wireless respectfully requests that this Honorable Court enter preliminary and final orders and judgments against Apple as are necessary to provide Core Wireless with the following relief:

(a) A judgment that Apple has infringed and/or is infringing one or more claims of the '476 patent;

(b) A judgment that Apple has infringed and/or is infringing one or more claims of the '671 patent;

(c) A judgment that Apple has infringed and/or is infringing one or more claims of the '020 patent;

(d) A judgment that Apple has infringed and/or is infringing one or more claims of the '552 patent;

(e) A judgment that Apple has infringed and/or is infringing one or more claims of the '667 patent;

(f) A judgment that Apple has infringed and/or is infringing one or more claims of the '823 patent;

(g) Actual damages;

(h) A mandatory future royalty payable on each future product sold by Apple that is found to infringe one or more of the patents asserted herein and on all future products which are not colorably different from products found to infringe;

(i) Attorneys' fees pursuant to 35 U.S.C. § 285 or as otherwise allowed by law;

- (j) Pre-judgment and post-judgment interest as allowed by law;
- (k) Costs of suit;
- (l) All further relief in law or in equity as the Court may deem just and proper.

DEMAND FOR JURY TRIAL

Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure and Local Rule CV-38, Core Wireless demands a trial by jury of this action.

Dated: July 24, 2015

Respectfully Submitted,

By: /s/ Henry C. Bunsow

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**ATTORNEYS FOR PLAINTIFF
CORE WIRELESS LICENSING S.A.R.L.**

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing document was filed electronically in compliance with Local Rule CV-5(a). Therefore, this document was served on all counsel who are deemed to have consented to electronic service. Local Rule CV-5(a)(3)(A). Pursuant to Fed.R.Civ.P. 5(d) and Local Rule CV-5(e), all other counsel of record not deemed to have consented to electronic service were served with a true and correct copy of this document via email, facsimile and/or U.S. First Class Mail.

Dated: July 24, 2015

/s/ Henry C. Bunsow

Henry C. Bunsow