UNITED STATES DISTRICT COURT FOR THE
SOUTHERN DISTRICT OF FLORIDA
Miami Division

Case Number: 16-23535-CIV-MORENO

BLACKBERRY LIMITED,

Plaintiff,

vs.

BLU PRODUCTS, INC.,

Defendant.

BLACKBERRY'S
FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff BlackBerry Limited ("BlackBerry"), for its First Amended Complaint against Defendant BLU Products, Inc. ("BLU"), alleges as follows:

THE PARTIES

1. Plaintiff BlackBerry Limited is a Canadian company with its principal place of business at 2200 University Avenue East, Waterloo, Ontario, Canada N2K 0A7.

2. BlackBerry revolutionized the mobile communications industry. Its innovative, cutting-edge products changed the way millions of people around the world connect, converse, and share digital information.

3. BlackBerry was founded in 1984 in Waterloo, Ontario by two engineering students, Mike Lazaridis and Douglas Fregin. In its early years, the company—then named Research In Motion ("RIM")—focused its inventive energies on wireless data transmission.

4. From its modest beginnings more than 30 years ago, BlackBerry has gone on to offer a portfolio of award-winning products, services, and embedded technologies to tens of

millions of individual consumers and organizations around the world, including governments, educational institutions, and over 90% of Fortune 500 companies. By transforming the way people communicate, BlackBerry laid a foundation for today's multibillion-dollar modern smartphone industry.

5. In the course of developing its ground-breaking mobile communications devices, BlackBerry (and the BlackBerry family of companies) has invented a broad array of new technologies that cover everything from enhanced security protocols, to mobile device user interfaces, to communication advancements, to battery conservation, and many other areas. As just one example, security posed a critical challenge for BlackBerry to address when bringing its mobile devices to market. Commercial acceptance of such mobile devices required providing mechanisms to ensure safe and secure use of software applications that are downloaded from the Internet, so that users and businesses could be confident that their confidential and private information stayed that way in spite of ever increasing data breaches. Due to its innovative technologies, BlackBerry has been universally recognized as the gold standard when it comes to secure mobile devices.

6. Throughout its history, BlackBerry has demonstrated a commitment to innovation, including through its investments in research and development, which have totaled more than $5.5 billion over the past five years. BlackBerry has protected the technical innovations resulting from these investments, including through seeking patent protection, and BlackBerry owns rights to a wide array of patented technologies in the United States and worldwide.

7. As a result of its innovative efforts, among other patents, BlackBerry also built a substantial portfolio of patents declared essential to critical mobile telecommunications standards

that enable the widely used 2G, 3G, and LTE communications networks[1] implemented in the United States. BlackBerry developed these technologies and then helped develop these standards in conjunction with the Third Generation Partnership Project ("3GPP").

8. As part of the standard development process, BlackBerry committed to license its patents essential to these standards (standard essential patents or "SEPs") on terms and conditions that are fair, reasonable, and non-discriminatory ("FRAND"). SEPs are particularly powerful patents because all implementers must practice them in order be able to make, use, or sell standard-compliant products. FRAND licenses are therefore used in connection with SEPs to strike a balance that ensures SEP owners receive appropriate compensation for their intellectual property rights but also allows for implementers to widely adopt the standard.

9. Upon information and belief, Defendant BLU Products, Inc. is a Delaware corporation with its principal place of business at 10814 N.W. 33rd Street, Building 100, Doral, Florida 33172.

10. On information and belief, BLU Products, Inc. may be served through its registered agent, Bernard L. Egozi of Egozi & Bennett, P.A. 2999 NE 191st, Suite 407, Aventura, FL 33180. BLU operates and/or owns the website located at http://bluproducts.com/.

11. BLU infringes multiple BlackBerry standard essential and non-standard essential patents by using, without authorization, BlackBerry's proprietary technology in a number of BLU's commercial products including mobile phones, smartphones, tablets, and software for mobile communication devices.

[1] This standard technology is set forth in at least the following specification numbers: 4G: 3GPP TS 23.122, 23.401, 24.229, 24.301, 36.211, 36.212, 36.213, 36.300, 36.321, 36.322, 36.331; 3G: 3GPP TS 23.002, 25.133, 25.201, 25.211, 25.212, 25.213, 25.214, 25.215, 25.301, 25.309, 25.321, 25.331, 25.401, 25.433.

12. As a result of its infringement, BLU has earned substantial revenue selling devices, including 2G, 3G, and LTE-compliant products, that use BlackBerry's technology. BLU makes, sells, uses, offers to sell, markets, and/or imports numerous smartphones, including those compatible with the 2G, 3G, and LTE standard, throughout the United States without a license from BlackBerry.

13. BlackBerry offered BLU a license to certain of its SEPs on FRAND terms, but BLU never responded. Despite efforts by BlackBerry to negotiate, BLU has persisted in importing, selling, and offering for sale a substantial volume of standard-compliant products that use BlackBerry's SEP technology without a license. Based on these actions, BlackBerry brings claims for patent infringement against BLU under 35 U.S.C. § 271, *et seq*.

JURISDICTION AND VENUE

14. This is a civil action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 101, *et seq.*

15. This Court has subject matter jurisdiction over this action pursuant to 28 U.S.C. §§ 1331, 1332, 1338(a), and 1367.

16. This Court has personal jurisdiction over BLU for at least the following reasons: (1) BLU's principal place of business is located in this District; and (2) BLU regularly does business or solicits business, engages in other persistent courses of conduct, and/or derives substantial revenues from products and/or services provided to individuals in Florida.

17. BLU committed and continues to commit acts of infringement in violation of 35 U.S.C. § 271. BLU has made, used, offered for sale, sold, marketed, and/or imported infringing products in the State of Florida, including in this District. BLU's acts cause injury to BlackBerry, including within this District.

18. Venue is proper in this District pursuant to 28 U.S.C. §§ 1391(b) and (c) and 1400(b) for at least the following reasons: (1) BLU's principal place of business is located in this District; and (2) BLU regularly does business or solicits business, engages in other persistent courses of conduct, and/or derives substantial revenues from products and/or services provided to individuals in Florida.

FACTUAL BACKGROUND

19. BlackBerry is a global leader in the mobile communications industry. Through its significant investment in research and development over the past 30 years, BlackBerry has developed innovative, cutting-edge technologies that have changed the face of telecommunications.

20. In the late 1990s, BlackBerry began to release a series of game-changing handheld mobile devices that enabled users to send and receive email and messages on the go, without needing to be tethered to a modem or a desktop computer. The innovative nature of the 1998 RIM 950 Wireless Handheld, for example, was instantly recognized, garnering both an Editor's Choice Award from CNET and Andrew Seybold's Outlook Award.

21. In 2002, BlackBerry released the BlackBerry 6710 and 6720—the first BlackBerry devices capable of both sending emails and making phone calls, and some of the earliest smartphones released in the United States. The next year, BlackBerry introduced smartphone models that added built-in audio hardware and color screens. Since those first smartphones, BlackBerry has continued to offer handheld wireless products incorporating its proprietary technologies in security, communications, mobile device user interfaces, and other areas, including those fundamental and essential to wireless communication standards.

22. BlackBerry's technological innovations continue to this day, as embodied in the latest iterations of BlackBerry's mobile devices—including the BlackBerry Classic, Leap, Passport, PRIV, and DTEK50.

23. Each successive iteration of BlackBerry's wireless devices has received significant unsolicited coverage in the media. For example, GSMA—the largest and most well-known association of mobile operators—recognized BlackBerry's devices as "chang[ing] the face of communications." Thomson Reuters named BlackBerry one of the World's Top 100 Most Innovative Organizations, based largely on the number of "important patents" BlackBerry has. In 2015, Forrester Research crowned BlackBerry as a "leader in mobile management" based on BlackBerry's focus in security software and mobile solutions.

24. BlackBerry's mobile devices have won widespread industry acclaim for both their unique design and their performance. They have garnered dozens of industry awards, including the GSMA Chairman's Award, InfoWorld Magazine's Product of the Year Award, PC World's World Class Award, the Network Industry Award for Best New Mobile Communications Product, the BusinessWeek Best Product of the Year award, Digit Magazine's "World's Best Mobile OS" award, Security Products "Govies" Government Security Award, and PC Magazine's Best Products of the Year Award.

25. The industry acclaim for BlackBerry's innovations continues to this day. For example, in 2015 BlackBerry's Passport was awarded the prestigious Red Dot "Best of the Best" award for innovative product design (from thousands of total entries). Similarly, in 2016, BlackBerry's PRIV was awarded the Red Dot "Design Award" for best product design.

26. BlackBerry is informed and believes, and thereon alleges, that the BLU devices that have been provided with the Android operating system include: Advance 4.0, Advance 4.0

L, Advance 4.0 L2, Advance 4.5, Advance 5.0, Amour, Dash, Dash 3.2, Dash 3.5, Dash 3.5 II, Dash 4.0, Dash 4.5, Dash 5.0, Dash 5.0+, Dash 5.5, Dash C Music, Dash JR 3G, Dash L, Dash L2, Dash M, Dash M2, Dash Music 4.0, Dash X, Dash X Plus, Dash X Plus LTE, Dash X2, Energy X, Energy XL, Energy X LTE, Energy X Plus, Energy X2, Life 8, Life 8 XL, Life Mark, Life One M, Life One X, Life Play, Life Play 2, Life Play Mini, Life Play S, Life Play X, Life Pro, Life Pure, Life Pure Mini, Life View, Life View 8.0 (Tablet), Life View Tab (Tablet), Life X8, Neo 3.5, Neo 4.5, Neo 5.5, Neo Energy Mini, Neo X, Neo X Plus, Neo XL, Pure XL, R1 HD, Selfie, Sport 4.5, Star 4.5, Studio 5.0 C, Studio 5.0 C HD, Studio 5.0 II, Studio 5.0 S II, Studio 5.5, Studio 5.5 C, Studio 5.5 HD, Studio 5.5 S, Studio 6.0 HD, Studio 7.0, Studio 7.0 II, Studio C, Studio C 5+5, Studio C HD, Studio C Mini, Studio C Super Camera, Studio Energy, Studio Energy 2, Studio G, Studio G Plus, Studio M HD, Studio One, Studio One Plus, Studio Selfie, Studio Selfie 2, Studio Touch, Studio X, Studio X 5, Studio X 6, Studio X Mini, Studio X Plus, Studio XL, Tank 4.5, Touchbook 8.0 3G, Touchbook G7, Vivo 4.3, Vivo 4.65 HD, Vivo 4.8 HD, Vivo 5, Vivo Air, Vivo IV, Vivo Selfie, Vivo XL, Zoey 2.4 3G, Zoey 3G, Energy X Mini, Grand 5.5 HD, Neo 5.0, Studio G HD, Energy Diamond Mini (hereinafter, the "BLU Android Devices"). *See*, *e.g.*, Exhibit A, an 8/4/2016 capture of http://bluproducts.com/index.php/android-phones; Exhibit B, an 8/4/2016 capture of http://bluproducts.com/index.php/other-android-phones.

27. In the course of developing these ground-breaking devices, BlackBerry built a portfolio of approximately 40,000 patents and patent applications covering numerous fields of technology including mobile communication, radio frequency communication techniques, processors, power management, and many other areas.

Cellular Standards and the FRAND Commitment

28. Many of BlackBerry's patents, including its standard-essential patents, cover aspects of industry standards developed by 3GPP through a collaborative process in which European Telecommunications Standards Institute ("ETSI") and other international standard-setting organizations ("SSOs") collaborate to create and improve global standards for the telecommunications industry. 3GPP operates as an umbrella SSO that produces and maintains the technologies that enable the "second", "third", and "fourth" generations of wireless telecommunications technology ("2G", "3G", and "LTE", respectively). LTE technology, which evolved from 3G, aims to increase capacity and speed. In particular, the LTE standard represents the latest advances in wireless telecommunications technology and is credited with many technical innovations that have greatly enhanced user experience, including a dramatic increase in data throughput and system performance compared to 3G technology. The family of 3GPP radio access technologies shares a number of synergies and certain features may be designed to operate across, or to enable interworking between 2G, 3G, and LTE. Mobile devices and infrastructure equipment are also commonly "multi-mode," i.e., are compatible with multiple generations of 3GPP's radio access technologies. For example, LTE phones are commonly also capable of communicating using 3G technologies.

29. Similarly, LTE and 3G technologies evolved from 2G technologies and multi-mode devices supporting LTE and 3G are also commonly compatible with 2G technologies.

30. Cellular standards enable interoperability, i.e., the ability of devices and equipment made by different manufacturers to communicate and work together in a cellular network. In order for mobile devices and telecommunications infrastructure equipment to be commercially viable in the United States and most of the world today, it is essential that such devices and equipment comply with 3GPP standards.

31. 3GPP maintains and approves standards through a collaborative process in which its members submit technical proposals for establishing or improving aspects of a standard. These proposals are evaluated, refined, tested, and ultimately approved or rejected by technical committees of 3GPP. The resulting 3GPP technical specifications are incorporated by ETSI and other SSOs into relevant standards.

32. Once a particular technology is incorporated into a standard, manufacturers of telecommunications devices and equipment must integrate the technology into their products to comply with the standard. Because it is common for SSO members to own patents covering the technology they contribute to standards, organizations like ETSI have created policies that seek to ensure those patents will be available for manufacturers to license on FRAND terms and conditions. For example, ETSI's Intellectual Property Right ("IPR") Policy requires members to disclose patents they believe are or may become "essential" to complying with a standard and declare whether they are prepared to grant irrevocable licenses on FRAND terms and conditions.

33. ETSI's IPR Policy defines "essential" as follows:

> "ESSENTIAL" as applied to IPR means that it is not possible on technical (but not commercial) grounds, taking into account normal technical practice and the state of the art generally available at the time of standardization, to make, sell, lease, otherwise dispose of, repair, use or operate EQUIPMENT or METHODS which comply with a STANDARD without infringing that IPR. For the avoidance of doubt in exceptional cases where a STANDARD can only be implemented by technical solutions, all of which are infringements of IPRs, all such IPRs shall be considered ESSENTIAL.

Exhibit C at 41, § 15(6).

34. ETSI members who disclose their SEPs are thus invited to declare whether they are ready to license them, upon request, to implementers of the 3GPP standards on FRAND terms and conditions. The declaration forms ETSI members may use to disclose SEPs state:

> To the extent that the IPR(s) disclosed in the attached *IPR Information Statement Annex* are or become, and remain ESSENTIAL in respect of the ETSI Work Item,

> STANDARD and/or TECHNICAL SPECIFICATION identified in the attached *IPR Information Statement Annex*, the Declarant and/or its AFFILIATES are (1) prepared to grant irrevocable licenses under this/these IPR(s) on terms and conditions which are in accordance with Clause 6.1 of the ETSI IPR Policy; and (2) will comply with Clause 6.1bis of the ETSI IPR Policy.

E.g., *id.* at 43.

35. Many other SSOs require similar commitments from members who disclose patents that are or may become essential to practicing relevant standards.

36. ETSI declarations create binding contractual commitments with ETSI to which other ETSI members and implementers of the 3GPP standards are third-party beneficiaries.

37. The FRAND requirement is intended to ensure that SEP owners receive appropriate compensation for their intellectual property rights while preventing attempts to extract from implementers more favorable license terms than SEP owners would have obtained had their patents not been declared essential.

38. BlackBerry and its affiliates are members of over thirty SSOs and have forged many industry alliances to promote the development of information and communications technology. BlackBerry and its affiliates have submitted many proposals to various standards organizations. BlackBerry and its affiliates have been active participating members of ETSI since 1999 and have made thousands of contributions to 3GPP standards, including the 2G, 3G, and LTE wireless standards.

39. BlackBerry, on its behalf and on behalf of its affiliates, has disclosed to ETSI over two hundred patent families that are or may become essential to practicing one or more 3GPP standards. BlackBerry, on its behalf and on behalf of its affiliates, has committed to license, and has licensed to multiple companies, its standard-essential patents and those of its affiliates ("BlackBerry's SEP Portfolio") on FRAND terms and conditions according to ETSI's IPR

Policy. BlackBerry's SEP Portfolio, particularly as it relates to the 2G, 3G, and LTE standards, is extremely valuable within these standards and the industry.

Notice Letters from BlackBerry to BLU Products

40. On November 21, 2015, BlackBerry notified BLU of BlackBerry's belief that BLU is infringing BlackBerry's SEPs through its manufacture and sale of mobile phones and tablets that are compliant with, among others, the 2G, 3G, and LTE wireless standards. In its notification, BlackBerry provided BLU with a non-exhaustive list of standards that BLU practices and a non-exhaustive list of BlackBerry's SEPs associated with those standards that BlackBerry believes BLU's products infringe.

41. BlackBerry additionally offered BLU the opportunity to license the SEPs on FRAND terms and requested a meeting at BLU's headquarters to discuss the potential for licensing the technology to BLU. BlackBerry also offered to (1) explain in greater detail the basis of BlackBerry's belief that BLU is infringing the BlackBerry patents and (2) present a specific, written offer for a license on FRAND terms, including the royalty amount.

42. BlackBerry asked for a response to its November 21, 2015 letter by December 4, 2015.

43. BLU did not respond to BlackBerry's November 21, 2015 letter by December 4, 2015.

44. On December 8, 2015, BlackBerry sent BLU a second notice letter, stating that BLU had failed to respond to the November 21, 2015 letter and that the lack of response from BLU indicated to BlackBerry that BLU was not interested in pursuing a license with BlackBerry.

45. Despite BlackBerry's December 8, 2015 letter, BLU did not pursue a license from BlackBerry or otherwise engage in licensing negotiations.

BLU's Sales of 3GPP Standard-Compliant Products

46. BLU has earned substantial revenue selling 2G, 3G, and LTE-compliant products that use BlackBerry's technology. Those sales have propelled BLU to become, in its own words "one of the fastest growing mobile phone manufacturers in the world." Exhibit D, an 8/14/2016 capture of *About Us*, BLU PRODUCTS, http://bluproducts.com/into-blu/about-us.

47. BLU makes, sells, uses, offers to sell, markets, and/or imports numerous smartphones compatible with the LTE standards, as well as tablets and related devices, in(to) the Southern District of Florida and throughout the United States without a license from BlackBerry. BLU's LTE-enabled products are designed to operate on U.S. cellular networks with LTE capabilities. BLU markets LTE-capability as a key feature of its products.

48. BlackBerry is informed and believes, and thereon alleges, that the BLU devices that are designed to operate on LTE, 3G, and 2G networks and are compliant with all necessary 2G, 3G, and LTE standards include, but are not limited to, the following models: Dash X Plus LTE, Energy X LTE, Life Mark, Life One X, Pure XL, Studio Energy 2, Studio One, Studio One Plus, Studio Touch, Studio X Mini, Vivo 5, Vivo XL, Energy XL, R1 HD (hereinafter, the "Accused LTE Products").

49. BLU makes, sells, uses, offers to sell, markets, and/or imports numerous smartphones compatible with the 3G standards, as well as tablets and related devices, in(to) the Southern District of Florida and throughout the United States without a license from BlackBerry. BLU's 3G-enabled products are designed to operate on U.S. cellular networks with 3G capabilities. BLU markets 3G capability as a key feature of its products.

50. BlackBerry is informed and believes, and thereon alleges, that the BLU devices that are designed to operate on 3G and 2G networks and are compliant with all necessary 2G and

3G standards, other than the Accused LTE Products, include, but are not limited to, the following models: Advance 4.0, Advance 4.0 L, Advance 4.0 L2, Advance 4.5, Advance 5.0, Amour, Dash, Dash 3.2, Dash 3.5, Dash 4.0, Dash 4.5, Dash 5.0, Dash 5.0+, Dash 5.5, Dash C Music, Dash L, Dash L2, Dash M, Dash M2, Dash Music 4.0, Dash X, Dash X Plus, Dash X2, Energy X, Energy X Plus, Energy X2, Life 8, Life 8 XL, Life One M, Life Play, Life Play 2, Life Play Mini, Life Play S, Life Play X, Life Pro, Life Pure, Life Pure Mini, Life View, Life View 8.0 (Tablet), Life View Tab (Tablet), Life X8, Neo 3.5, Neo 4.5, Neo Energy Mini, Neo X, Neo X Plus, Neo XL, Selfie, Sport 4.5, Star 4.5, Studio 5.0 C, Studio 5.0 C HD, Studio 5.0 II, Studio 5.0 S II, Studio 5.5, Studio 5.5 C, Studio 5.5 HD, Studio 5.5 S, Studio 6.0 HD, Studio 7.0, Studio 7.0 II, Studio C, Studio C 5+5, Studio C HD, Studio C Mini, Studio C Super Camera, Studio Energy, Studio G, Studio G Plus, Studio M HD, Studio Selfie 2, Studio X, Studio X 5, Studio X 6, Studio X Plus, Studio XL, Tank 4.5, Touchbook G7, Vivo 4.3, Vivo 4.65 HD, Vivo 4.8 HD, Vivo Air, Vivo IV, Vivo Selfie, Energy X Mini, Grand 5.5 HD, Neo 5.0, Studio G HD, Energy Diamond Mini (hereinafter, the "Accused 3G Products") (the Accused 3G Products and Accused LTE Products collectively referred to as the "Accused Standard Compliant Products").

As detailed further below, BLU's Accused Standard Compliant Products use technology protected by BlackBerry's SEPs.

BLACKBERRY'S PATENTS

51. U.S. Patent No. 8,489,868 (the "'868 patent"), entitled "Software Code Signing System and Method," was duly and legally issued on July 16, 2013. BlackBerry Limited is the owner by assignment of all right, title, and interest in and to the '868 patent, including without limitation the right to sue and recover for past infringement thereof. A copy of the '868 patent is attached as Exhibit E.

52. U.S. Patent No. 8,713,466 (the "'466 patent"), entitled "Dynamic Bar Oriented User Interface," was duly and legally issued on April 29, 2014. BlackBerry Limited is the owner by assignment of all right, title, and interest in and to the '466 patent, including without limitation the right to sue and recover for past infringement thereof. A copy of the '466 patent is attached as Exhibit F.

53. U.S. Patent 8,402,384 (the "'384 patent"), entitled "Dynamic Bar Oriented User Interface," was duly and legally issued on March 19, 2013. BlackBerry Limited is the owner by assignment of all right, title, and interest in and to the '384 patent, including without limitation the right to sue and recover for past infringement thereof. A copy of the '384 patent is attached as Exhibit G.

54. U.S. Patent 8,411,845 (the "'845 patent"), entitled "Handheld Electronic Device Having Improved Phone Call Log, and Associated Method," was duly and legally issued on April 2, 2013. BlackBerry Limited is the owner by assignment of all right, title, and interest in and to the '845 patent, including without limitation the right to sue and recover for past infringement thereof. A copy of the '845 patent is attached as Exhibit H.

55. U.S. Patent 6,271,605 (the "'605 patent"), entitled "Battery Disconnect System," was duly and legally issued on August 7, 2001. BlackBerry Limited is the owner by assignment

of all right, title, and interest in and to the '605 patent, including without limitation the right to sue and recover for past infringement thereof. A copy of the '605 patent is attached as Exhibit I.

56. U.S. Patent 8,745,149 (the "'149 patent"), entitled "Handheld Electronic Device and Associated Method Providing Time Data in a Messaging Environment," was duly and legally issued on June 3, 2014. BlackBerry Limited is the owner by assignment of all right, title, and interest in and to the '149 patent, including without limitation the right to sue and recover for past infringement thereof. A copy of the '149 patent is attached as Exhibit J.

57. U.S. Patent 8,169,449 (the "'449 patent"), entitled "System Compositing Images From Multiple Applications," was duly and legally issued on May 1, 2012. BlackBerry Limited is the owner by assignment of all right, title, and interest in and to the '449 patent, including without limitation the right to sue and recover for past infringement thereof. A copy of the '449 patent is attached as Exhibit K.

58. U.S. Patent No. 7,969,924 ("'924 patent"), entitled "Method and Apparatus for State/Mode Transitioning," was duly and legally issued on June 28, 2011. BlackBerry Limited is the owner by assignment of all right, title, and interest in and to the '924 patent, including without limitation the right to sue and recover for past infringement thereof. A copy of the '924 patent is attached as Exhibit L.

59. U.S. Patent No. 8,483,060 ("'060 patent") is entitled "Method for Configuring a Telecommunication System," and issued on July 9, 2013. BlackBerry Limited is the owner by assignment of all right, title, and interest in and to the '060 patent, including without limitation the right to sue and recover for past infringement thereof. A copy of the '060 patent is attached as Exhibit M.

60. U.S. Patent No. 8,406,118 ("'118 patent") is entitled "Scattered Pilot Pattern and Channel Estimation Method for MIMO-OFDM Systems," and issued on March 26, 2013. BlackBerry Limited is the owner by assignment of all right, title, and interest in and to the '118 patent, including without limitation the right to sue and recover for past infringement thereof. A copy of the '118 patent is attached as Exhibit N.

61. U.S. Patent No. 8,472,567 ("'567 patent") is entitled "Detecting the Number of Transmit Antennas in a Base Station," and issued on June 25, 2013. BlackBerry Limited is the owner by assignment of all right, title, and interest in and to the '567 patent, including without limitation the right to sue and recover for past infringement thereof. A copy of the '567 patent is attached as Exhibit O.

62. U.S. Patent No. 8,265,034 ("'034 patent") is entitled "Method and System for Signaling Connection Release Indication," and issued on September 11, 2012. BlackBerry Limited is the owner by assignment of all right, title, and interest in and to the '034 patent, including without limitation the right to sue and recover for past infringement thereof. A copy of the '034 patent is attached as Exhibit P.

63. U.S. Patent No. 8,625,506 ("'506 patent") is entitled "System and Method for Determining Establishment Causes," and issued on January 7, 2014. BlackBerry Limited is the owner by assignment of all right, title, and interest in and to the '506 patent, including without limitation the right to sue and recover for past infringement thereof. A copy of the '506 patent is attached as Exhibit Q.

64. U.S. Patent No. 7,933,355 ("'355 patent") is entitled "Systems, Devices, and Methods for Training Sequence, Transmission and Reception," and issued on April 26, 2011. BlackBerry Limited is the owner by assignment of all right, title, and interest in and to the '355

patent, including without limitation the right to sue and recover for past infringement thereof. A copy of the '355 patent is attached as Exhibit R.

65. U.S. Patent No. 7,050,413 ("'413 patent") is entitled "Information Transmission Method, Mobile Communications System, Base Station and Mobile Station in which Data Size of Identification Data Is Reduced," and issued on May 23, 2006. BlackBerry Limited is the owner by assignment of all right, title, and interest in and to the '413 patent, including without limitation the right to sue and recover for past infringement thereof. A copy of the '413 patent is attached as Exhibit S.

FIRST CAUSE OF ACTION
(Infringement of U.S. Patent No. 8,489,868)

66. BlackBerry realleges and incorporates by reference the allegations set forth in the foregoing paragraphs.

67. On information and belief, BLU has directly infringed and is continuing to directly infringe the '868 patent, either literally or under the doctrine of equivalents, by making, using, selling, offering for sale, and/or importing in the United States and in this Judicial District, products, software, and/or services that incorporate or make use of one or more of the inventions covered by the '868 patent, including but not limited to the BLU Android Devices (*see, e.g.*, Exhibits A, B) ("'868 Accused Products"), thereby infringing one or more claims of the '868 patent.

68. BLU's '868 Accused Products satisfy each and every element of one or more claims of the '868 patent, for example, and without limitation, claims 1 and 76 of the '868 patent.

69. Claim 1 of the '868 patent recites:

A mobile device containing software instructions which when executed on the mobile device cause the mobile device to perform operations for controlling access to an application platform of the mobile device, the operation comprising:

storing a plurality of application programming interfaces (APIs) at the mobile device, wherein at least one API comprises a sensitive API to which access is restricted; ("Element 1A")

receiving, at the mobile device, an indication that a software application on the mobile device is requesting access to the sensitive API stored at the mobile device; ("Element 1B")

determining, at the mobile device, whether the software application is signed, wherein a signed software application includes a digital signature generated using a private key of a private key-public key pair, wherein the private key is not accessible to the mobile device; ("Element 1C")

the mobile device using a public key of the private key-public key pair to verify the digital signature of the software application; and ("Element 1D")

based upon verifying the digital signature at the mobile device, the mobile device allowing the software application access to the sensitive API. ("Element 1E")

70. To the extent the preamble is considered a limitation, the '868 Accused Products satisfy the preamble of claim 1 of the '868 patent: "A mobile device containing software instructions which when executed on the mobile device cause the mobile device to perform operations for controlling access to an application platform of the mobile device, the operation comprising." *See*, Exhibits A, B.

The Android Permission Model: Accessing Protected APIs

> All applications on Android run in an Application Sandbox, described earlier in this document. By default, an Android application can only access a limited range of system resources. The system manages Android application access to resources that, if used incorrectly or maliciously, could adversely impact the user experience, the network, or data on the device.
>
> These restrictions are implemented in a variety of different forms. Some capabilities are restricted by an intentional lack of APIs to the sensitive functionality (e.g. there is no Android API for directly manipulating the

> SIM card). In some instances, separation of roles provides a security measure, as with the per-application isolation of storage. In other instances, the sensitive APIs are intended for use by trusted applications and protected through a security mechanism known as Permissions.
>
> These protected APIs include:
>
> - Camera functions
> - Location data (GPS)
> - Bluetooth functions
> - Telephony functions
> - SMS/MMS functions
> - Network/data connections

Exhibit T at pgs. 1-2, an 8/11/2016 capture of http://source.android.com/security/overview/app-security.html.

71. The '868 Accused Products satisfy Element 1A of claim 1 of the '868 patent: "storing a plurality of application programming interfaces (APIs) at the mobile device, wherein at least one API comprises a sensitive API to which access is restricted." *See, e.g.,* Paragraph 70.

72. The '868 Accused Products satisfy Element 1B of claim 1 of the '868 patent: "receiving, at the mobile device, an indication that a software application on the mobile device is requesting access to the sensitive API stored at the mobile device." *See, e.g.*:

APP MANIFEST

> Every application must have an AndroidManifest.xml file (with precisely that name) in its root directory. The manifest file provides essential information about your app to the Android system, which the system must have before it can run any of the app's code. Among other things, the manifest does the following:
> …
> - It declares the permissions that the application must have in order to access protected parts of the API and interact with other applications.
> …

Exhibit U at 1, an 8/11/2016 capture

of http://developer.android.com/guide/topics/manifest/manifest-intro.html.

A. Permissions

> A *permission* is a restriction limiting access to a part of the code or to data on the device. The limitation is imposed to protect critical data and code that could be misused to distort or damage the user experience.
> …
> If an application needs access to a feature protected by a permission, it must declare that it requires that permission with a <uses-permission> element in the manifest. Then, when the application is installed on the device, the installer determines whether or not to grant the requested permission by checking the authorities that signed the application's certificates and, in some cases, asking the user. If the permission is granted, the application is able to use the protected features. If not, its attempts to access those features fail without any notification to the user.

Exhibit U at 5; *see also* Paragraph 70.

73. The '868 Accused Products satisfy Element 1C of claim 1 of the '868 patent: "determining, at the mobile device, whether the software application is signed, wherein a signed software application includes a digital signature generated using a private key of a private key-public key pair, wherein the private key is not accessible to the mobile device." *See, e.g.*:

> **Application Signing**
>
> Code signing allows developers to identify the author of the application and to update their application without creating complicated interfaces and permissions. Every application that is run on the Android platform must be signed by the developer. Applications that attempt to install without being signed will [be] rejected by either Google Play or the package installer on the Android device.
> …
> On Android, application signing is the first step to placing an application in its Application Sandbox. The signed application certificate defines which user id is associated with which application; different applications run under different user IDs. Application signing ensures that one

> application cannot access any other application except through well-defined IPC.
>
> When an application (APK file) is installed onto an Android device, the Package Manager verifies that the APK has been properly signed with the certificate included in that APK. If the certificate (or, more accurately, the public key in the certificate) matches the key used to sign any other APK on the device, the new APK has the option to specify in the manifest that it will share a UID with the other similarly-signed APKs.
> …
> Applications are also able to declare security permissions at the Signature protection level, restricting access only to applications signed with the same key while maintaining distinct UIDs and Application Sandboxes. A closer relationship with a shared Application Sandbox is allowed via the shared UID feature (https://developer.android.com/guide/topics/manifest/manifest-element.html#uid) where two or more applications signed with same developer key can declare a shared UID in their manifest.

Exhibit T at 5-6.

SIGN YOUR APP

> Android requires that all APKs be digitally signed with a certificate before they can be installed. This document describes how to sign your APKs using Android Studio, including creating and storing your certificate, signing different build configurations using different certificates, and configuring the build process to sign your APKs automatically.
>
> **Certificates and Keystores**
>
> A public-key certificate, also known as a digital certificate or an identity certificate, contains the public key of a public/private key pair, as well as some other metadata identifying the owner of the key (for example, name and location). The owner of the certificate holds the corresponding private key. …

Exhibit V at 1, an 8/11/2016 capture of http://developer.android.com/studio/publish/app-signing.html. *See also* Exhibit W, an 8/11/2016 capture of http://developer.android.com/guide/topics/manifest/permission-element.html; Paragraphs 70 and 72.

74. The ’868 Accused Products satisfy Element 1D of claim 1 of the ’868 patent: “the mobile device using a public key of the private key-public key pair to verify the digital signature of the software application.” *See, e.g.*, Paragraphs 70, 72, and 73.

75. The ’868 Accused Products satisfy Element 1E of claim 1 of the ’868 patent: “based upon verifying the digital signature at the mobile device, the mobile device allowing the software application access to the sensitive API.” *See, e.g.*, Paragraphs 70, 72, and 73.

76. Claim 76 of the ’868 patent recites:

> A method for controlling access to an application platform of a mobile device, comprising:
>
> storing a plurality of application programming interfaces (APIs) at the mobile device, wherein at least one API comprises a sensitive API to which access is restricted; (“Element 76A”)
>
> receiving, at the mobile device, an indication that a software application on the mobile device is requesting access to the sensitive API stored at the mobile device; (“Element 76B”)
>
> determining, at the mobile device, whether the software application is signed, wherein a signed software application includes a digital signature generated using a private key of a private key-public key pair, wherein the private key is not accessible to the mobile device; (“Element 76C”)
>
> mobile device using a public key of the private key-public key pair to verify of the digital signature of the software application; and (“Element 76D”)
>
> based upon verifying the digital signature at the mobile device, the mobile device allowing the software application access to the sensitive API. (“Element 76E”)

77. To the extent the preamble is considered a limitation, the ’868 Accused Products satisfy the preamble of claim 76 of the ’868 patent: “A method for controlling access to an application platform of a mobile device, comprising.” *See, e.g.*, Paragraph 70.

78. The ’868 Accused Products satisfy Element 76A of claim 76 of the ’868 patent: “storing a plurality of application programming interfaces (APIs) at the mobile device, wherein

at least one API comprises a sensitive API to which access is restricted." *See, e.g.*, Paragraph 70.

79. The '868 Accused Products satisfy Element 76B of claim 76 of the '868 patent: "receiving, at the mobile device, an indication that a software application on the mobile device is requesting access to the sensitive API stored at the mobile device." *See, e.g.*, Paragraphs 70 and 72.

80. The '868 Accused Products satisfy Element 76C of claim 76 of the '868 patent: "determining, at the mobile device, whether the software application is signed, wherein a signed software application includes a digital signature generated using a private key of a private key-public key pair, wherein the private key is not accessible to the mobile device." *See, e.g.*, Paragraphs 70, 72, and 73.

81. The '868 Accused Products satisfy Element 76D of claim 76 of the '868 patent: "mobile device using a public key of the private key-public key pair to verify of the digital signature of the software application." *See, e.g.*, Paragraphs 70, 72, and 73.

82. The '868 Accused Products satisfy Element 76E of claim 76 of the '868 patent: "based upon verifying the digital signature at the mobile device, the mobile device allowing the software application access to the sensitive API." *See, e.g.*, Paragraphs 70, 72, and 73.

83. By its actions, BLU has injured BlackBerry and is liable to BlackBerry for infringement of the '868 patent pursuant to 35 U.S.C. § 271.

84. BlackBerry has been damaged by BLU's infringement of the '868 patent and will continue to be damaged unless BLU is enjoined by this Court. BlackBerry has suffered and continues to suffer irreparable injury for which there is no adequate remedy at law. The balance of hardships favors BlackBerry, and public interest is not disserved by an injunction.

85. BlackBerry is entitled to recover from BLU all damages that BlackBerry has sustained as a result of BLU's infringement of the '868 patent, including without limitation, lost profits and not less than a reasonable royalty.

SECOND CAUSE OF ACTION
(Infringement of U.S. Patent No. 8,713,466)

86. BlackBerry realleges and incorporates by reference the allegations set forth in the foregoing paragraphs.

87. On information and belief, BLU has directly infringed and is continuing to directly infringe the '466 patent, either literally or under the doctrine of equivalents, by making, using, selling, offering for sale, and/or importing in the United States and in this Judicial District, products, software, and/or services that incorporate or make use of one or more of the inventions covered by the '466 patent, including but not limited to the BLU Android Devices (*see, e.g.*, Exhibits A, B) ("'466 Accused Products"), thereby infringing one or more claims of the '466 patent.

88. BLU's '466 Accused Products satisfy each and every element of one or more claims of the '466 patent, for example, and without limitation, claims 1 and 14 of the '466 patent.

89. Claim 1 of the '466 patent recites:

A method for displaying preview information, the method comprising:

displaying on a display dynamic preview information in a dynamic bar, the dynamic preview information being determined from information managed by a software application, the dynamic preview information being updated to reflect a change to the information managed by the software application; and ("Element 1A")

expanding the dynamic bar to display an expanded dynamic bar in response to a first input, displaying the expanded dynamic bar comprising: ("Element 1B")

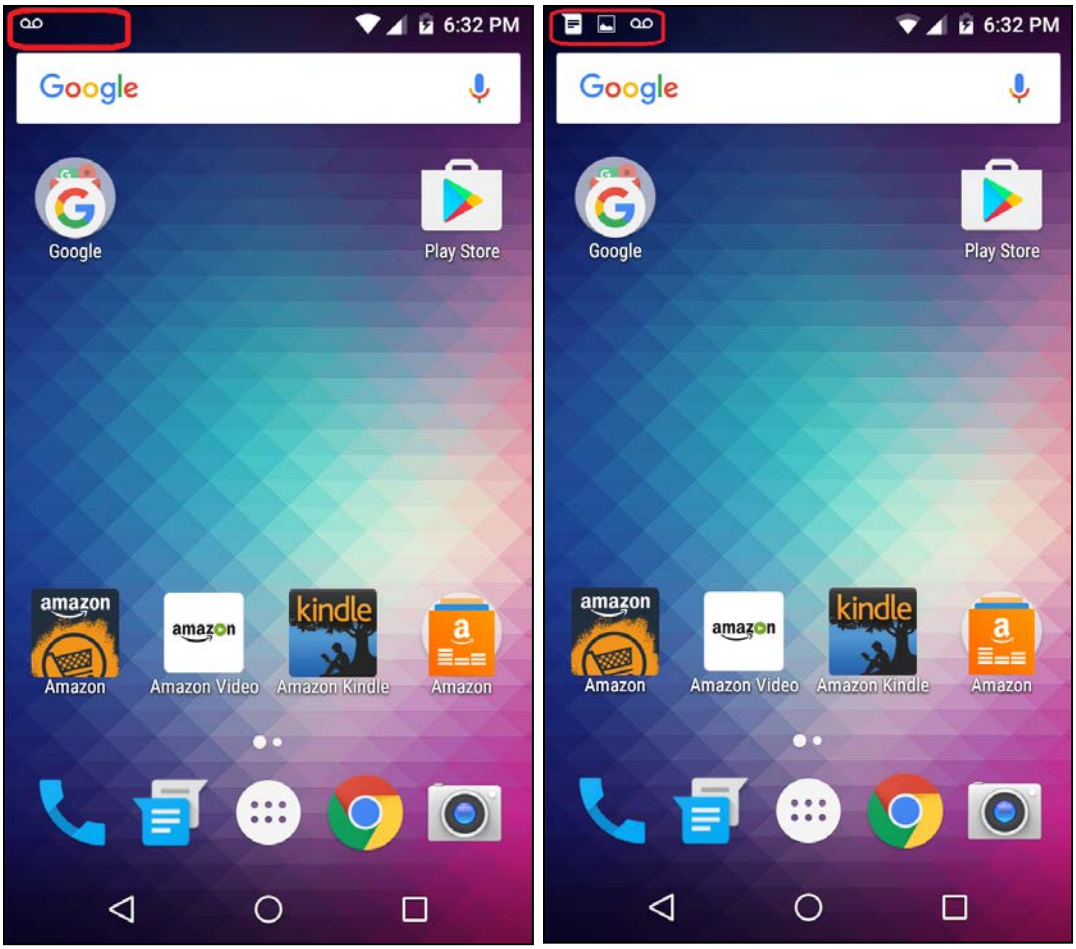
displaying additional dynamic preview information determined from the information managed by the software application, the additional dynamic preview information being different from the dynamic preview information displayed in the dynamic bar; ("Element 1C")

the additional dynamic preview information comprising a selectable link which when activated, invokes the software application. ("Element 1D")

90. To the extent the preamble is considered a limitation, the '466 Accused Products satisfy the preamble of claim 1 of the '466 patent: "A method for displaying preview information, the method comprising." *See, e.g.*, Exhibit X, an 8/11/2016 capture of http://developer.android.com/guide/topics/ui/notifiers/notifications.html; *see also* Exhibits A, B; *see also*:

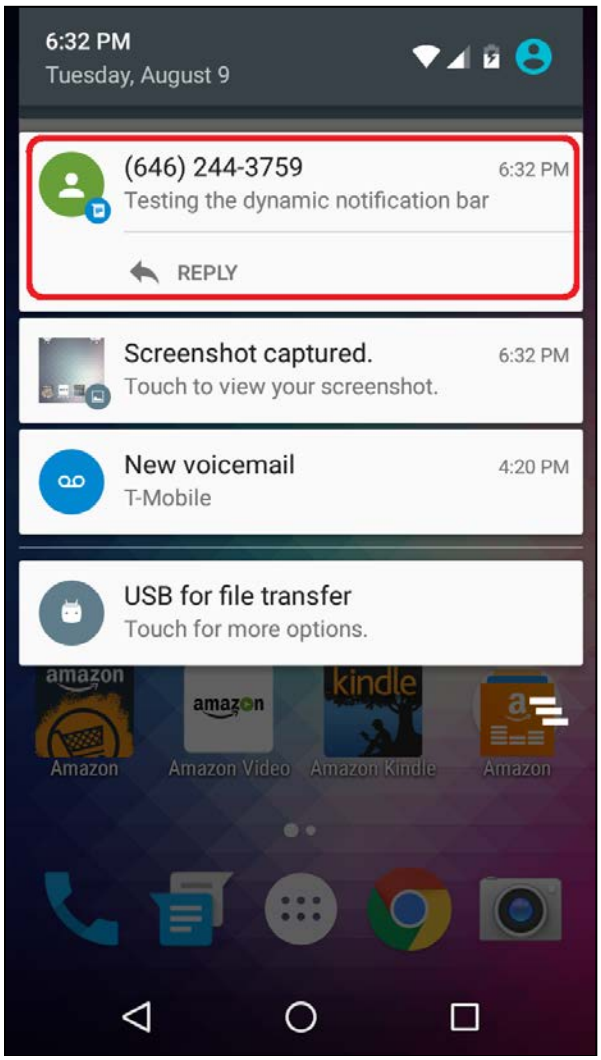
Exhibit Y at 9-10, an 8/11/2016 capture of http://www.bluproducts.com/r1-hd/ (image taken from native website due to better formatting).

91. The '466 Accused Products satisfy Element 1A of claim 1 of the '466 patent: "displaying on a display dynamic preview information in a dynamic bar, the dynamic preview information being determined from information managed by a software application, the dynamic preview information being updated to reflect a change to the information managed by the software application." *See, e.g.*:



Screenshots taken on R1 HD device running Android Version 6.0, red box annotations added. The screenshots show that a notification icon is generated in the notification bar after a text message is received. *See also* Paragraph 90.

92. The '466 Accused Products satisfy Element 1B of claim 1 of the '466 patent: "expanding the dynamic bar to display an expanded dynamic bar in response to a first input, displaying the expanded dynamic bar comprising." *See, e.g.*:



Screenshots taken on R1 HD device running Android Version 6.0, red box annotations added. When the notification bar is selected, the notification bar expands and displays a preview of the text. *See also*:

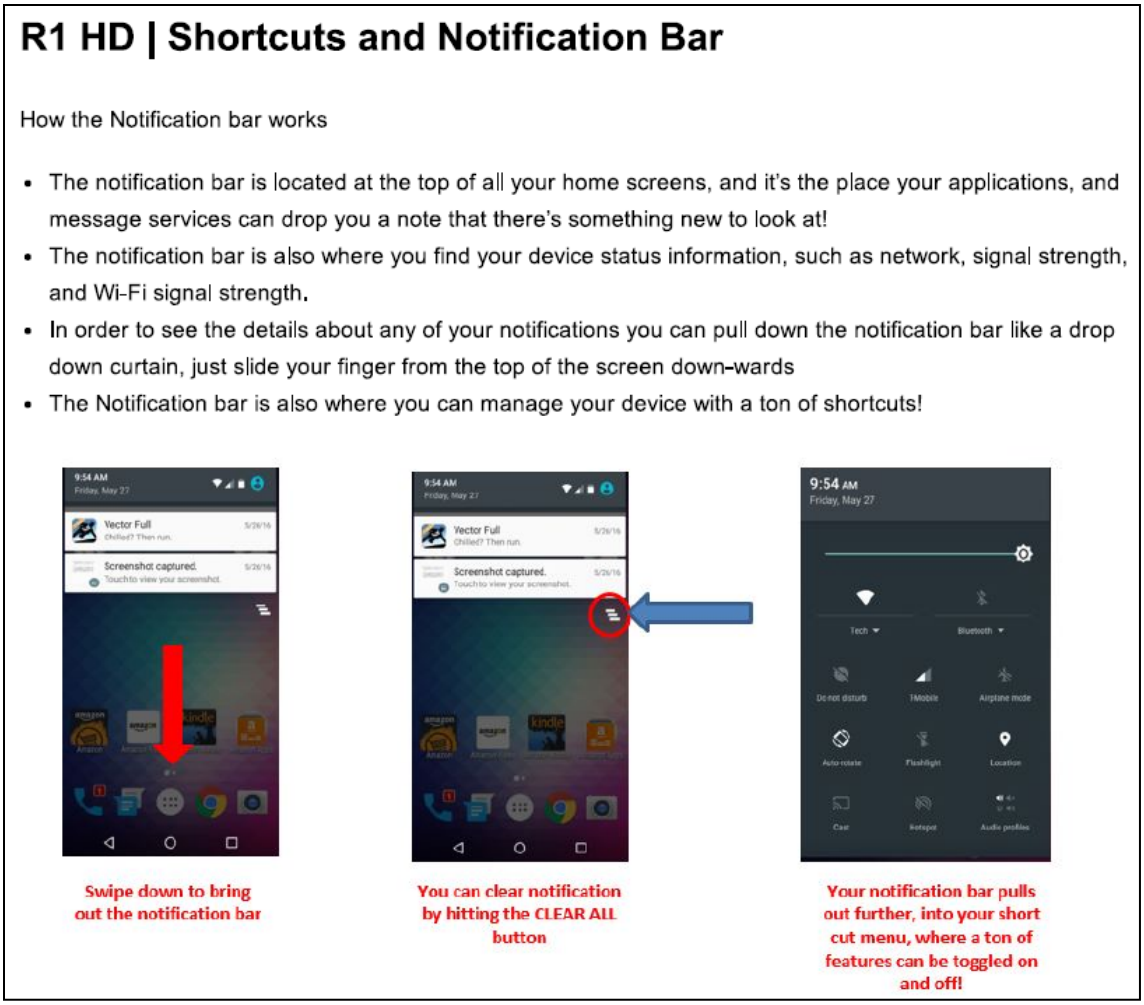
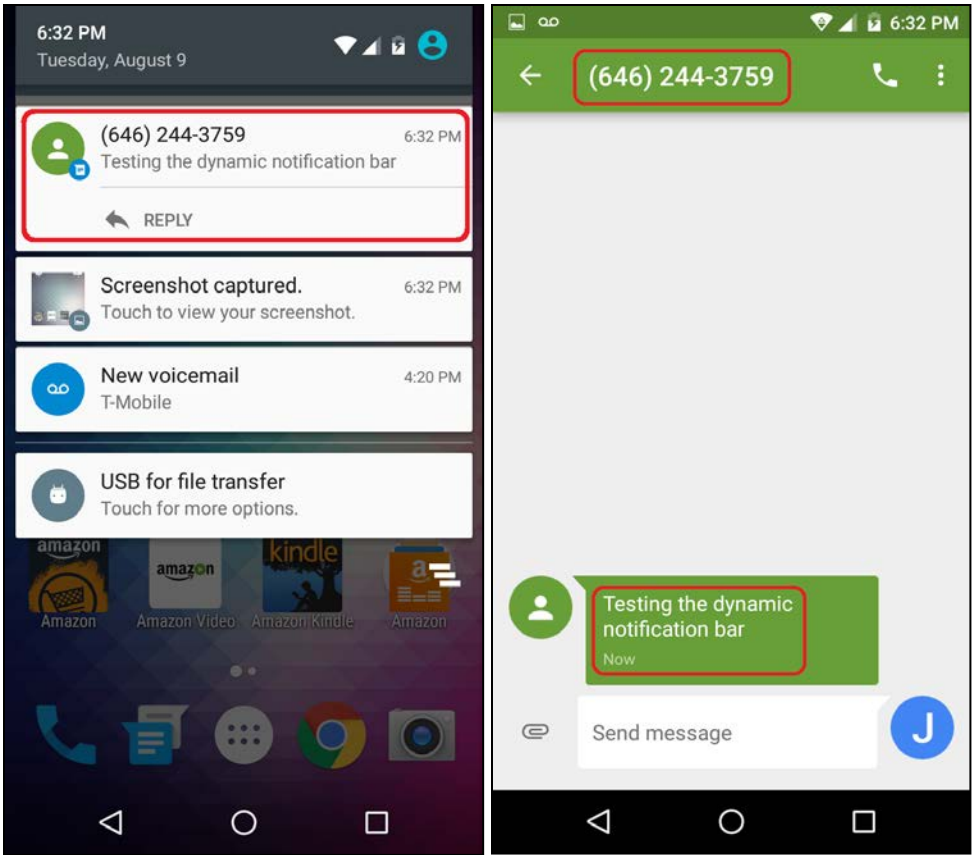


Exhibit Z, an 8/11/2016 capture of http://www.bluproducts.com/r1-hd-device/r1-hd-shortcuts-notifications.html; *see also* Exhibits A, B.

93. The '466 Accused Products satisfy Element 1C of claim 1 of the '466 patent: "displaying additional dynamic preview information determined from the information managed by the software application, the additional dynamic preview information being different from the dynamic preview information displayed in the dynamic bar." *See, e.g.*, Paragraph 92.

94. The '466 Accused Products satisfy Element 1D of claim 1 of the '466 patent: "the additional dynamic preview information comprising a selectable link which when activated, invokes the software application." *See, e.g.*:



Screenshots taken on R1 HD device running Android Version 6.0, red box annotations added.

When the preview of the text is selected, the texting application is launched.

95. Claim 14 of the ’466 patent recites:

A device for displaying preview information, the device comprising:

a display; (“Element 14A”)

a processor configured for: (“Element 14B”)

displaying, on the display, dynamic preview information in a dynamic bar, the dynamic preview information being determined from information managed by a software application, the dynamic preview information being updated to reflect a change to the information managed by the software application; and (“Element 14C”)

expanding the dynamic bar to display an expanded dynamic bar in response to a first input, displaying the expanded dynamic bar comprising: (“Element 14D”)

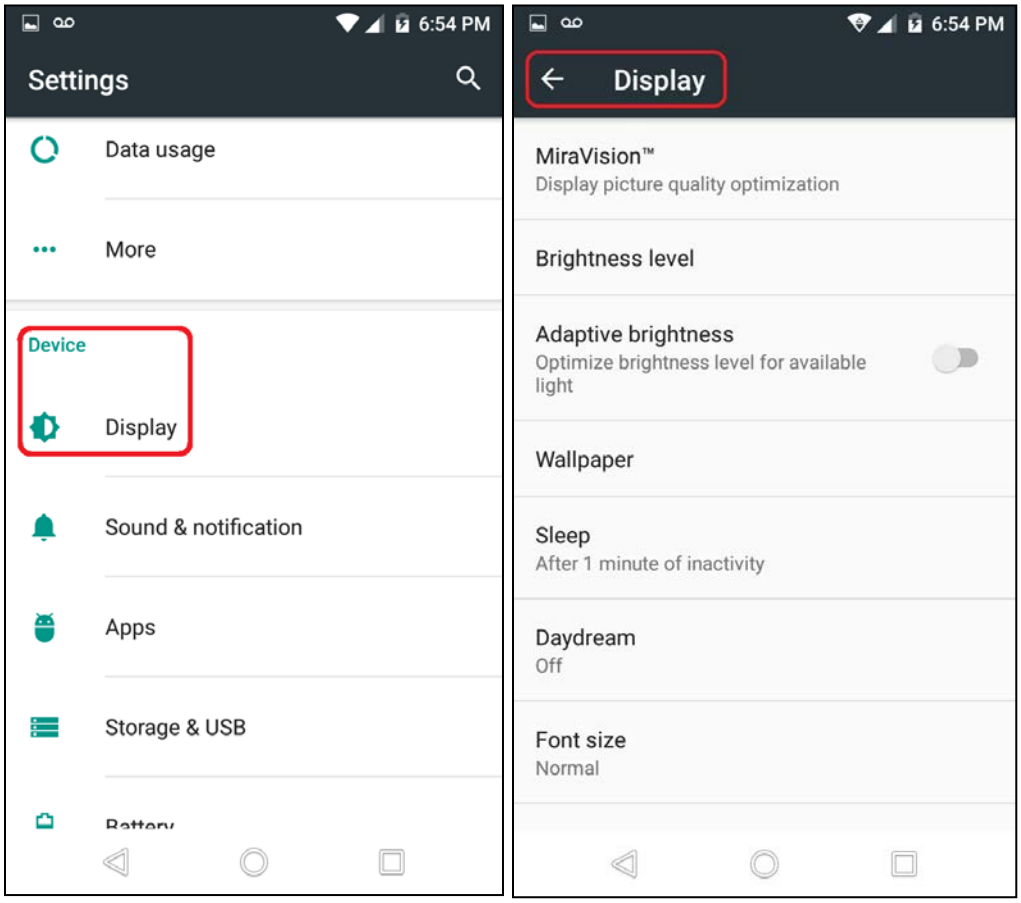
displaying additional dynamic preview information determined from the information managed by the software application, the additional dynamic

preview information being different from the dynamic preview information displayed in the dynamic bar; ("Element 14E")

the additional dynamic preview information comprising a selectable link which when activated, invokes the software application. ("Element 14F")

96. To the extent the preamble is considered a limitation, the '466 Accused Products satisfy the preamble of claim 14 of the '466 patent: "A device for displaying preview information, the device comprising." *See, e.g.*, Paragraph 90.

97. The '466 Accused Products satisfy Element 14A of claim 14 of the '466 patent: "a display." *See, e.g.*:



Screenshots taken on R1 HD device running Android Version 6.0, red box annotations added.

See also:

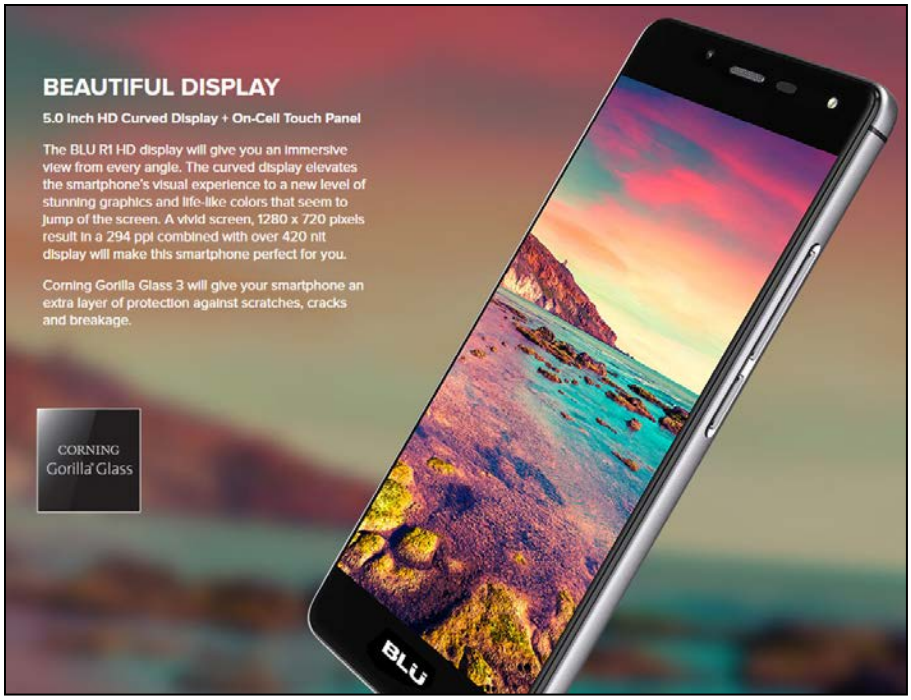


Exhibit Y at 3 (image taken from native website due to better formatting).

98. The '466 Accused Products satisfy Element 14B of claim 14 of the '466 patent: "a processor configured for." *See, e.g.*:

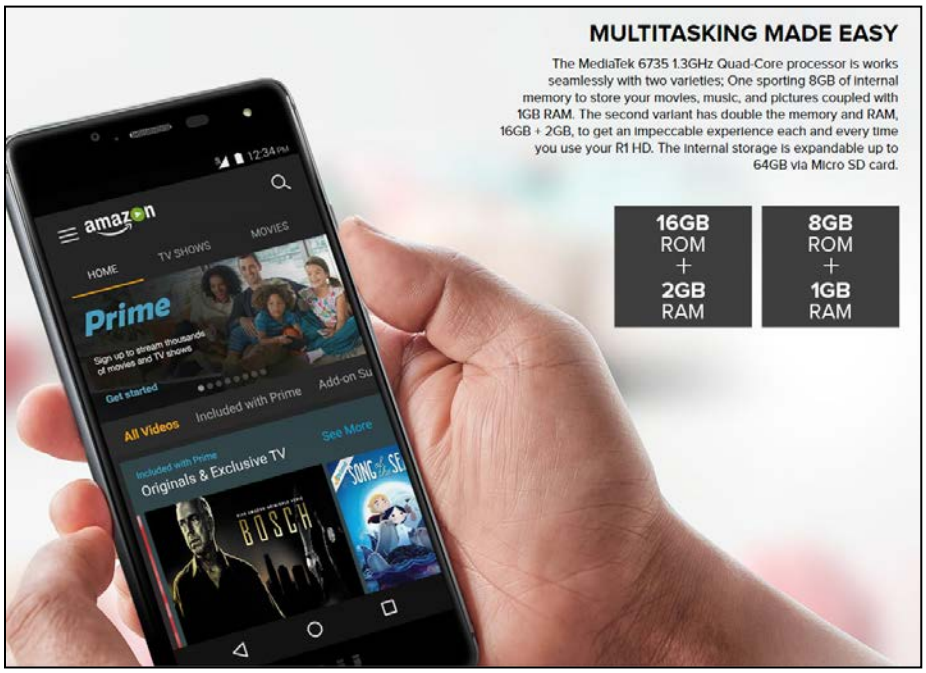


Exhibit Y at 3-4 (image taken from native website due to better formatting).

99. The ’466 Accused Products satisfy Element 14C of claim 14 of the ’466 patent: “displaying, on the display, dynamic preview information in a dynamic bar, the dynamic preview information being determined from information managed by a software application, the dynamic preview information being updated to reflect a change to the information managed by the software application.” *See, e.g.*, Paragraph 91.

100. The ’466 Accused Products satisfy Element 14D of claim 14 of the ’466 patent: “expanding the dynamic bar to display an expanded dynamic bar in response to a first input, displaying the expanded dynamic bar comprising.” *See, e.g.*, Paragraph 92.

101. The ’466 Accused Products satisfy Element 14E of claim 14 of the ’466 patent: “displaying additional dynamic preview information determined from the information managed by the software application, the additional dynamic preview information being different from the dynamic preview information displayed in the dynamic bar.” *See, e.g.*, Paragraph 93.

102. The ’466 Accused Products satisfy Element 14F of claim 14 of the ’466 patent: “the additional dynamic preview information comprising a selectable link which when activated, invokes the software application.” *See, e.g.*, Paragraph 94.

103. By its actions, BLU has injured BlackBerry and is liable to BlackBerry for infringement of the ’466 patent pursuant to 35 U.S.C. § 271.

104. BlackBerry has been damaged by BLU’s infringement of the ’466 patent and will continue to be damaged unless BLU is enjoined by this Court. BlackBerry has suffered and continues to suffer irreparable injury for which there is no adequate remedy at law. The balance of hardships favors BlackBerry, and public interest is not disserved by an injunction.

105. BlackBerry is entitled to recover from BLU all damages that BlackBerry has sustained as a result of BLU's infringement of the '466 patent, including without limitation, lost profits and not less than a reasonable royalty.

THIRD CAUSE OF ACTION
(Infringement of U.S. Patent No. 8,402,384)

106. BlackBerry realleges and incorporates by reference the allegations set forth in the foregoing paragraphs.

107. On information and belief, BLU has directly infringed and is continuing to directly infringe the '384 patent, either literally or under the doctrine of equivalents, by making, using, selling, offering for sale, and/or importing in the United States and in this Judicial District, products, software, and/or services that incorporate or make use of one or more of the inventions covered by the '384 patent, including but not limited to the BLU Android Devices (*see, e.g.*, Exhibits A, B) ("'384 Accused Products"), thereby infringing one or more claims of the '384 patent.

108. BLU's '384 Accused Products satisfy each and every element of one or more claims of the '384 patent, for example, and without limitation, claims 1 and 4 of the '384 patent.

109. Claim 1 of the '384 patent recites:

> A method for controlling an apparatus comprising a display, the method comprising:
>
> displaying a dynamic bar on the display; ("Element 1A")
>
> displaying dynamic preview information in the dynamic bar, the dynamic preview information being determined from information managed by a software application, the dynamic preview information being updated to reflect a change to the information managed by the software application; ("Element 1B")
>
> expanding the dynamic bar to display an expanded dynamic bar in response to a first input from an input device, displaying the expanded dynamic bar comprising: ("Element 1C")

displaying additional dynamic preview information determined from the information managed by the software application, the additional dynamic preview information being different from the dynamic preview information displayed in the dynamic bar, and the additional dynamic preview information being updated to reflect the same or different change to the information managed by the software application; ("Element 1D")

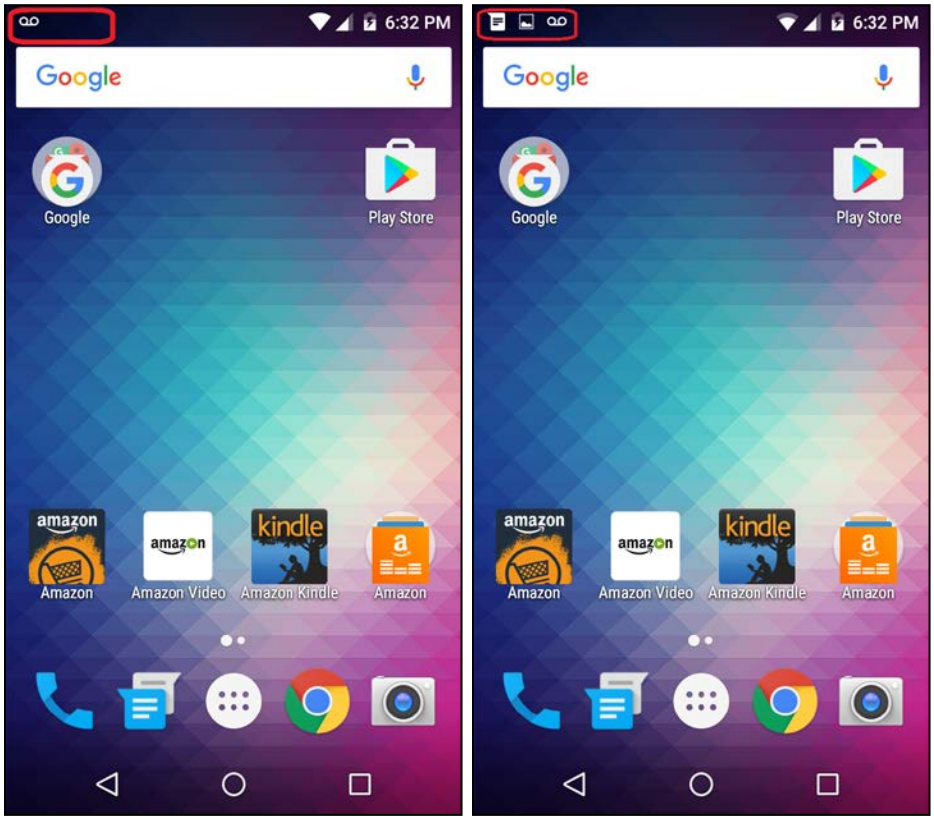
displaying a selectable link embedded in the additional dynamic preview information to invoke the software application; and ("Element 1E")

activating the software application in response to a second input invoking the link. ("Element 1F")

110. To the extent the preamble is considered a limitation, the '384 Accused Products satisfy the preamble of claim 1: "A method for controlling an apparatus comprising a display, the method comprising." *See, e.g.*, Exhibits A, B, X; *see also*:

Exhibit Y at 9-10 (image taken from native website due to better formatting).

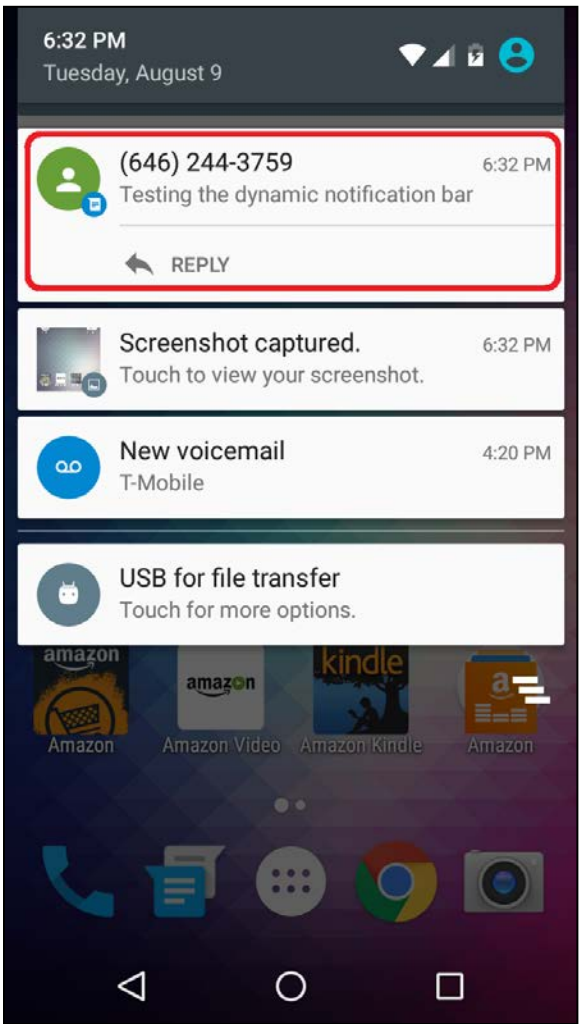
111. The ’384 Accused Products satisfy Element 1A of claim 1 of the ’384 patent: “displaying a dynamic bar on the display.” *See, e.g.*:



Screenshots taken on R1 HD device running Android Version 6.0, red box annotations added. The screenshots show that a notification icon is generated in the notification bar after a text message is received. *See also* Paragraph 110.

112. The ’384 Accused Products satisfy Element 1B of claim 1 of the ’384 patent: “displaying dynamic preview information in the dynamic bar, the dynamic preview information being determined from information managed by a software application, the dynamic preview information being updated to reflect a change to the information managed by the software application.” *See, e.g.*, Paragraph 111.

113. The '384 Accused Products satisfy Element 1C of claim 1 of the '384 patent: "expanding the dynamic bar to display an expanded dynamic bar in response to a first input from an input device, displaying the expanded dynamic bar comprising." *See, e.g.*:



Screenshots taken on R1 HD device running Android Version 6.0, red box annotations added. When the notification bar is selected, the notification bar expands and displays a preview of the text. *See also*:

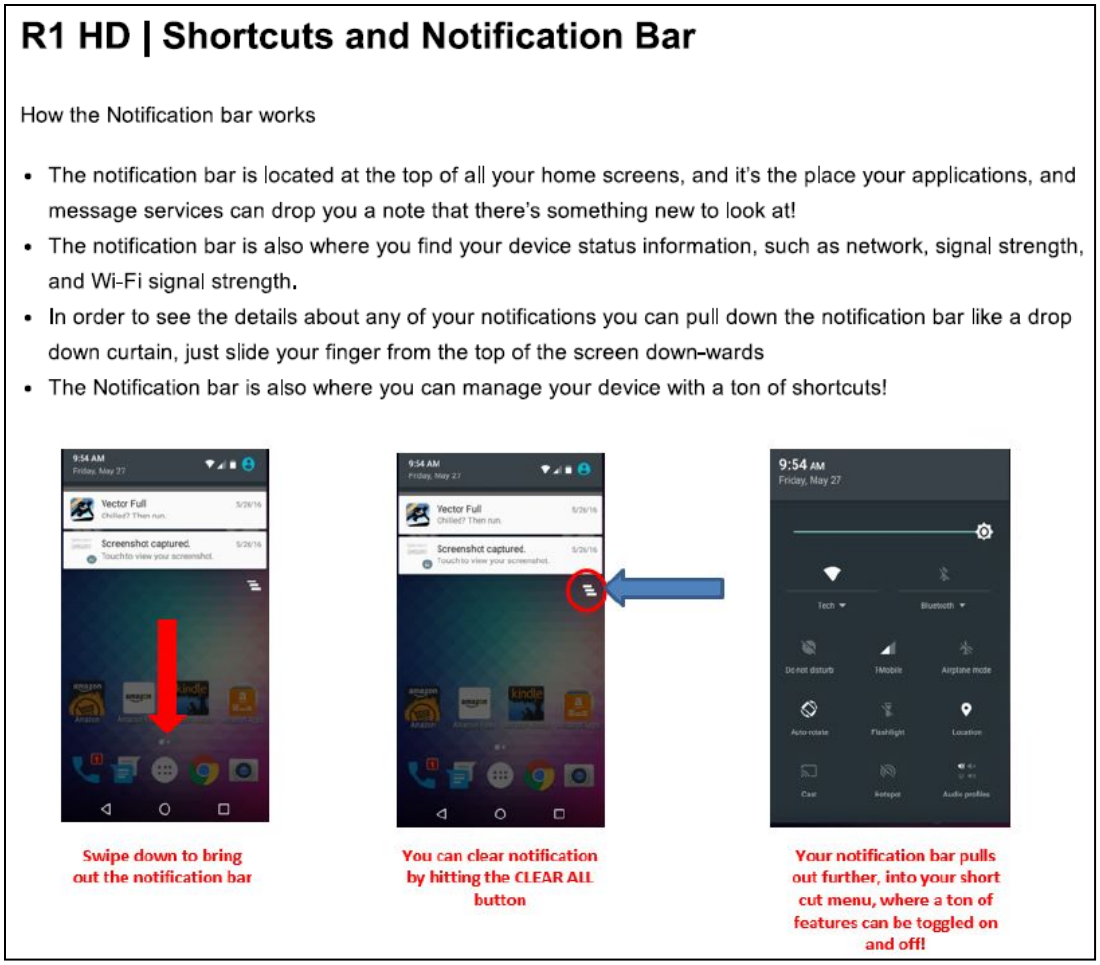
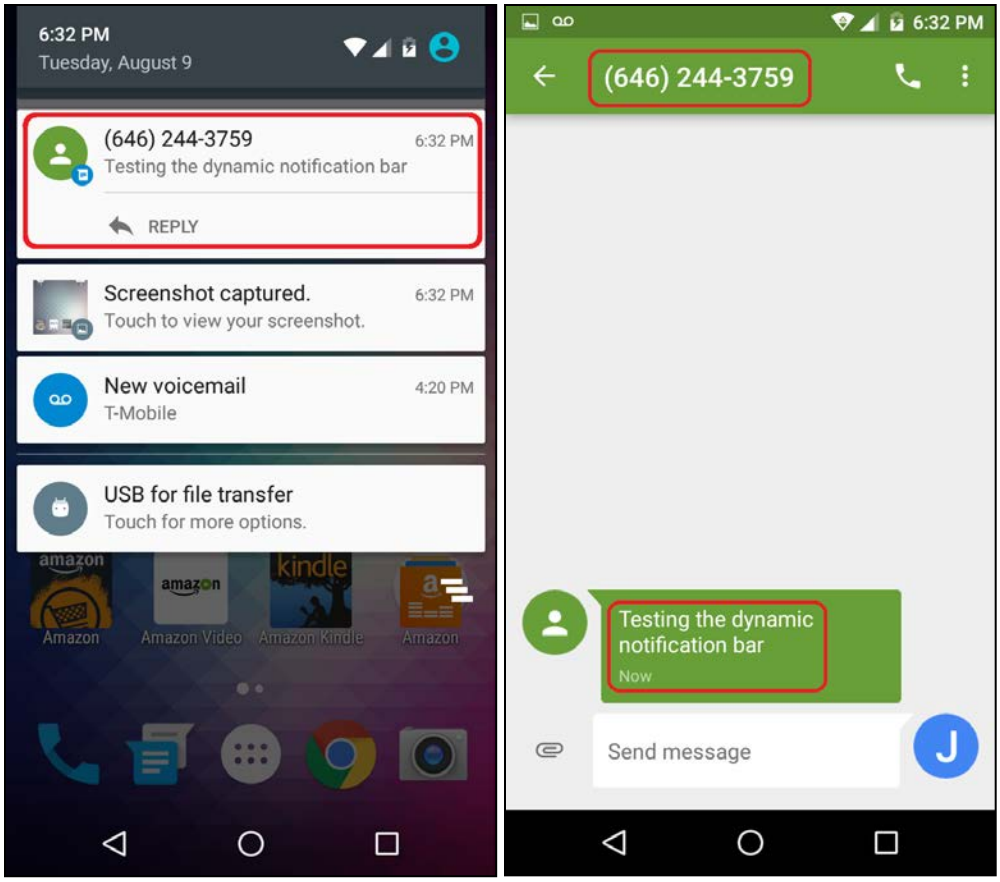


Exhibit Z; *see also* Exhibits A, B.

114. The '384 Accused Products satisfy Element 1D of claim 1 of the '384 patent: "displaying additional dynamic preview information determined from the information managed by the software application, the additional dynamic preview information being different from the dynamic preview information displayed in the dynamic bar, and the additional dynamic preview information being updated to reflect the same or different change to the information managed by the software application." *See, e.g.*, Paragraph 113.

115. The '384 Accused Products satisfy Element 1E of claim 1 of the '384 patent: "displaying a selectable link embedded in the additional dynamic preview information to invoke the software application." *See, e.g.*:



Screenshots taken on R1 HD device running Android Version 6.0, red box annotations added. When the preview of the text is selected, the texting application is launched.

116. The ’384 Accused Products satisfy Element 1F of claim 1 of the ’384 patent: “activating the software application in response to a second input invoking the link.” *See, e.g.*, Paragraph 115.

117. Claim 4 of the ’384 patent recites:

The method of claim 1:

wherein the apparatus comprises a cellular telephone.

118. The ’384 Accused Products satisfy the elements of claim 4 of the ’384 patent as set forth above in Paragraphs 110-116.

119. The ’384 Accused Products satisfy Element 4G of claim 4 of the ’384 patent: “wherein the apparatus comprises a cellular telephone.” *See, e.g.*, Paragraphs 110-116.

120. By its actions, BLU has injured BlackBerry and is liable to BlackBerry for infringement of the ’384 patent pursuant to 35 U.S.C. § 271.

121. BlackBerry has been damaged by BLU’s infringement of the ’384 patent and will continue to be damaged unless BLU is enjoined by this Court. BlackBerry has suffered and continues to suffer irreparable injury for which there is no adequate remedy at law. The balance of hardships favors BlackBerry, and public interest is not disserved by an injunction.

122. BlackBerry is entitled to recover from BLU all damages that BlackBerry has sustained as a result of BLU’s infringement of the ’384 patent, including without limitation, lost profits and not less than a reasonable royalty.

FOURTH CAUSE OF ACTION
(Infringement of U.S. Patent No. 8,411,845)

123. BlackBerry realleges and incorporates by reference the allegations set forth in the foregoing paragraphs.

124. On information and belief, BLU has directly infringed and is continuing to directly infringe the ’845 patent, either literally or under the doctrine of equivalents, by making, using, selling, offering for sale, and/or importing in the United States and in this Judicial District, products, software, and/or services that incorporate or make use of one or more of the inventions covered by the ’845 patent, including but not limited to the BLU Android Devices (*see, e.g.*, Exhibits A, B) (“’845 Accused Products”), thereby infringing one or more claims of the ’845 patent.

125. BLU's '845 Accused Products satisfy each and every element of one or more claims of the '845 patent, for example, and without limitation, claims 1 and 16 of the '845 patent.

126. Claim 1 of the '845 patent recites:

> A method of displaying a communications log on a mobile device, the method comprising:
>
> detecting an outgoing phone call associated with a phone number; ("Element 1A")
>
> detecting an incoming phone call associated with the phone number; ("Element 1B")
>
> storing in a memory communications-related information for the incoming phone call; ("Element 1C")
>
> storing in the memory communications-related information for the outgoing phone call; ("Element 1D")
>
> displaying an entry in the communications log associated with one of the outgoing phone call and the incoming phone call; and ("Element 1E")
>
> displaying at least part of a listing when the entry is selected, the listing comprising communications-related information stored in the memory associated with the phone number including the outgoing phone call and the incoming phone call associated with the phone number. ("Element 1F")

127. To the extent the preamble is considered a limitation, the '845 Accused Products satisfy the preamble of claim 1 of the '845 patent: "A method of displaying a communications log on a mobile device, the method comprising." *See, e.g.*:

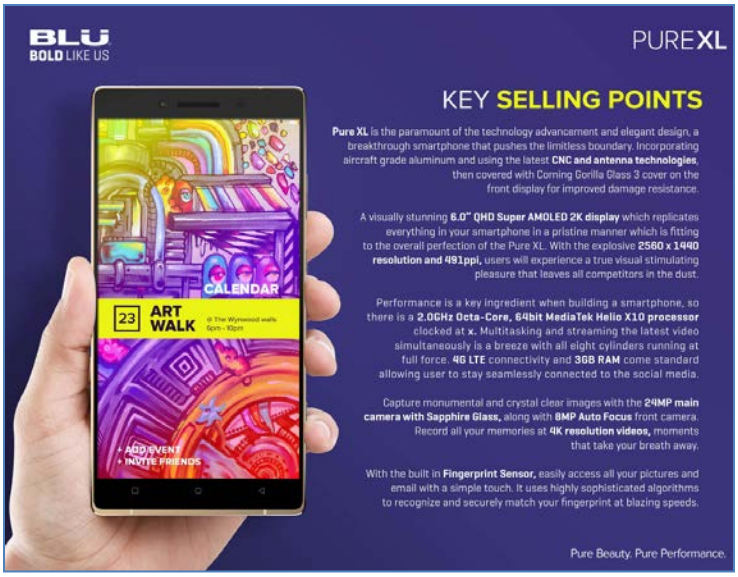
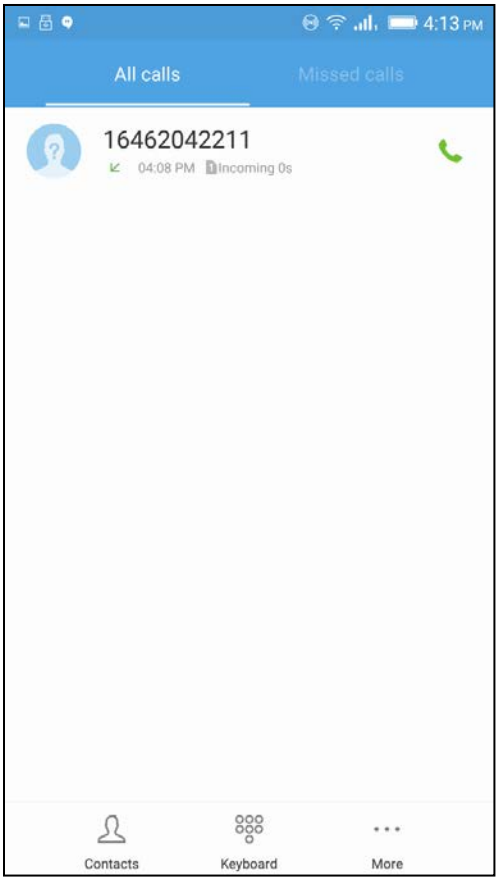


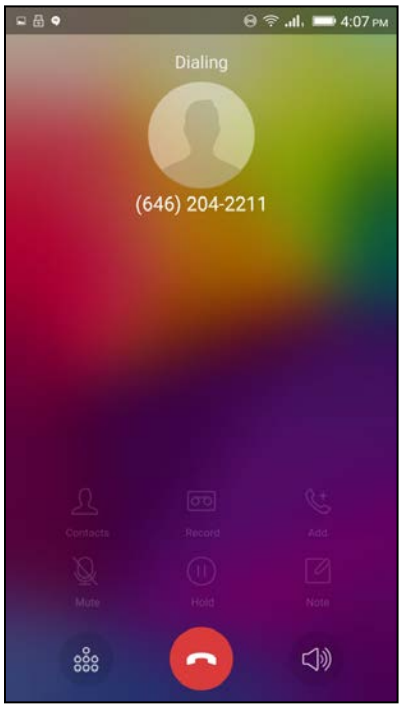
Exhibit AA at 5, BLU Pure XL Sales Guide, downloaded on 8/12/2016

from http://s536785483.onlinehome.us/salesguides/images/salesguides/pure-xl-sg.pdf. *See also*:



Screenshots taken on BLU PURE XL device running Android Version 5.1; *see also* Exhibits A, B.

128. The ’845 Accused Products satisfy Element 1A of claim 1 of the ’845 patent: “detecting an outgoing phone call associated with a phone number.” *See, e.g.*:

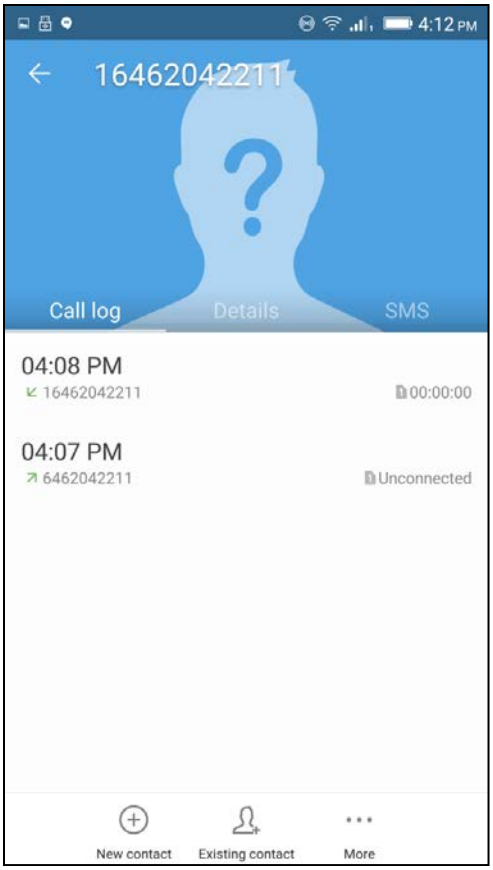


Screenshots taken on BLU PURE XL device running Android Version 5.1.

129. The ’845 Accused Products satisfy Element 1B of claim 1 of the ’845 patent: “detecting an incoming phone call associated with the phone number.” *See, e.g.*:

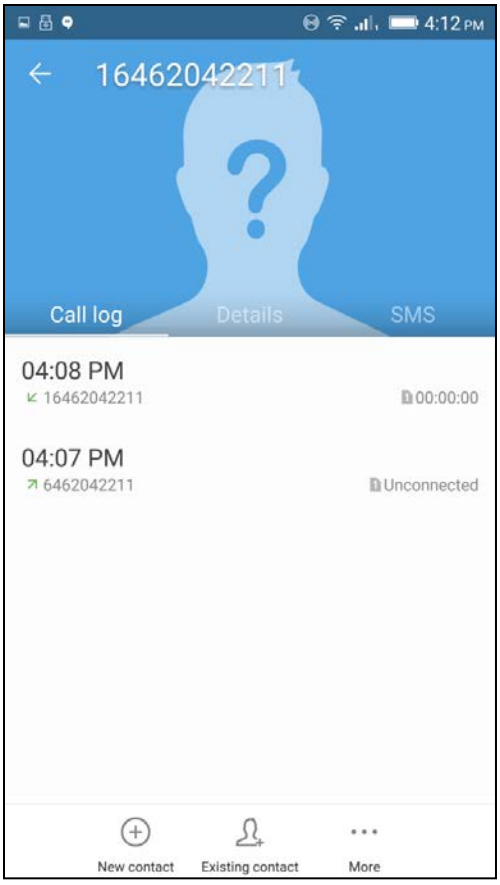
Screenshots taken on BLU PURE XL device running Android Version 5.1.

130. The ’845 Accused Products satisfy Element 1C of claim 1 of the ’845 patent: “storing in a memory communications-related information for the incoming phone call.” *See, e.g.*:



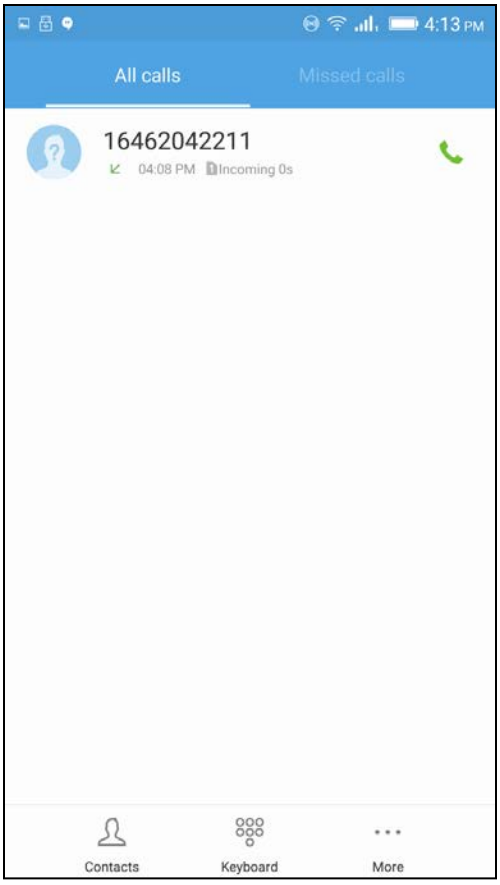
Screenshots taken on BLU PURE XL device running Android Version 5.1.

131. The ’845 Accused Products satisfy Element 1D of claim 1 of the ’845 patent: “storing in the memory communications-related information for the outgoing phone call.” *See, e.g.*:



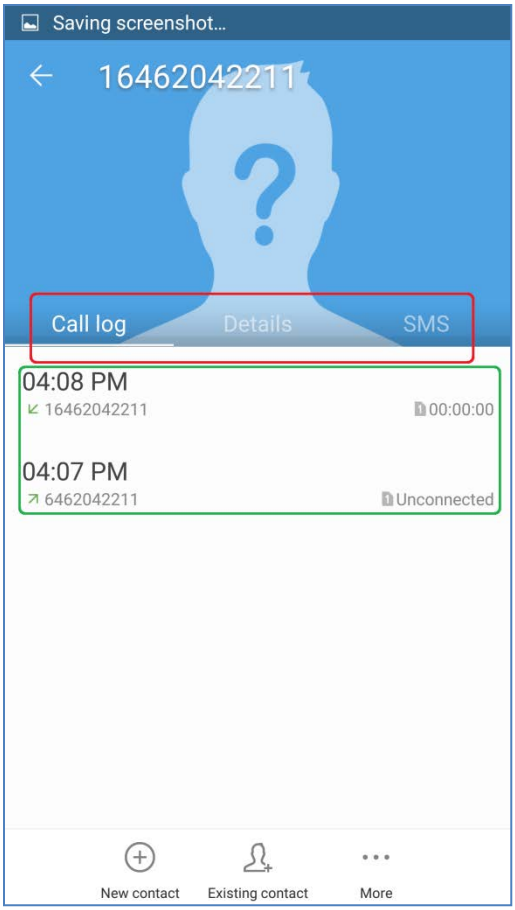
Screenshots taken on BLU PURE XL device running Android Version 5.1.

132. The ’845 Accused Products satisfy Element 1E of claim 1 of the ’845 patent: “displaying an entry in the communications log associated with one of the outgoing phone call and the incoming phone call.” *See, e.g.*:



Screenshots taken on BLU PURE XL device running Android Version 5.1.

133. The ’845 Accused Products satisfy Element 1F of claim 1 of the ’845 patent: “displaying at least part of a listing when the entry is selected, the listing comprising communications-related information stored in the memory associated with the phone number including the outgoing phone call and the incoming phone call associated with the phone number.” *See, e.g.*:



Screenshots taken on BLU PURE XL device running Android Version 5.1, red and green box annotations added. When the entry on the call log is selected, call log history ("Call log"; including phone number, time, and duration information (green box)), contact information ("Details"), and text message history ("SMS") is provided for the contact.

134. Claim 16 of the '845 patent recites:

A mobile device comprising:

a processor; ("Element 16A")

an input apparatus coupled to the processor; and ("Element 16B")

a memory coupled to the processor, the memory storing instructions executable by the processor, the instructions being adapted to: ("Element 16C")

detect an outgoing phone call associated with a phone number; ("Element 16D")

detect an incoming phone call associated with the phone number; ("Element 16E")

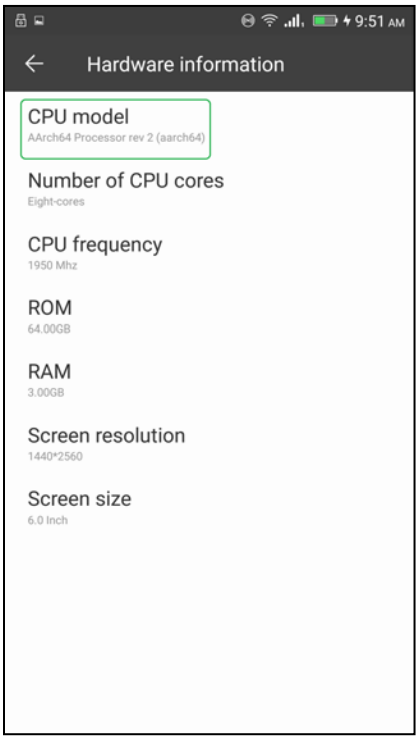
store in the memory communications-related information for the outgoing phone call; ("Element 16F")

display an entry in the communications log associated with one of the outgoing phone call and the incoming phone call; and ("Element 16G")

display at least part of a listing when the entry is selected, the listing comprising communications-related information stored in the memory associated with the phone number including the outgoing phone call and the incoming phone call associated with the phone number. ("Element 16H")

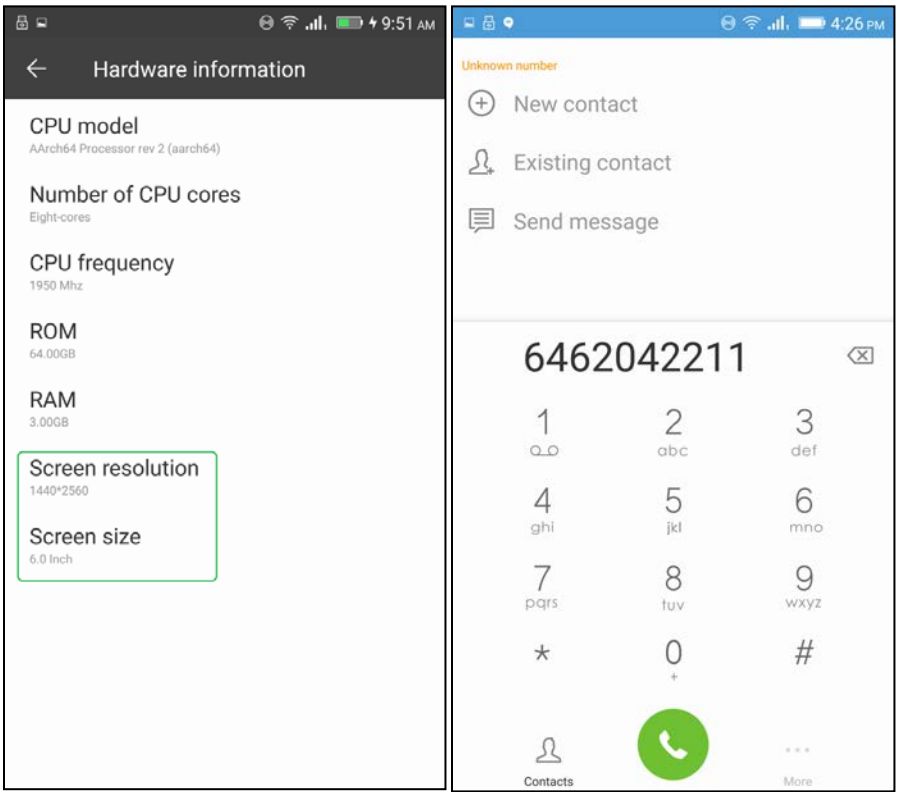
135. To the extent the preamble is considered a limitation, the '845 Accused Products satisfy the preamble of claim 16 of the '845 patent: "A mobile device comprising." *See, e.g.*, Paragraph 127.

136. The '845 Accused Products satisfy Element 16A of claim 16 of the '845 patent: "a processor." *See, e.g.*:



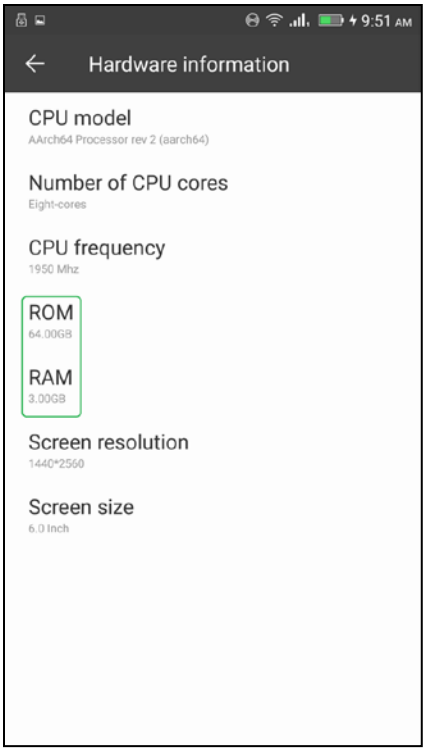
Screenshots taken on BLU PURE XL device running Android Version 5.1, green box annotation added.

137. The ’845 Accused Products satisfy Element 16B of claim 16 of the ’845 patent: “an input apparatus coupled to the processor.” *See, e.g.*:



Screenshots taken on BLU PURE XL device running Android Version 5.1, green box annotation added.

138. The ’845 Accused Products satisfy Element 16C of claim 16 of the ’845 patent: “a memory coupled to the processor, the memory storing instructions executable by the processor, the instructions being adapted to.” *See, e.g.*:



Screenshots taken on BLU PURE XL device running Android Version 5.1, green box annotation added.

139. The ’845 Accused Products satisfy Element 16D of claim 16 of the ’845 patent: “detect an outgoing phone call associated with a phone number.” *See, e.g.*, Paragraph 128.

140. The ’845 Accused Products satisfy Element 16E of claim 16 of the ’845 patent: “detect an incoming phone call associated with the phone number.” *See, e.g.*, Paragraph 129.

141. The ’845 Accused Products satisfy Element 16F of claim 16 of the ’845 patent: “store in the memory communications-related information for the outgoing phone call.” *See, e.g.*, Paragraph 131.

142. The ’845 Accused Products satisfy Element 16G of claim 16 of the ’845 patent: “display an entry in the communications log associated with one of the outgoing phone call and the incoming phone call.” *See, e.g.*, Paragraph 132.

143. The ’845 Accused Products satisfy Element 16H of claim 16 of the ’845 patent: “display at least part of a listing when the entry is selected, the listing comprising communications-related information stored in the memory associated with the phone number including the outgoing phone call and the incoming phone call associated with the phone number.” *See, e.g.*, Paragraph 133.

144. By its actions, BLU has injured BlackBerry and is liable to BlackBerry for infringement of the ’845 patent pursuant to 35 U.S.C. § 271.

145. BlackBerry has been damaged by BLU’s infringement of the ’845 patent and will continue to be damaged unless BLU is enjoined by this Court. BlackBerry has suffered and continues to suffer irreparable injury for which there is no adequate remedy at law. The balance of hardships favors BlackBerry, and public interest is not disserved by an injunction.

146. BlackBerry is entitled to recover from BLU all damages that BlackBerry has sustained as a result of BLU’s infringement of the ’845 patent, including without limitation, lost profits and not less than a reasonable royalty.

FIFTH CAUSE OF ACTION
(Infringement of U.S. Patent No. 6,271,605)

147. BlackBerry realleges and incorporates by reference the allegations set forth in the foregoing paragraphs.

148. On information and belief, BLU has directly infringed and is continuing to directly infringe the ’605 patent, either literally or under the doctrine of equivalents, by making, using, selling, offering for sale, and/or importing in the United States and in this Judicial District, products, software, and/or services that incorporate or make use of one or more of the inventions covered by the ’605 patent, including but not limited to the BLU Pure XL and BLU Vivo 5 (“’605 Accused Products”), thereby infringing one or more claims of the ’605 patent.

149. BLU's '605 Accused Products satisfy each and every element of one or more claims of the '605 patent, for example, and without limitation, claims 9 and 25 of the '605 patent.

150. Claim 9 of the '605 patent recites:

A device comprising:

(a) a battery for providing power; ("Element 9A")

(b) a load for using power provided by said battery; ("Element 9B")

(c) a switch coupled between said battery and said load and having a first and a second state, said switch being operative to connect said battery to said load when in said second state, said switch also being operative to disconnect said battery from said load when in said first state wherein the load is not provided with power when said switch is in the first state; and ("Element 9C")

(d) a switch controller coupled to said switch, said switch controller having an input for receiving a first signal from a first source and a second signal from a second source, said switch controller being operative to cause said switch to enter said second state in response to said first signal wherein the first signal provides an indication that an external power source has been coupled to the device, said switch controller also being operative to cause said switch to enter said first state in response to said second signal. ("Element 9D")

151. To the extent the preamble is considered a limitation, the '605 Accused Products satisfy the preamble of claim 9 of the '605 patent: "A device comprising." *See, e.g.*:

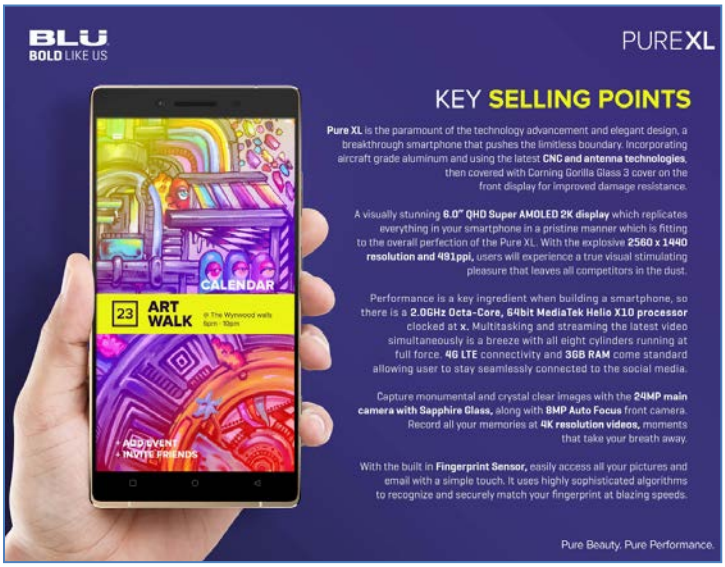
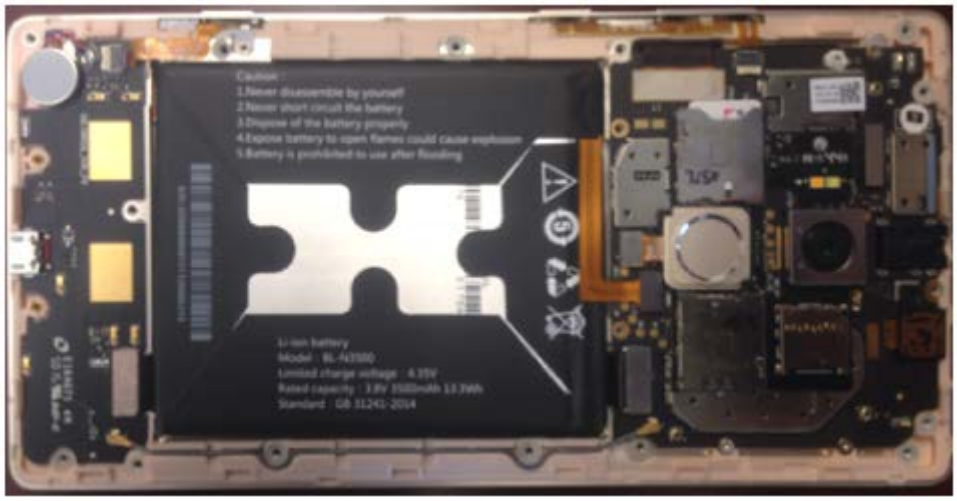


Exhibit AA at 5.

152. The ’605 Accused Products satisfy Element 9A of claim 9 of the ’605 patent: “a battery for providing power.” *See, e.g.*:



On information and belief, the BLU PURE XL (pictured above) includes and uses the Texas Instruments power path management device model TI BQ24192. *See also* Teardown Report for BLU PURE XL available from Teardown.com.

TEXAS INSTRUMENTS

bq24190, bq24192, bq24192I

SLUSAW5B – JANUARY 2012 – REVISED DECEMBER 2014

bq2419x I²C Controlled 4.5-A Single Cell USB/Adapter Charger with Narrow VDC Power Path Management and USB OTG

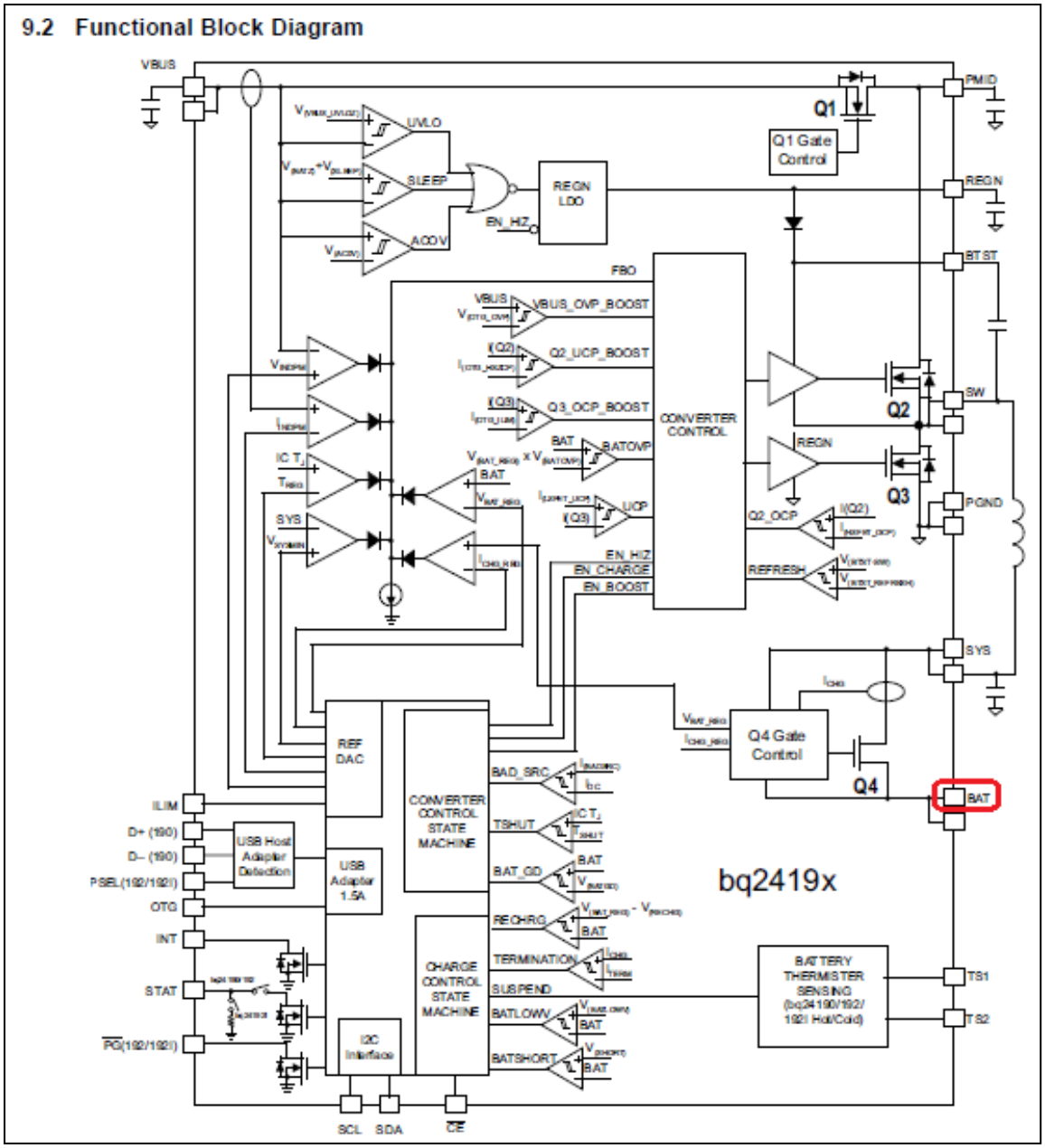


Exhibit AB, TI BQ24192 manual at 1, Figure 9.2, red box annotation added.

153. The ’605 Accused Products satisfy Element 9B of claim 9 of the ’605 patent: “a load for using power provided by said battery.” *See, e.g.*:

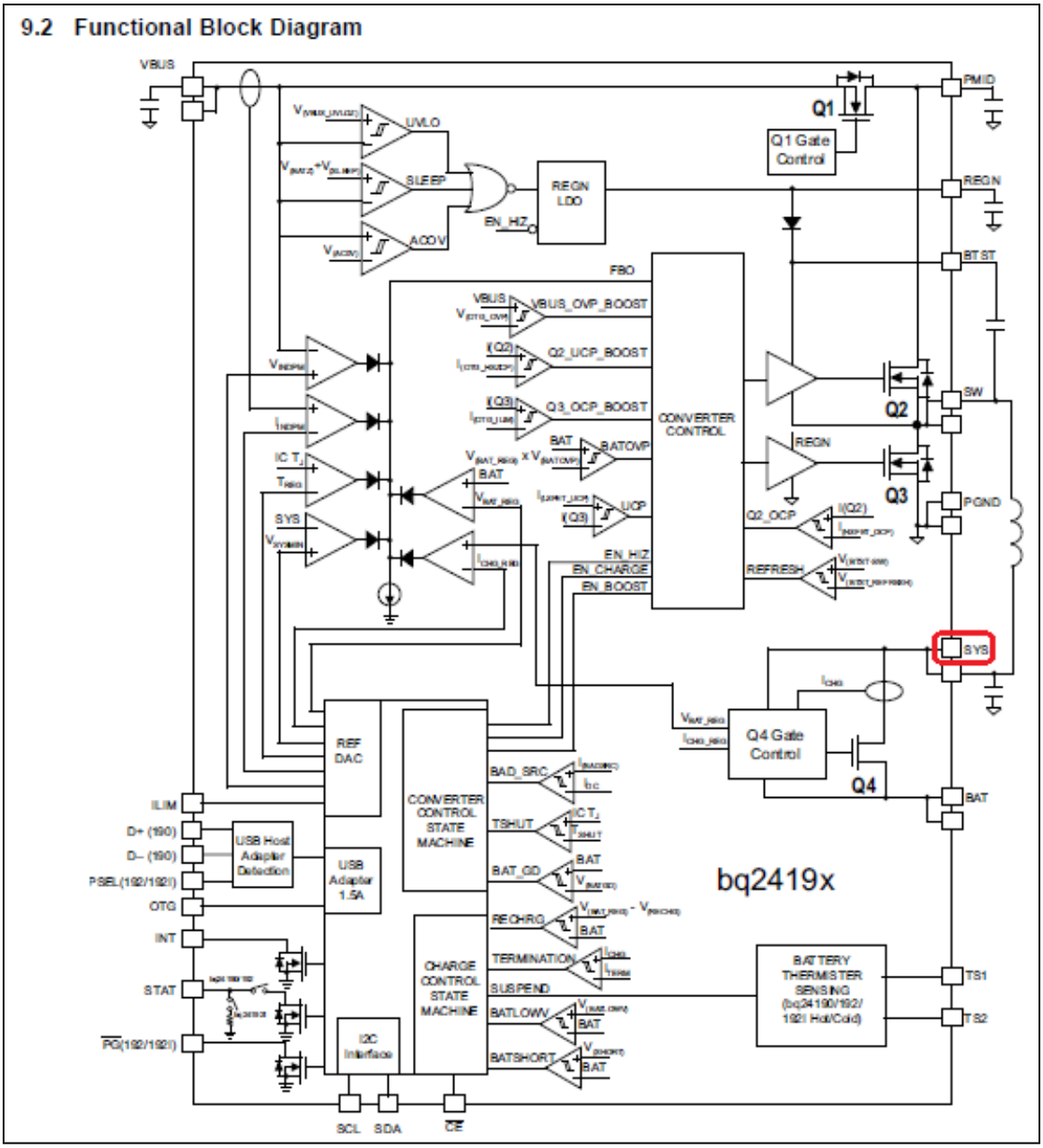


Exhibit AB at Figure 9.2, red box annotation added.

154. The ’605 Accused Products satisfy Element 9C of claim 9 of the ’605 patent: “a switch coupled between said battery and said load and having a first and a second state, said switch being operative to connect said battery to said load when in said second state, said switch also being operative to disconnect said battery from said load when in said first state wherein the load is not provided with power when said switch is in the first state.” *See, e.g.*:

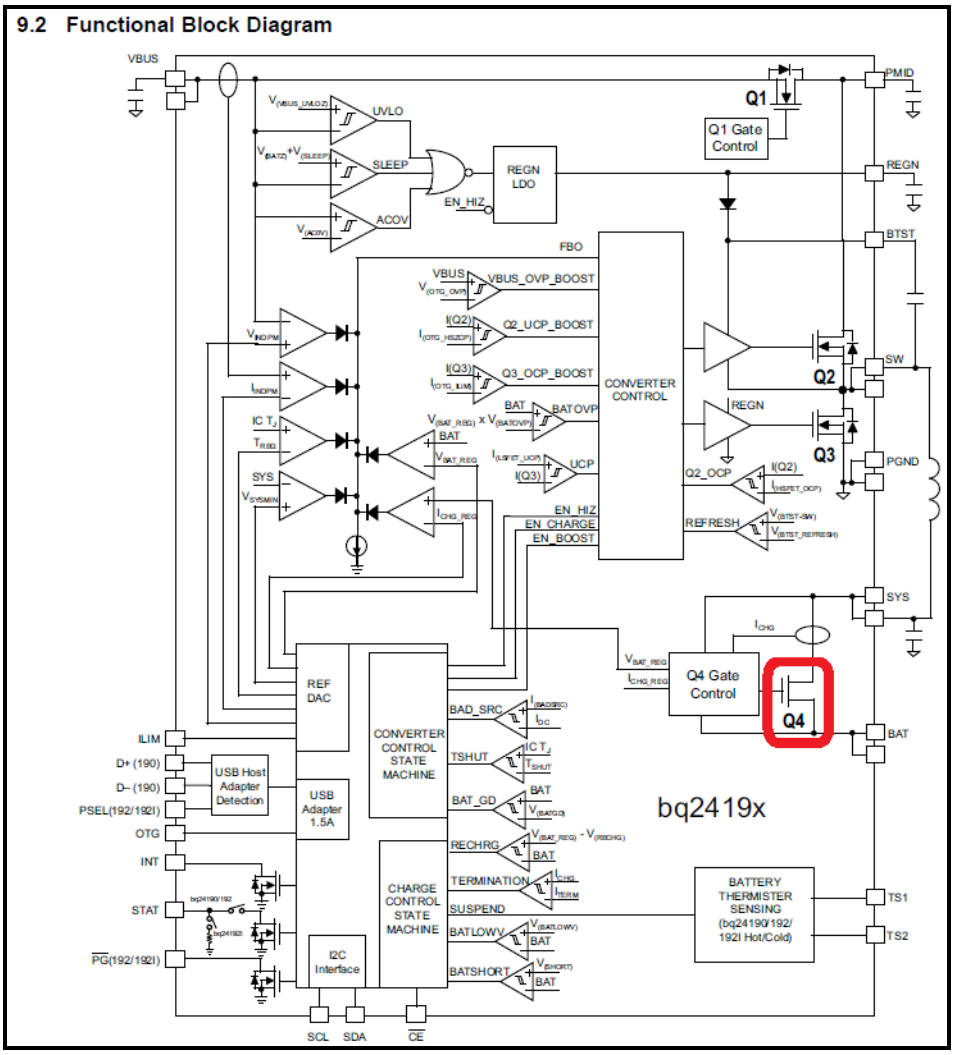


Exhibit AB at Figure 9.2, red box annotation added.

9.3.1.2.1 BATFET Turn Off

The BATFET can be forced off by the host through I^2C REG07[5]. This bit allows the user to independently turn off the BATFET when the battery condition becomes abnormal during charging. When BATFET is off, there is no path to charge or discharge the battery.

When battery is not attached, the BATFET should be turned off by setting REG07[5] to 1 to disable charging and supplement mode.

9.3.1.2.2 Shipping Mode

When end equipment is assembled, the system is connected to battery through BATFET. There will be a small leakage current to discharge the battery even when the system is powered off. In order to extend the battery life during shipping and storage, the device can turn off BATFET so that the system voltage is zero to minimize the leakage.

In order to keep BATFET off during shipping mode, the host has to disable the watchdog timer (REG05[5:4] = 00) and disable BATFET (REG07[5] = 1) at the same time.

Once the BATFET is disabled, the BATFET can be turned on by plugging in adapter.

Exhibit AB at 13.

155. The ’605 Accused Products satisfy Element 9D of claim 9 of the ’605 patent: “a switch controller coupled to said switch, said switch controller having an input for receiving a first signal from a first source and a second signal from a second source, said switch controller being operative to cause said switch to enter said second state in response to said first signal wherein the first signal provides an indication that an external power source has been coupled to the device, said switch controller also being operative to cause said switch to enter said first state in response to said second signal.” *See, e.g.*:

9 Detailed Description

9.1 Overview

The bq24190, bq24192, bq24192I is an I^2C controlled power path management device and a single cell Li-Ion battery charger. It integrates the input reverse-blocking FET (RBFET, Q1), high-side switching FET (HSFET, Q2), low-side switching FET (LSFET, Q3), and BATFET (Q4) between system and battery. The device also integrates the bootstrap diode for the high-side gate drive.

9.3.1.2.1 BATFET Turn Off

The BATFET can be forced off by the host through I^2C REG07[5]. This bit allows the user to independently turn off the BATFET when the battery condition becomes abnormal during charging. When BATFET is off, there is no path to charge or discharge the battery.

When battery is not attached, the BATFET should be turned off by setting REG07[5] to 1 to disable charging and supplement mode.

9.3.1.2.2 Shipping Mode

When end equipment is assembled, the system is connected to battery through BATFET. There will be a small leakage current to discharge the battery even when the system is powered off. In order to extend the battery life during shipping and storage, the device can turn off BATFET so that the system voltage is zero to minimize the leakage.

In order to keep BATFET off during shipping mode, the host has to disable the watchdog timer (REG05[5:4] = 00) and disable BATFET (REG07[5] = 1) at the same time.

Once the BATFET is disabled, the BATFET can be turned on by plugging in adapter.

Exhibit AB at 12-13.

156. Claim 25 of the ’605 patent recites:

A method for controlling the operating environment of a rechargeable battery in an electronic device having a load and wherein the rechargeable battery is the direct source of power to the load, comprising the steps of:

(a) providing a switch in the device that is operative to electrically couple the load to the rechargeable battery when in a second state, the switch also being

operative to electrically decouple the load from the rechargeable battery when in a first state; ("Element 25A")

(b) charging the rechargeable battery; ("Element 25B")

(c) placing said switch in the first state thereby electrically disconnecting the rechargeable battery from the load after the rechargeable battery has been at least partially charged so the load does not drain the battery after the battery has been charged; ("Element 25C")

(d) electrically coupling an external power source to the device; ("Element 25D")

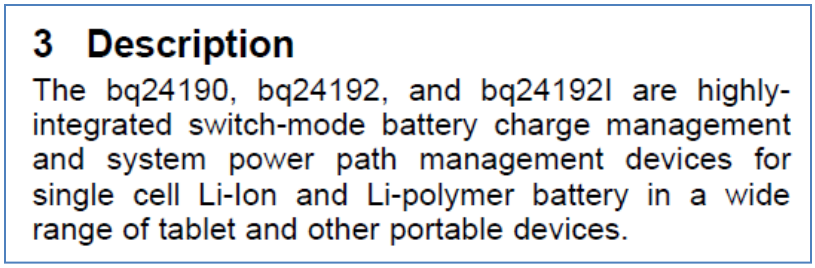
(e) detecting the coupling of said external power source to the device; and ("Element 25E")

(f) placing said switch in the second state whereby the rechargeable battery is electrically connected to the load in response to detecting the coupling of said external power source to the device. ("Element 25F")

157. To the extent the preamble is considered a limitation, the '605 Accused Products satisfy the preamble of claim 25 of the '605 patent: "A method for controlling the operating environment of a rechargeable battery in an electronic device having a load and wherein the rechargeable battery is the direct source of power to the load, comprising the steps of." *See, e.g.*, Paragraphs 151-53.

158. The '605 Accused Products satisfy Element 25A of claim 25 of the '605 patent: "providing a switch in the device that is operative to electrically couple the load to the rechargeable battery when in a second state, the switch also being operative to electrically decouple the load from the rechargeable battery when in a first state." *See, e.g.*, Paragraph 154.

159. The '605 Accused Products satisfy Element 25B of claim 25 of the '605 patent: "charging the rechargeable battery." *See, e.g.*:



3 Description

The bq24190, bq24192, and bq24192I are highly-integrated switch-mode battery charge management and system power path management devices for single cell Li-Ion and Li-polymer battery in a wide range of tablet and other portable devices.

Exhibit AB at 1; *see also* Paragraphs 154-55.

160. The '605 Accused Products satisfy Element 25C of claim 25 of the '605 patent: "placing said switch in the first state thereby electrically disconnecting the rechargeable battery from the load after the rechargeable battery has been at least partially charged so the load does not drain the battery after the battery has been charged." *See, e.g.*, Paragraphs 154-55.

161. The '605 Accused Products satisfy Element 25D of claim 25 of the '605 patent: "electrically coupling an external power source to the device." *See, e.g.*, Paragraphs 154-55.

162. The '605 Accused Products satisfy Element 25E of claim 25 of the '605 patent: "detecting the coupling of said external power source to the device." *See, e.g.*, Paragraphs 154-55.

163. The '605 Accused Products satisfy Element 25F of claim 25 of the '605 patent: "placing said switch in the second state whereby the rechargeable battery is electrically connected to the load in response to detecting the coupling of said external power source to the device." *See, e.g.*, Paragraphs 154-55.

164. By its actions, BLU has injured BlackBerry and is liable to BlackBerry for infringement of the '605 patent pursuant to 35 U.S.C. § 271.

165. BlackBerry has been damaged by BLU's infringement of the '605 patent and will continue to be damaged unless BLU is enjoined by this Court. BlackBerry has suffered and

continues to suffer irreparable injury for which there is no adequate remedy at law. The balance of hardships favors BlackBerry, and public interest is not disserved by an injunction.

166. BlackBerry is entitled to recover from BLU all damages that BlackBerry has sustained as a result of BLU's infringement of the '605 patent, including without limitation, lost profits and not less than a reasonable royalty.

SIXTH CAUSE OF ACTION
(Infringement of U.S. Patent No. 8,745,149)

167. BlackBerry realleges and incorporates by reference the allegations set forth in the foregoing paragraphs.

168. On information and belief, BLU has directly infringed and is continuing to directly infringe the '149 patent, either literally or under the doctrine of equivalents, by making, using, selling, offering for sale, and/or importing in the United States and in this Judicial District, products, software, and/or services that incorporate or make use of one or more of the inventions covered by the '149 patent, including but not limited to the BLU Android Devices (*see, e.g.*, Exhibits A, B) ("'149 Accused Products"), thereby infringing one or more claims of the '149 patent.

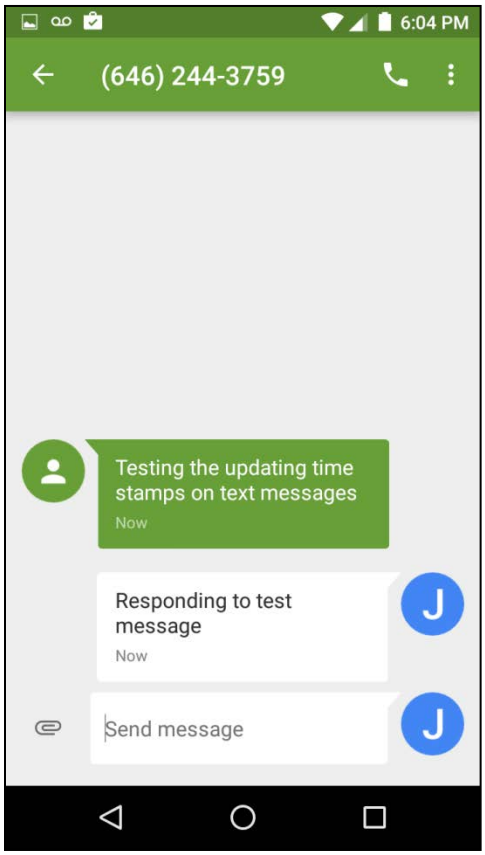
169. BLU's '149 Accused Products satisfy each and every element of one or more claims of the '149 patent, for example, and without limitation, claims 1 and 9 of the '149 patent.

170. Claim 1 of the '149 patent recites:

> A method of displaying an instant messaging conversation on a display of an electronic device, the method comprising:
>
> displaying a conversation of instant messages; ("Element 1A")
>
> displaying a first time information for an instant message in the conversation in response to a first input; and ("Element 1B")

automatically changing the first time information for the instant message to a second time information as time progresses and displaying the second time information instead of the first time information. ("Element 1C")

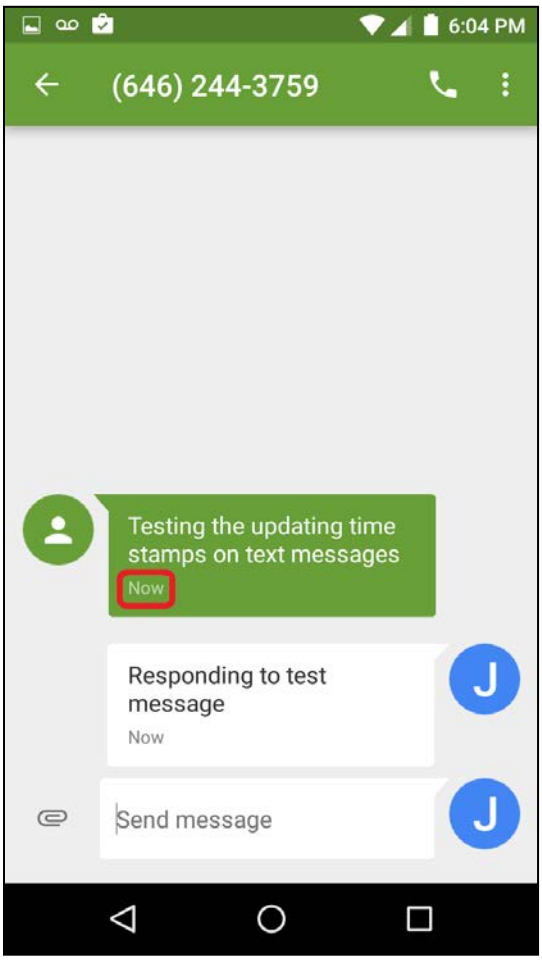
171. To the extent the preamble is considered a limitation, the '149 Accused Products satisfy the preamble of claim 1 of the '149 patent: "A method of displaying an instant messaging conversation on a display of an electronic device, the method comprising." *See, e.g.*:



Screenshot taken on R1 HD device running Android Version 6.0.

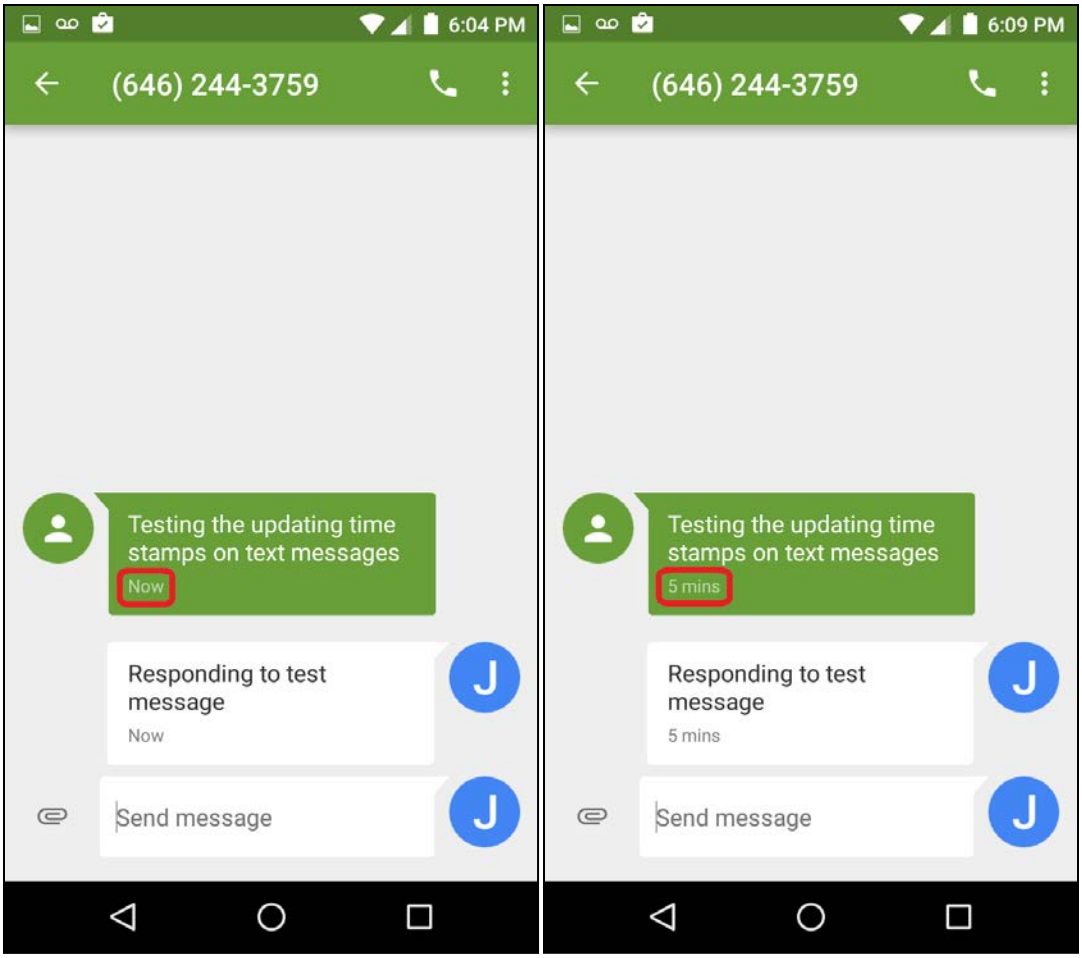
172. The '149 Accused Products satisfy Element 1A of claim 1 of the '149 patent: "displaying a conversation of instant messages." *See, e.g.*, Paragraph 171.

173. The '149 Accused Products satisfy Element 1B of claim 1 of the '149 patent: "displaying a first time information for an instant message in the conversation in response to a first input." *See, e.g.*:



Screenshot taken on R1 HD device running Android Version 6.0, red box annotation added. The device displays "Now" when the text message is viewed soon after receipt.

174. The '149 Accused Products satisfy Element 1C of claim 1 of the '149 patent: "automatically changing the first time information for the instant message to a second time information as time progresses and displaying the second time information instead of the first time information." *See, e.g.*:



Screenshots taken on R1 HD device running Android Version 6.0, red box annotations added.

The device displays "Now" when the text message is viewed soon after receipt. The time stamp automatically changes from "Now" to "5 mins" after five minutes have elapsed.

175. Claim 9 of the '149 patent recites:

An electronic device for displaying an instant messaging conversation, the electronic device comprising:

a display; ("Element 9A")

a memory; and ("Element 9B")

a processor electronically coupled with the display and the memory, the processor configured to: ("Element 9C")

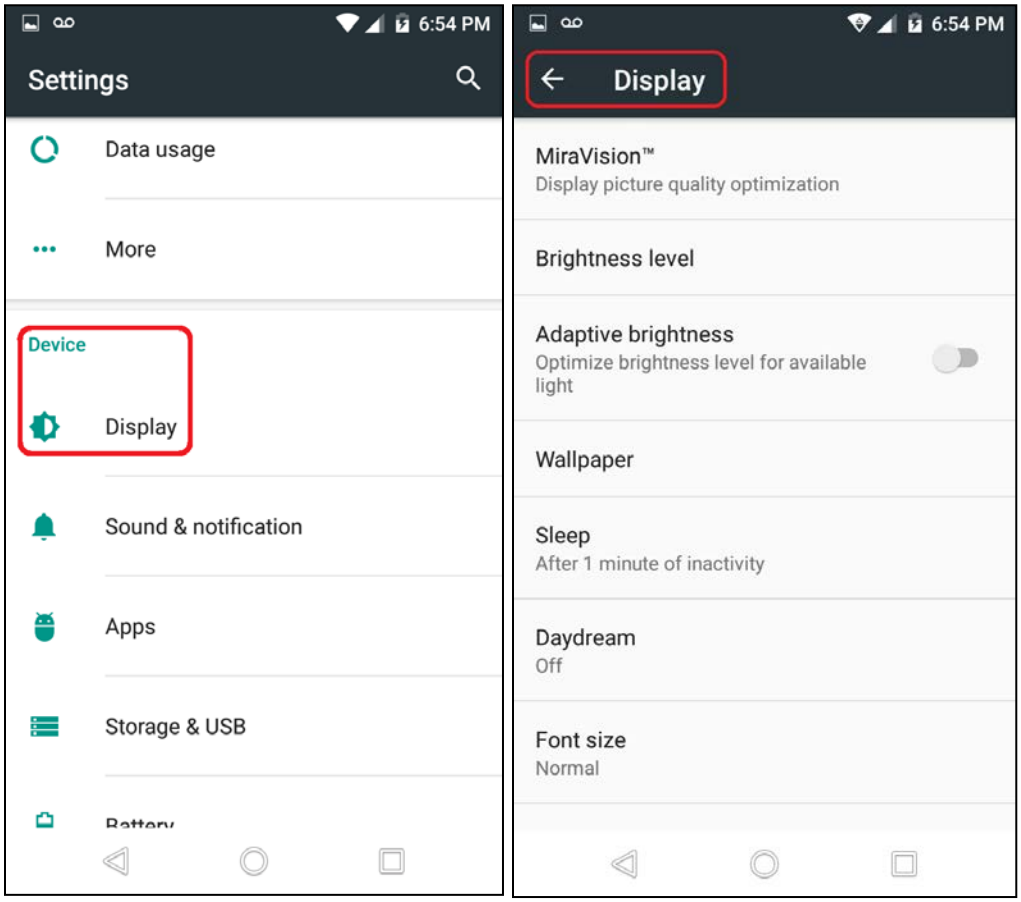
display a conversation of instant messages; ("Element 9D")

display a first time information for an instant message in the conversation in response to a first input; and ("Element 9E")

automatically change the first time information for the instant message to a second time information as time progresses and display the second time information instead of the first time information. ("Element 9F")

176. To the extent the preamble is considered a limitation, the '149 Accused Products: "An electronic device for displaying an instant messaging conversation, the electronic device comprising." *See, e.g.*, Paragraph 171.

177. The '149 Accused Products satisfy Element 9A of claim 9 of the '149 patent: "a display." *See, e.g.*:



Screenshots taken on R1 HD device running Android Version 6.0, red box annotations added.

See also:

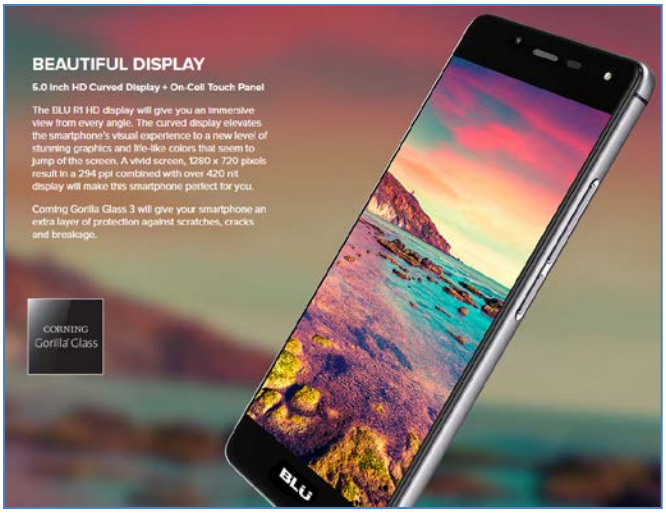
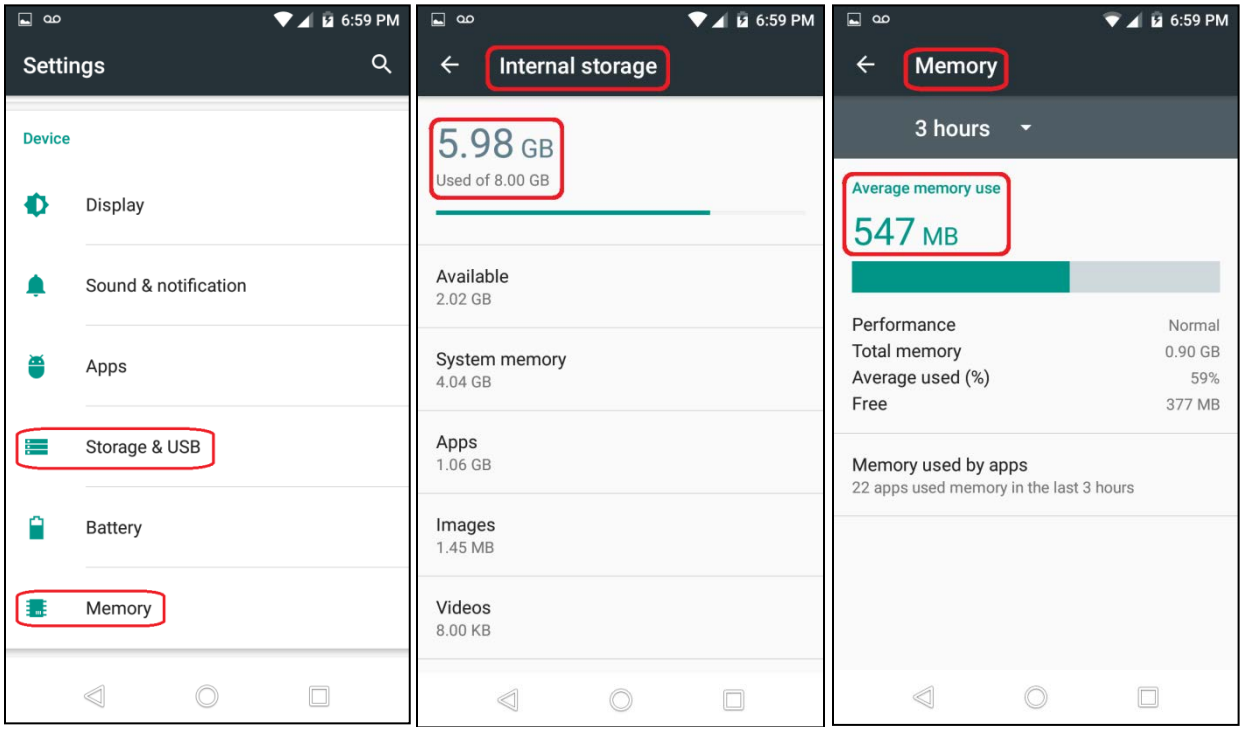


Exhibit Y at 3 (image taken from native website due to better formatting).

178. The '149 Accused Products satisfy Element 9B of claim 9 of the '149 patent: "a memory." *See, e.g.*:



Screenshots taken on R1 HD device running Android Version 6.0, red box annotations added.

See also:

Exhibit Y at 9-10 (*see* "MEMORY"; image taken from native website due to better formatting).

179. The '149 Accused Products satisfy Element 9C of claim 9 of the '149 patent: "a processor electronically coupled with the display and the memory, the processor configured to." *See, e.g.*:

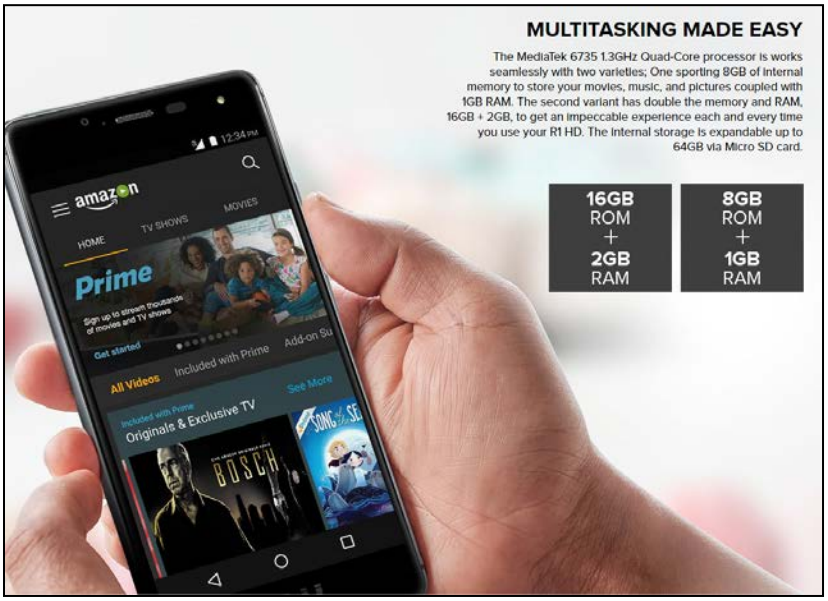


Exhibit Y at 3-4 (image taken from native website due to better formatting).

180. The ’149 Accused Products satisfy Element 9D of claim 9 of the ’149 patent: “display a conversation of instant messages.” *See, e.g.*, Paragraph 172.

181. The ’149 Accused Products satisfy Element 9E of claim 9 of the ’149 patent: “display a first time information for an instant message in the conversation in response to a first input.” *See, e.g.*, Paragraph 173.

182. The ’149 Accused Products satisfy Element 9F of claim 9 of the ’149 patent: “automatically change the first time information for the instant message to a second time information as time progresses and display the second time information instead of the first time information.” *See, e.g.*, Paragraph 174.

183. By its actions, BLU has injured BlackBerry and is liable to BlackBerry for infringement of the ’149 patent pursuant to 35 U.S.C. § 271.

184. BlackBerry has been damaged by BLU’s infringement of the ’149 patent and will continue to be damaged unless BLU is enjoined by this Court. BlackBerry has suffered and continues to suffer irreparable injury for which there is no adequate remedy at law. The balance of hardships favors BlackBerry, and public interest is not disserved by an injunction.

185. BlackBerry is entitled to recover from BLU all damages that BlackBerry has sustained as a result of BLU’s infringement of the ’149 patent, including without limitation, lost profits and not less than a reasonable royalty.

SEVENTH CAUSE OF ACTION
(Infringement of U.S. Patent No. 8,169,449)

186. BlackBerry realleges and incorporates by reference the allegations set forth in the foregoing paragraphs.

187. On information and belief, BLU has directly infringed and is continuing to directly infringe the ’449 patent, either literally or under the doctrine of equivalents, by making,

using, selling, offering for sale, and/or importing in the United States and in this Judicial District, products, software, and/or services that incorporate or make use of one or more of the inventions covered by the '449 patent, including but not limited to the BLU Android Devices (*see, e.g.*, Exhibits A, B) ("'449 Accused Products"), thereby infringing one or more claims of the '449 patent.

188. BLU's '449 Accused Products satisfy each and every element of one or more claims of the '449 patent, for example, and without limitation, claim 1 of the '449 patent.

189. Claim 1 of the '449 patent recites:

> A system for compositing images using a multilayer graphics controller having an ability to show an image in a masked region based on a masking criterion, the system comprising:
>
> a first application defining one or more images for display using a layer of the multilayer graphics controller, the first application further defining a masked display region using masking criterion; and ("Element 1A")
>
> a second application providing an image to a further layer of the multilayer graphics controller for display in the masked display region; ("Element 1B")
>
> wherein the multilayer graphics controller does not combine the one or more images of the first application with the image of the second application. ("Element 1C")

190. To the extent the preamble is considered a limitation, the '449 Accused Products satisfy the preamble of claim 1 of the '449 patent: "A system for compositing images using a multilayer graphics controller having an ability to show an image in a masked region based on a masking criterion, the system comprising." *See, e.g.*:

Hardware Composer

The Hardware Composer HAL ("HWC") was first introduced in Android 3.0 ("Honeycomb") and has evolved steadily over the years. Its primary purpose is to determine the most efficient way to composite buffers with the available hardware. As a HAL, its implementation is device-specific and usually implemented by the display hardware OEM.

The value of this approach is easy to recognize when you consider "overlay planes." The purpose of overlay planes is to composite multiple buffers together, but in the display hardware rather than the GPU. For example, suppose you have a typical Android phone in portrait orientation, with the status bar on top and navigation bar at the bottom, and app content everywhere else. The contents for each layer are in separate buffers. You could handle composition by rendering the app content into a scratch buffer, then rendering the status bar over it, then rendering the navigation bar on top of that, and finally passing the scratch buffer to the display hardware. Or, you could pass all three buffers to the display hardware, and tell it to read data from different buffers for different parts of the screen. The latter approach can be significantly more efficient.

Exhibit AC at 4, an 8/11/2016 capture

of https://source.android.com/devices/graphics/architecture.html.

191. The ’449 Accused Products satisfy Element 1A of claim 1 of the ’449 patent: “a first application defining one or more images for display using a layer of the multilayer graphics controller, the first application further defining a masked display region using masking criterion.” *See, e.g.*:

Composition and the Hardware Scaler

Now that we have a bit more context, it's useful to go back and look at a couple of fields from `dumpsys SurfaceFlinger` that we skipped over earlier on. Back in the Hardware Composer discussion, we looked at some output like this:

```
    type    |          source crop              |           frame           name
------------+-----------------------------------+--------------------------------
        HWC | [    0.0,    0.0,  320.0,  240.0] | [   48,  411, 1032, 1149] SurfaceView
        HWC | [    0.0,   75.0, 1080.0, 1776.0] | [    0,   75, 1080, 1776]
com.android.grafika/com.android.grafika.PlayMovieSurfaceActivity
        HWC | [    0.0,    0.0, 1080.0,   75.0] | [    0,    0, 1080,   75] StatusBar
        HWC | [    0.0,    0.0, 1080.0,  144.0] | [    0, 1776, 1080, 1920] NavigationBar
  FB TARGET | [    0.0,    0.0, 1080.0, 1920.0] | [    0,    0, 1080, 1920]
HWC_FRAMEBUFFER_TARGET
```

This was taken while playing a movie in Grafika's "Play video (SurfaceView)" activity, on a Nexus 5 in portrait orientation. Note that the list is ordered from back to front: the SurfaceView's Surface is in the back, the app UI layer sits on top of that, followed by the status and navigation bars that are above everything else. The video is QVGA (320x240).

The "source crop" indicates the portion of the Surface's buffer that SurfaceFlinger is going to display. The app UI was given a Surface equal to the full size of the display (1080x1920), but there's no point rendering and compositing pixels that will be obscured by the status and navigation bars, so the source is cropped to a rectangle that starts 75 pixels from the top, and ends 144 pixels from the bottom. The status and navigation bars have smaller Surfaces, and the source crop describes a rectangle that begins at the the top left (0,0) and spans their content.

The "frame" is the rectangle where the pixels end up on the display. For the app UI layer, the frame matches the source crop, because we're copying (or overlaying) a portion of a display-sized layer to the same location in another display-sized layer. For the status and navigation bars, the size of the frame rectangle is the same, but the position is adjusted so that the navigation bar appears at the bottom of the screen.

Exhibit AC at 12.

192. The ’449 Accused Products satisfy Element 1B of claim 1 of the ’449 patent: “a second application providing an image to a further layer of the multilayer graphics controller for display in the masked display region.” *See, e.g.*, Paragraphs 190-91.

193. The ’449 Accused Products satisfy Element 1C of claim 1 of the ’449 patent: “wherein the multilayer graphics controller does not combine the one or more images of the first application with the image of the second application.” *See, e.g.*, Paragraphs 190-91.

194. By its actions, BLU has injured BlackBerry and is liable to BlackBerry for infringement of the ’449 patent pursuant to 35 U.S.C. § 271.

195. BlackBerry has been damaged by BLU’s infringement of the ’449 patent and will continue to be damaged unless BLU is enjoined by this Court. BlackBerry has suffered and continues to suffer irreparable injury for which there is no adequate remedy at law. The balance of hardships favors BlackBerry, and public interest is not disserved by an injunction.

196. BlackBerry is entitled to recover from BLU all damages that BlackBerry has sustained as a result of BLU’s infringement of the ’449 patent, including without limitation, lost profits and not less than a reasonable royalty.

EIGHTH CAUSE OF ACTION
(Infringement of U.S. Patent No. 7,969,924)

197. BlackBerry realleges and incorporates by reference the allegations set forth in the foregoing paragraphs.

198. On information and belief, BLU has directly infringed and is continuing to directly infringe the ’924 patent, either literally or under the doctrine of equivalents, by making, using, selling, offering for sale, marketing, and/or importing in the United States and in this Judicial District, products, software, and/or services that incorporate or make use of one or more of the inventions covered by the ’924 patent, including but not limited to products or software supporting the 3G standard, including 3GPP TS 25.331 (v8.14.0 and subsequent releases and versions). The Accused Standard Compliant Products therefore infringe at least claims 1 and 23 of the ’924 patent.

199. For example, on information and belief, the BLU Vivo XL contains the features and functionality designed and used to comply with the 3G standard.

See, e.g., Exhibit AD, 8/14/2016 download of *Vivo XL Sales Guide* 20, http://bluproducts.com/index.php/android-phones.

200. On information and belief, the Accused Standard Compliant Products, including the BLU Vivo XL, comply with 3GPP TS 25.331 (v8.14.0 and subsequent releases and versions) when implementing the 3G standard.

201. On information and belief, by complying with the 3G standard and the 3GPP TS 25.331 (v8.14.0 and subsequent releases and versions), the Accused Standard Compliant Products, including the BLU Vivo XL, satisfy each and every element of one or more of the claims '924 patent, including without limitation, claims 1 and 23.

202. Claim 1 of the '924 patent recites:

A method comprising: reading a system information message received from a network; ("'924 Element 1A")

determining, at a user equipment, if the system information message includes an inhibit transition indication; ("'924 Element 1B")

determining, at the user equipment, if no further data is expected; and ("'924 Element 1C")

if the system information message includes an inhibit transition indication, and if no further data is expected: ("'924 Element 1D")

transmitting an indication message from the user equipment to the network, the indication message including a cause. ("'924 Element 1E")

203. The Accused Standard Compliant Products satisfy '924 Element 1A of claim 1 of the '924 patent, literally or under the doctrine of equivalents, for example, by operating in accordance with section 8.1 of 3GPP TS 25.331 v8.14.0, including sections 8.1.1.1 and 8.1.1.3.

204. The Accused Standard Compliant Products satisfy '924 Element 1B of claim 1 of the '924 patent, literally or under the doctrine of equivalents, for example, by operating in accordance with section 8.1 of 3GPP TS 25.331 v8.14.0 (including sections 8.1.1.6, 8.1.1.6.1, 8.1.14 and 8.1.14.2), and section 10 of 3GPP TS 25.331 v8.14.0 (including sections 10.2.48.8 and 10.3.3.43).

205. The Accused Standard Compliant Products satisfy '924 Element 1C of claim 1 of the '924 patent, literally or under the doctrine of equivalents, for example, by operating in accordance with section 8.1 of 3GPP TS 25.331 v8.14.0, including section 8.1.14 and 8.1.14.2.

206. 65. The Accused Standard Compliant Products satisfy '924 Element 1D of claim 1 of the '924 patent, literally or under the doctrine of equivalents, for example, by operating in accordance with section 8.1 of 3GPP TS 25.331 v8.14.0, including sections 8.1.1.6, 8.1.1.6.1, 8.1.14 and 8.1.14.2.

207. The Accused Standard Compliant Products satisfy '924 Element 1E of claim 1 of the '924 patent, literally or under the doctrine of equivalents, for example, by operating in accordance with section 8.1 of 3GPP TS 25.331 v8.14.0, including section 8.1.14 and 8.1.14.2.

208. Claim 23 of the '924 patent recites:

A user equipment comprising: a processor configured to: read a system information message received from a network; ("'924 Element 23A")

determine if the system information message includes an inhibit transition indication; ("'924 Element 23B")

determine if no further data is expected; and ("'924 Element 23C")

if the system information message includes the inhibit transition indication, and if no further data is expected, ("'924 Element 23D")

transmit an indication message from the user equipment to the network, the indication message including a cause. ("'924 Element 23E")

209. The Accused Standard Compliant Products satisfy '924 Element 23A of claim 23 of the '924 patent, literally or under the doctrine of equivalents, for example, by being configured to operate in accordance with section 8.1 of 3GPP TS 25.331 v8.14.0, including sections 8.1.1.1 and 8.1.1.3.

210. The Accused Standard Compliant Products satisfy '924 Element 23B of claim 23 of the '924 patent, literally or under the doctrine of equivalents, for example, by being configured to operate in accordance with section 8.1 of 3GPP TS 25.331 v8.14.0 (including sections 8.1.1.6, 8.1.1.6.1, 8.1.14 and 8.1.14.2), and section 10 of 3GPP TS 25.331 v8.14.0 (including sections 10.2.48.8 and 10.3.3.43).

211. The Accused Standard Compliant Products satisfy '924 Element 23C of claim 23 of the '924 patent, literally or under the doctrine of equivalents, for example, by being configured to operate in accordance with section 8.1 of 3GPP TS 25.331 v8.14.0, including section 8.1.14 and 8.1.14.2.

212. The Accused Standard Compliant Products satisfy '924 Element 23D of claim 23 of the '924 patent, literally or under the doctrine of equivalents, for example, by being configured to operate in accordance with section 8.1 of 3GPP TS 25.331 v8.14.0, including sections 8.1.1.6, 8.1.1.6.1, 8.1.14 and 8.1.14.2.

213. The Accused Standard Compliant Products satisfy '924 Element 23E of claim 23 of the '924 patent, literally or under the doctrine of equivalents, for example, by being configured to operate operating in accordance with section 8.1 of 3GPP TS 25.331 v8.14.0, including section 8.1.14 and 8.1.14.2.

214. On or about November 21, 2015, BlackBerry notified BLU that it infringed the '924 patent by providing a list of patents required to practice, inter alia, the 2G, 3G, and LTE standards. The notice contained an offer to license the '924 patent on fair, reasonable, and nondiscriminatory terms. BLU became aware of the '924 patent at least as of this notice.

215. On information and belief, BLU also induces infringement of at least claims 1 and 23 of the '924 patent. BLU's Accused Standard Compliant Products as sold are specifically configured to infringe BlackBerry's '924 patent as described above. BLU actively instructs its customers on how to use its products, including through product manuals and advertising. When used as instructed, BLU's customers use its products to practice the methods and use the apparatus of the '924 patent. BLU's customers thereby directly infringe, either literally or under the doctrine of equivalents, the '924 patent. For example, the Accused Standard Compliant Products practice the '924 patent when an end user uses his or her device in an ordinary manner, such as to transmit or receive data over a 3G communication network. The BLU Vivo XL sales guide, for example, informs and instructs users how to use the phone with a 3G network in an infringing manner. *See, e.g.*, *BLU Vivo XL Sales Guide* 20, Exhibit AD.

216. BLU knew of the '924 patent, or should have known of the '924 patent but was willfully blind to its existence, since at least its incorporation into the 3G standard and its disclosure to 3GPP and ETSI. BLU was made aware of its infringement through a notice letter

sent from BlackBerry on November 21, 2015. Additionally, BLU has had actual knowledge of the '924 patent since at least as early as the filing and/or service of this Complaint.

217. As of the date of its earliest awareness of the '924 patent, BLU knew of the '924 patent and knew that its customers' actions taken during the ordinary and intended use of the Accused Standard Compliant Products would constitute infringement of the '924 patent. Alternatively, BLU understood that there is a high probability that its customers would infringe the '924 patent but remained willfully blind to the infringing nature of its customers' actions taken during the ordinary and intended use of the Accused Standard Compliant Products.

218. BLU's infringement of the '924 patent has been and continues to be willful, and BLU's conduct renders this case exceptional under 35 U.S.C. § 285. BlackBerry provided BLU notice on November 21, 2015, identifying the '924 patent and the infringement by BLU's products. Despite this notice, BLU failed to negotiate in good faith and has willfully and deliberately continued infringing the claims of the '924 patent to the present day.

219. Additional allegations regarding BLU's knowledge of the '924 patent and willful infringement likely will have evidentiary support after a reasonable opportunity for discovery.

220. By its actions, BLU has injured BlackBerry and is liable to BlackBerry for infringement of the '924 patent pursuant to 35 U.S.C. § 271.

NINTH CAUSE OF ACTION
(Infringement of U.S. Patent No. 8,483,060)

221. BlackBerry realleges and incorporates by reference the allegations set forth in the foregoing paragraphs.

222. On information and belief, BLU has directly infringed and is continuing to directly infringe the '060 patent, either literally or under the doctrine of equivalents, by making, using, selling, offering for sale, marketing, and/or importing in the United States and in this

Judicial District, products, software, and/or services that incorporate or make use of one or more of the inventions covered by the '060 patent, including but not limited to products or software supporting the 3G standard, including 3GPP TS 25.212 (v6.10.0 and subsequent releases and versions), TS 25.331 (v6.25.0 and subsequent releases and versions), and TS 25.401 (v6.9.0 and subsequent releases and versions) (collectively the "Accused '060 Technical Specifications"). The Accused Standard Compliant Products therefore infringe at least claims 1 and 14 of the '060 patent.

223. For example, on information and belief, the BLU Vivo XL contains the features and functionality designed and used to comply with the 3G standard.

See, e.g., *BLU Vivo XL Sales Guide* 20, Exhibit AD.

224. On information and belief, by complying with the 3G standard and Accused '060 Technical Specifications, the Accused Standard Compliant Products, including the BLU Vivo XL, satisfy each and every element of one or more of the claims '060 patent, including without limitation, claims 1 and 14.

225. Claim 1 of the '060 patent recites:

> A method for a communication terminal communicating with a network entity using a plurality of transport channels, the method comprising: ("'060 Preamble 1A")

receiving for each of said transport channels a first parameter relating to a rate matching ratio for the transport channel; ("'060 Element 1B")

receiving data with a rate determined by a rate matching process; and ("'060 Element 1C")

determining a variation between a number of bits of each of said transport channels before and after the rate matching process based on a second parameter indicating a maximum physical rate corresponding to a transport channel composite and at least one of the received first parameters. ("'060 Element 1D")

226. To the extent the preamble is considered a limitation, the '060 Accused Standard Compliant Products satisfy '060 Preamble 1A of claim 1 of the '060 patent, literally or under the doctrine of equivalents, for example, by operating in accordance with section 4.2 of 3GPP TS 25.212 v6.10.0, including as further explained by figure 2 and associated text, and as further defined by section 3 of 3GPP TS 25.212 v6.10.0 and by section 3 of 3GPP TS 25.401 v6.9.0.

227. The Accused Standard Compliant Products satisfy '060 Element 1B of claim 1 of the '060 patent, literally or under the doctrine of equivalents, for example, by operating in accordance with section 10.2 of 3GPP TS 25.331 (including section 10.2.33), section 10.3.5 of 3GPP TS 25.331 v6.25.0 (including sections 10.3.5.1, 10.3.5.11, and 10.3.5.23), section 4.2 of 3GPP TS 25.212 v6.10.0 (including sections 4.2.7 and 4.2.7.2), and as further defined by section 3.2 of 3GPP TS 25.212 v6.10.0.

228. The Accused Standard Compliant Products satisfy '060 Element 1C of claim 1 of the '060 patent, literally or under the doctrine of equivalents, for example, by operating in accordance with section 4.2 of 3GPP TS 25.212 v6.10.0, including sections 4.2.7 and 4.2.7.2.

229. The Accused Standard Compliant Products satisfy '060 Element 1D of claim 1 of the '060 patent, literally or under the doctrine of equivalents, for example, by operating in accordance with section 4.2 of 3GPP TS 25.212 v6.10.0, including sections 4.2.7 and 4.2.7.2.

230. Claim 14 of the ’060 patent recites:

A communication terminal for communicating using a plurality of transport channels, the communication terminal comprising: (“’060 Preamble 14”)

a receiver configured to receive for each of said transport channels a first parameter relating to a rate matching ratio for the transport channel (“’060 Element 14A”)

and receive data with a rate determined by a rate matching process, and (“’060 Element 14B”)

said communication terminal configured to: determine a variation between a number of bits of each of said transport channels before and after the rate matching process based on a second parameter indicating a maximum physical rate corresponding to a transport channel composite and at least one of the received first parameters. (“’060 Element 14C”)

231. To the extent the preamble is considered a limitation, the Accused Standard Compliant Products satisfy the ’060 Preamble 14 of claim 14 the ’060 patent, literally or under the doctrine of equivalents, for example, by being configured to operate in accordance with section 4.2 of 3GPP TS 25.212 v6.10.0, including as further explained by figure 2 and associated text, and as further defined by section 3 of 3GPP TS 25.212 v6.10.0 and section 3 of 3GPP TS 25.401 v6.9.0.

232. The Accused Standard Compliant Products satisfy ’060 Element 14A of claim 14 of the ’060 patent, literally or under the doctrine of equivalents, for example, by being configured to operate in accordance with section 10.2 of 3GPP TS 25.331 v6.25.0 (including section 10.2.33), section 10.3.5 of 3GPP TS 25.331 v6.25.0 (including sections 10.3.5.1, 10.3.5.11, and 10.3.5.23), section 4.2 of 3GPP TS 25.212 v6.10.0 (including sections 4.2.7 and 4.2.7.2), and as further defined by section 3.2 of 3GPP TS 25.212 v6.10.0.

233. The Accused Standard Compliant Products satisfy ’060 Element 14B of claim 14 of the ’060 patent, literally or under the doctrine of equivalents, for example, by being

configured to operate in accordance with section 4.2 of 3GPP TS 25.212 v6.10.0, including sections 4.2.7 and 4.2.7.2.

234. The Accused Standard Compliant Products satisfy '060 Element 14C of claim 14 of the '060 patent, literally or under the doctrine of equivalents, for example, by being configured to operate in accordance with section 4.2 of 3GPP TS 25.212 v6.10.0, including sections 4.2.7 and 4.2.7.2.

235. On or about November 21, 2015, BlackBerry notified BLU that it infringed the '060 patent by providing a list of patents required to practice, *inter alia*, the 2G, 3G, and LTE standards. The notice contained an offer to license the '060 patent on fair, reasonable, and nondiscriminatory terms. BLU became aware of the '060 patent at least as of this notice.

236. On information and belief, BLU also induces infringement of at least claims 1 and 14 of the '060 patent. BLU's Accused Standard Compliant Products as sold are specifically configured to infringe BlackBerry's '060 patent as described above. BLU actively instructs its customers on how to use its products, including through product manuals and advertising. When used as instructed, BLU's customers use its products to practice the methods and use the apparatus of the '060 patent. BLU's customers thereby directly infringe, either literally or under the doctrine of equivalents, the '060 patent. For example, the Accused Standard Compliant Products practice the '060 patent when an end user uses his or her device in an ordinary manner, such as to transmit or receive data over a 3G communication network. The BLU Vivo XL sales guide, for example, informs and instructs users how to use the phone with a 3G network in an infringing manner. *See, e.g., BLU Vivo XL Sales Guide* 20, Exhibit AD.

237. BLU knew of the '060 patent, or should have known of the '060 patent but was willfully blind to its existence, since at least its incorporation into the 3G standard and its

disclosure to 3GPP and ETSI. BLU was made aware of its infringement through a notice letter sent from BlackBerry on November 21, 2015. Additionally, BLU has had actual knowledge of the '060 patent since at least as early as the filing and/or service of this Complaint.

238. As of the date of its earliest awareness of the '060 patent, BLU knew of the '060 patent and knew that its customers' actions taken during the ordinary and intended use of the Accused Standard Compliant Products would constitute infringement of the '060 patent. Alternatively, BLU understood that there is a high probability that its customers would infringe the '060 patent but remained willfully blind to the infringing nature of its customers' actions taken during the ordinary and intended use of the Accused Standard Compliant Products.

239. BLU's infringement of the '060 patent has been and continues to be willful, and BLU's conduct renders this case exceptional under 35 U.S.C. § 285. BlackBerry provided BLU notice on November 21, 2015, identifying the '060 patent and the infringement by BLU's products. Despite this notice, BLU failed to negotiate in good faith and has willfully and deliberately continued infringing the claims of the '060 patent to the present day.

240. Additional allegations regarding BLU's knowledge of the '060 patent and willful infringement likely will have evidentiary support after a reasonable opportunity for discovery.

241. By its actions, BLU has injured BlackBerry and is liable to BlackBerry for infringement of the '060 patent pursuant to 35 U.S.C. § 271.

TENTH CAUSE OF ACTION
(Infringement of U.S. Patent No. 8,406,118)

242. BlackBerry realleges and incorporates by reference the allegations set forth in the foregoing paragraphs.

243. On information and belief, BLU has directly infringed and is continuing to directly infringe the '118 patent, either literally or under the doctrine of equivalents, by making,

using, selling, offering for sale, marketing, and/or importing in the United States and in this Judicial District, products, software, and/or services that incorporate or make use of one or more of the inventions covered by the '118 patent, including but not limited to products or software supporting the LTE standard, including 3GPP TS 36.211 (v8.9.0 and subsequent releases and versions) and TS 36.300 (v8.12.0 and subsequent releases and versions). The Accused Standard Compliant Products therefore infringe at least claims 1 and 11 of the '118 patent.

244. For example, on information and belief, the BLU Vivo XL contains the features and functionality designed and used to comply with the LTE standard.

See, e.g., *BLU Vivo XL Sales Guide* 20, Exhibit AD.

245. On information and belief, by complying with the LTE standard and including 3GPP TS 36.211 (v8.9.0 and subsequent releases and versions) and TS 36.300 (v8.12.0 and subsequent releases and versions), the Accused LTE Products, including the BLU Vivo XL, satisfy each and every element of one or more of the claims '118 patent, including without limitation, claims 1 and 11.

246. Claim 1 of the '118 patent recites:

> A method of receiving pilot symbols in Orthogonal Frequency Division Multiplexing (OFDM) frames at an OFDM receiver having at least one receiving antenna from an OFDM base station having at least two transmitting antennas, ("'118 Element 1A")

the OFDM base station having an adjacent OFDM base station having at least two transmitting antennas, ("'118 Element 1B")

the OFDM frames having a time domain and a frequency domain, each OFDM frame comprising a plurality of OFDM symbols in the time domain and a plurality of subcarriers in the frequency domain, the method comprising: ("'118 Element 1C")

receiving scattered pilot symbols in a scattered pattern in time-frequency from each transmitting antenna of the OFDM base station, wherein the scattered pattern is offset from a scattered pattern of the adjacent OFDM base station. ("'118 Element 1D")

247. The Accused LTE Products satisfy '118 Element 1A of claim 1 of the '118 patent, literally or under the doctrine of equivalents, for example, by operating in accordance with section 6.2 of 3GPP TS 36.211 v8.9.0, including section 6.2.1.

248. The Accused LTE Products satisfy '118 Element 1B of claim 1 of the '118 patent, literally or under the doctrine of equivalents, for example, by operating in accordance with section 4 of 3GPP TS 36.300 v8.12.0, as further explained by Figure 4-1 and associated text.

249. The Accused LTE Products satisfy '118 Element 1C of claim 1 of the '118 patent, literally or under the doctrine of equivalents, for example, by operating in accordance with section 6.2 of 3GPP TS 36.211 v8.9.0, including sections 6.2.2 and 6.2.3.

250. The Accused LTE Products satisfy '118 Element 1D of claim 1 of the '118 patent, literally or under the doctrine of equivalents, for example, by operating in accordance with section 6.10 of 3GPP TS 36.211 v8.9.0, including section 6.10.1.2.

251. Claim 11 of the '118 patent recites:

A user equipment (UE) of a wireless network, the wireless network including a first Orthogonal Frequency Division Multiplexing (OFDM) base station having at least two transmitting antennas, ("'118 Element 11A")

the OFDM base station adjacent to a second OFDM base station having at least two transmitting antennas, the UE comprising: a receiving antenna; and ("'118 Element 11B")

a receiver configured to: receive scattered pilot symbols in a scattered pattern in time-frequency for each transmitting antenna of the first OFDM base station, wherein the scattered pattern from the first OFDM base station is offset from a scattered pattern of the second OFDM base station; and ("'118 Element 11C")

receive the scattered pilot symbols in OFDM frames from the first OFDM base station, the OFDM frames having a time domain and a frequency domain, each OFDM frame having a plurality of OFDM symbols in the time domain and a plurality of subcarriers in the frequency domain. ("'118 Element 11D")

252. The Accused LTE Products satisfy '118 Element 11A of claim 11 of the '118 patent, literally or under the doctrine of equivalents, for example, by being configured to operate in accordance with section 6.2 of 3GPP TS 36.211 v8.9.0, including section 6.2.1.

253. The Accused LTE Products satisfy '118 Element 11B of claim 11 of the '118 patent, literally or under the doctrine of equivalents, for example, by being configured to operate in accordance with section 4 of 3GPP TS 36.300 v8.12.0, as further explained by Figure 4-1 and associated text.

254. The Accused LTE Products satisfy '118 Element 11C of claim 11 of the '118 patent, literally or under the doctrine of equivalents, for example, by being configured to operate in accordance with section 6.2 of 3GPP TS 36.211 v8.9.0, including sections 6.2.2 and 6.2.3.

255. The Accused LTE Products satisfy '118 Element 11D of claim 11 of the '118 patent, literally or under the doctrine of equivalents, for example, by being configured to operate in accordance with section 6.10 of 3GPP TS 36.211 v8.9.0, including section 6.10.1.2.

256. On or about November 21, 2015, BlackBerry notified BLU that it infringed the '118 patent by providing a list of patents required to practice, *inter alia*, the 2G, 3G, and LTE standards. The notice contained an offer to license the '118 patent on fair, reasonable, and nondiscriminatory terms. BLU became aware of the '118 patent at least as of this notice.

257. On information and belief, BLU also induces infringement of at least claims 1 and 11 of the '118 patent. BLU's Accused Standard Compliant Products as sold are specifically

configured to infringe BlackBerry's '118 patent as described above. BLU actively instructs its customers on how to use its products, including through product manuals and advertising. When used as instructed, BLU's customers use its products to practice the methods and use the apparatus of the '118 patent. BLU's customers thereby directly infringe, either literally or under the doctrine of equivalents, the '118 patent. For example, the Accused Standard Compliant Products practice the '118 patent when an end user uses his or her device in an ordinary manner, such as to transmit or receive data over a LTE communication network. The BLU Vivo XL sales guide, for example, informs and instructs users how to use the phone with a LTE network in an infringing manner. *See, e.g.*, *BLU Vivo XL Sales Guide* 20, Exhibit AD.

258. BLU knew of the '118 patent, or should have known of the '118 patent but was willfully blind to its existence, since at least its incorporation into the LTE standard and its disclosure to 3GPP and ETSI. BLU was made aware of its infringement through a notice letter sent from BlackBerry on November 21, 2015. Additionally, BLU has had actual knowledge of the '118 patent since at least as early as the filing and/or service of this Complaint.

259. As of the date of its earliest awareness of the '118 patent, BLU knew of the '118 patent and knew that its customers' actions taken during the ordinary and intended use of the Accused LTE Products would constitute infringement of the '118 patent. Alternatively, BLU understood that there is a high probability that its customers would infringe the '118 patent but remained willfully blind to the infringing nature of its customers' actions taken during the ordinary and intended use of the Accused LTE Products.

260. BLU's infringement of the '118 patent has been and continues to be willful, and BLU's conduct renders this case exceptional under 35 U.S.C. § 285. BlackBerry provided BLU notice on November 21, 2015, identifying the '118 patent and the infringement by BLU's

products. Despite this notice, BLU failed to negotiate in good faith and has willfully and deliberately continued infringing the claims of the '118 patent to the present day.

261. By its actions, BLU has injured BlackBerry and is liable to BlackBerry for infringement of the '118 patent pursuant to 35 U.S.C. § 271.

ELEVENTH CAUSE OF ACTION
(Infringement of U.S. Patent No. 8,472,567)

262. BlackBerry realleges and incorporates by reference the allegations set forth in the foregoing paragraphs.

263. On information and belief, BLU has directly infringed and is continuing to directly infringe the '567 patent, either literally or under the doctrine of equivalents, by making, using, selling, offering for sale, marketing, and/or importing in the United States and in this Judicial District, products, software, and/or services that incorporate or make use of one or more of the inventions covered by the '567 patent, including but not limited to products or software supporting the LTE standard, including 3GPP TS 36.211 (v8.9.0 and subsequent releases and versions) and TS 36.212 (v8.8.0 and subsequent releases and versions) (collectively the "Accused '567 Technical Specifications"). The Accused LTE Products therefore infringe at least claims 11 and 16 of the '567 patent.

264. For example, on information and belief, the BLU Vivo XL contains the features and functionality designed and used to comply with the LTE standard.

See, e.g., *BLU Vivo XL Sales Guide* 20, Exhibit AD.

265. On information and belief, by complying with the LTE standard and the Accused '567 Technical Specifications, the Accused Standard Compliant Products, including the BLU Vivo XL, satisfy each and every element of one or more of the claims '567 patent, including without limitation, claims 11 and 16.

266. Claim 11 of the '567 patent recites:

> A method for use with Long Term Evolution (LTE) broadcast channel data, the method comprising: receiving at least a portion of the LTE broadcast channel data from a transmitter; ("'567 Element 11A")
>
> descrambling the at least a portion of the LTE broadcast channel data using a descrambling sequence one of a plurality of unique descrambling sequences; and ("'567 Element 11B")
>
> determining the number of transmit antennas used by the transmitter based on the unique descrambling sequence used to descramble the at least a portion of the LTE broadcast channel data, ("'567 Element 11C")
>
> wherein receiving at least a portion of broadcast channel data comprises receiving the at least a portion of broadcast channel data within a primary broadcast channel in accordance with a Long Term Evolution (LTE) standard. ("'567 Element 11D")

267. The Accused LTE Products satisfy '567 Element 11A of claim 11 of the '567 patent, literally or under the doctrine of equivalents, for example, by operating in accordance

with section 5.3 of 3GPP TS 36.212 v8.8.0 (including sections 5.3.1, 5.3.1.1, and 5.3.1.3) and section 6.6 of 3GPP TS 36.211 v8.9.0.

268. The Accused LTE Products satisfy '567 Element 11B of claim 11 of the '567 patent, literally or under the doctrine of equivalents, for example, by operating in accordance with section 5.3 of 3GPP TS 36.212 v8.8.0, including sections 5.3.1 and 5.3.1.1.

269. The Accused LTE Products satisfy '567 Element 11C of claim 11 of the '567 patent, literally or under the doctrine of equivalents, for example, by operating in accordance with section 5.3 of 3GPP TS 36.212 v8.8.0, including sections 5.3.1 and 5.3.1.1.

270. The Accused LTE Products satisfy '567 Element 11D of claim 11 of the '567 patent, literally or under the doctrine of equivalents, for example, by operating in accordance with section 6.6 of 3GPP TS 36.211 v8.9.0 and as further defined by 3GPP TS 36.212 v8.8.0.

271. Claim 16 of the '567 patent recites:

> A communications device for receiving Long Term Evolution (LTE) broadcast channel data from a transmitter in a wireless network, the communications device configured to: receive at least a portion of the LTE broadcast channel data from a transmitter; ("'567 Element 16A")
>
> descramble the at least a portion of LTE broadcast channel data using one of a plurality of unique descrambling sequences; and ("'567 Element 16B")
>
> determine the number of transmit antennas used by the transmitter based on the unique descrambling sequence used to descramble the at least a portion of the LTE broadcast channel data, ("'567 Element 16C")
>
> wherein the communications device is further configured to receive the at least a portion of broadcast channel data within a primary broadcast channel in accordance with a Long Term Evolution (LTE) standard. ("'567 Element 16D")

272. The Accused LTE Products satisfy '567 Element 16A of claim 16 of the '567 patent, literally or under the doctrine of equivalents, for example, by being configured to operate

in accordance with section 5.3 of 3GPP TS 36.212 v8.8.0 (including sections 5.3.1, 5.3.1.1, and 5.3.1.3) and section 6.6 of 3GPP TS 36.211 v8.9.0.

273. The Accused LTE Products satisfy '567 Element 16B of claim 16 of the '567 patent, literally or under the doctrine of equivalents, for example, by being configured to operate in accordance with section 5.3 of 3GPP TS 36.212 v8.8.0, including sections 5.3.1 and 5.3.1.1.

274. The Accused LTE Products satisfy '567 Element 16C of claim 16 of the '567 patent, literally or under the doctrine of equivalents, for example, by being configured to operate in accordance with section 5.3 of 3GPP TS 36.212 v8.8.0, including sections 5.3.1 and 5.3.1.1.

275. The Accused LTE Products satisfy '567 Element 16D of claim 16 of the '567 patent, literally or under the doctrine of equivalents, for example, by being configured to operate in accordance with section 6.6 of 3GPP TS 36.211 v8.9.0 and as further defined by 3GPP TS 36.212 v8.8.0.

276. On or about November 21, 2015, BlackBerry notified BLU that it infringed the '567 patent by providing a list of patents required to practice, *inter alia*, the 2G, 3G, and LTE standards. The notice contained an offer to license the '567 patent on fair, reasonable, and nondiscriminatory terms. BLU became aware of the '567 patent at least as of this notice.

277. On information and belief, BLU also induces infringement of at least claims 11 and 16 of the '567 patent. BLU's Accused LTE Products as sold are specifically configured to infringe BlackBerry's '567 patent as described above. BLU actively instructs its customers on how to use its products, including through product manuals and advertising. When used as instructed, BLU's customers use its products to practice the methods and use the apparatus of the '567 patent. BLU's customers thereby directly infringe, either literally or under the doctrine of equivalents, the '567 patent. For example, the Accused LTE Products practice the '567 patent

when an end user uses his or her device in an ordinary manner, such as to transmit or receive data over a LTE communication network. The BLU Vivo XL sales guide, for example, informs and instructs users how to use the phone with a LTE network in an infringing manner. *See, e.g.*, *BLU Vivo XL Sales Guide* 20, Exhibit AD.

278. BLU knew of the '567 patent, or should have known of the '567 patent but was willfully blind to its existence, since at least its incorporation into the LTE standard and its disclosure to 3GPP and ETSI. BLU was made aware of its infringement through a notice letter sent from BlackBerry on November 21, 2015. Additionally, BLU has had actual knowledge of the '567 patent since at least as early as the filing and/or service of this Complaint.

279. As of the date of its earliest awareness of the '567 patent, BLU knew of the '567 patent and knew that its customers' actions taken during the ordinary and intended use of the Accused LTE Products would constitute infringement of the '567 patent. Alternatively, BLU understood that there is a high probability that its customers would infringe the '567 patent but remained willfully blind to the infringing nature of its customers' actions taken during the ordinary and intended use of the Accused LTE Products.

280. BLU's infringement of the '567 patent has been and continues to be willful, and BLU's conduct renders this case exceptional under 35 U.S.C. § 285. BlackBerry provided BLU notice on November 21, 2015, identifying the '567 patent and the infringement by BLU's products. Despite this notice, BLU failed to negotiate in good faith and has willfully and deliberately continued infringing the claims of the '567 patent to the present day.

281. Additional allegations regarding BLU's knowledge of the '567 patent and willful infringement likely will have evidentiary support after a reasonable opportunity for discovery.

282. By its actions, BLU has injured BlackBerry and is liable to BlackBerry for infringement of the ’567 patent pursuant to 35 U.S.C. § 271.

TWELFTH CAUSE OF ACTION
(Infringement of U.S. Patent No. 8,265,034)

283. BlackBerry realleges and incorporates by reference the allegations set forth in the foregoing paragraphs.

284. On information and belief, BLU has directly infringed and is continuing to directly infringe the ’034 patent, either literally or under the doctrine of equivalents, by making, using, selling, offering for sale, marketing, and/or importing in the United States and in this Judicial District, products, software, and/or services that incorporate or make use of one or more of the inventions covered by the ’034 patent, including but not limited to products or software supporting the 3G standard, including 3GPP TS 25.331 (v8.19.0 and subsequent releases and versions). The Accused Standard Compliant Products therefore infringe at least claims 1 and 20 of the ’034 patent.

285. For example, on information and belief, the BLU Vivo XL contains the features and functionality designed and used to comply with the 3G standard.

See, e.g., BLU Vivo XL Sales Guide 20, Exhibit AD.

286. On information and belief, the Accused Standard Compliant Products, including the BLU Vivo XL, comply with 3GPP TS 25.331 (v8.19.0 and subsequent releases and versions) when implementing the 3G standard.

287. On information and belief, by complying with the 3G standard and 3GPP TS 25.331 (v8.19.0 and subsequent releases and versions), the Accused Standard Compliant Products, including the BLU Vivo XL, satisfy each and every element of one or more of the claims '034 patent, including without limitation, claims 1 and 20.

288. Claim 1 of the '034 patent recites:

> A method comprising: responsive to an indication from an upper layer of a user equipment (UE) that no more data is expected, ("'034 Element 1A")
>
> setting a cause in a signaling connection release indication message to UE Requested Packet Switched (PS) Data session end; ("'034 Element 1B")
>
> transmitting, from the user equipment to a wireless network on a Dedicated Control Channel (DCCH) using Acknowledged Mode (AM) Radio Link Control (RLC), the signaling connection release message including the cause for a network-controlled transition; and ("'034 Element 1C")
>
> receiving a state transition message from the wireless network. ("'034 Element 1D")

289. The Accused Standard Compliant Products satisfy '034 Element 1A of claim 1 of the '034 patent, literally or under the doctrine of equivalents, for example, by operating in accordance with section 8.1 of 3GPP TS 25.331 v8.19.0, including section 8.1.14.

290. The Accused Standard Compliant Products satisfy '034 Element 1B of claim 1 of the '034 patent, literally or under the doctrine of equivalents, for example, by operating in accordance with section 8.1 of 3GPP TS 25.331 v8.19.0, including section 8.1.14.

291. The Accused Standard Compliant Products satisfy '034 Element 1C of claim 1 of the '034 patent, literally or under the doctrine of equivalents, for example, by operating in accordance with section 8.1 of 3GPP TS 25.331 v8.19.0, including section 8.1.14.

292. The Accused Standard Compliant Products satisfy '034 Element 1D of claim 1 of the '034 patent, literally or under the doctrine of equivalents, for example, by operating in accordance with section 8.1 of 3GPP TS 25.331 v8.19.0 (including section 8.1.14), section 8.2 of 3GPP TS 25.331 v8.19.0 (including the figures in 8.2.2 and associated text and section 8.2.2.3), section 8.6.3 of 3GPP TS 25.331 v8.19.0 (including section 8.6.3.3), section 10.2 of 3GPP TS 25.331 v8.19.0 (including section 10.2.30), and section 10.3.3 of 3GPP TS 25.331 v8.19.0 (including section 10.3.3.35a).

293. Claim 20 of the '034 patent recites:

> A user equipment (UE) having a radio subsystem, a processor adapted to interact with a memory, the radio subsystem, and a user interface, the UE configured to: responsive to an indication from an upper layer of the UE, ("'034 Element 20A")
>
> set a cause in a signaling connection release indication message to UE Requested Packet Switched (PS) Data session end; ("'034 Element 20B")
>
> transmit, to a wireless network on a Dedicated Control Channel (DCCH) using Acknowledged Mode (AM) Radio Link Control (RLC), the signaling connection release indication message including the cause for a network-controlled transition; and ("'034 Element 20C")
>
> receive a state transition message from the wireless network. ("'034 Element 20D")

294. The Accused Standard Compliant Products satisfy '034 Element 20A of claim 20 of the '034 patent, literally or under the doctrine of equivalents, for example, by being configured to operate in accordance with section 8.1 of 3GPP TS 25.331 v8.19.0, including section 8.1.14.

295. The Accused Standard Compliant Products satisfy '034 Element 20B of claim 20 of the '034 patent, literally or under the doctrine of equivalents, for example, by being configured to operate in accordance with section 8.1 of 3GPP TS 25.331 v8.19.0, including section 8.1.14.

296. The Accused Standard Compliant Products satisfy '034 Element 20C of claim 20 of the '034 patent, literally or under the doctrine of equivalents, for example, by being configured to operate in accordance with section 8.1 of 3GPP TS 25.331 v8.19.0, including section 8.1.14.

297. The Accused Standard Compliant Products satisfy '034 Element 20D of claim 20 of the '034 patent, literally or under the doctrine of equivalents, for example, by being configured to operate in accordance with section 8.1 of 3GPP TS 25.331 v8.19.0 (including section 8.1.14), section 8.2 of 3GPP TS 25.331 v8.19.0 (including the figures in 8.2.2 and associated text and section 8.2.2.3), section 8.6.3 of 3GPP TS 25.331 v8.19.0 (including section 8.6.3.3), section 10.2 of 3GPP TS 25.331 v8.19.0 (including section 10.2.30), and section 10.3.3 of 3GPP TS 25.331 v8.19.0 (including section 10.3.3.35a).

298. On or about November 21, 2015, BlackBerry notified BLU that it infringed the '034 patent by providing a list of patents required to practice, *inter alia*, the 2G, 3G, and LTE standards. The notice contained an offer to license the '034 patent on fair, reasonable, and nondiscriminatory terms. BLU became aware of the '034 patent at least as of this notice.

299. On information and belief, BLU also induces infringement of at least claims 1 and 20 of the '034 patent. BLU's Accused Standard Compliant Products as sold are specifically configured to infringe BlackBerry's '034 patent as described above. BLU actively instructs its customers on how to use its products, including through product manuals and advertising. When used as instructed, BLU's customers use its products to practice the methods and use the apparatus of the '034 patent. BLU's customers thereby directly infringe, either literally or under the doctrine of equivalents, the '034 patent. For example, the Accused Standard Compliant Products practice the '034 patent when an end user uses his or her device in an ordinary manner,

such as to transmit or receive data over a 3G communication network. The BLU Vivo XL sales guide, for example, informs and instructs users how to use the phone with a 3G network in an infringing manner. *See, e.g.*, *BLU Vivo XL Sales Guide* 20, Exhibit AD.

300. BLU knew of the '034 patent, or should have known of the '034 patent but was willfully blind to its existence, since at least its incorporation into the 3G standard and its disclosure to 3GPP and ETSI. BLU was made aware of its infringement through a notice letter sent from BlackBerry on November 21, 2015. Additionally, BLU has had actual knowledge of the '034 patent since at least as early as the filing and/or service of this Complaint.

301. As of the date of its earliest awareness of the '034 patent, BLU knew of the '034 patent and knew that its customers' actions taken during the ordinary and intended use of the Accused Standard Compliant Products would constitute infringement of the '034 patent. Alternatively, BLU understood that there is a high probability that its customers would infringe the '034 patent but remained willfully blind to the infringing nature of its customers' actions taken during the ordinary and intended use of the Accused Standard Compliant Products.

302. BLU's infringement of the '034 patent has been and continues to be willful, and BLU's conduct renders this case exceptional under 35 U.S.C. § 285. BlackBerry provided BLU notice on November 21, 2015, identifying the '034 patent and the infringement by BLU's products. Despite this notice, BLU failed to negotiate in good faith and has willfully and deliberately continued infringing the claims of the '034 patent to the present day.

303. Additional allegations regarding BLU's knowledge of the '034 patent and willful infringement likely will have evidentiary support after a reasonable opportunity for discovery.

304. By its actions, BLU has injured BlackBerry and is liable to BlackBerry for infringement of the '034 patent pursuant to 35 U.S.C. § 271.

THIRTEENTH CAUSE OF ACTION
(Infringement of U.S. Patent No. 8,625,506)

305. BlackBerry realleges and incorporates by reference the allegations set forth in the foregoing paragraphs.

306. On information and belief, BLU has directly infringed and is continuing to directly infringe the ’506 patent, either literally or under the doctrine of equivalents, by making, using, selling, offering for sale, marketing, and/or importing in the United States and in this Judicial District, products, software, and/or services that incorporate or make use of one or more of the inventions covered by the ’506 patent, including but not limited to products or software supporting the LTE standard, including 3GPP TS 24.301 (v8.10.0 and subsequent releases and versions) and TS 36.300 (v8.12.0 and subsequent releases and versions). The Accused Standard Compliant Products therefore infringe at least claims 1 and 9 of the ’506 patent.

307. For example, on information and belief, the BLU Vivo XL contains the features and functionality designed and used to comply with the LTE standard.

See, e.g., *BLU Vivo XL Sales Guide* 20, Exhibit AD.

308. On information and belief, by complying with the LTE standard and 3GPP TS 24.301 (v8.10.0 and subsequent releases and versions) and TS 36.300 (v8.12.0 and subsequent

releases and versions), the Accused LTE Products, including the BLU Vivo XL, satisfy each and every element of one or more of the claims '506 patent, including without limitation, claims 1 and 9.

309. Claim 1 of the '506 patent recites:

> A user agent equipment for operation in an evolved packet system (EPS), the user agent equipment comprising: ("'506 Preamble 1")
>
> a non-access stratum (NAS) protocol layer configured to generate a NAS service request message comprising an EXTENDED SERVICE REQUEST and identifying a service type related to circuit-switched (CS) fallback; and ("'506 Element 1A")
>
> an access stratum (AS) protocol layer configured to set a radio resource control (RRC) establishment cause (EC) of an RRC CONNECTION REQUEST message, the EC based upon the service type related to CS fallback identified by the NAS service request message, ("'506 Element 1B")
>
> wherein when the service type is "mobile originating (MO) CS fallback", the RRC EC is set to "MO data". ("'506 Element 1C")

310. To the extent the preamble is considered a limitation, the Accused LTE Products satisfy the '506 Preamble 1 of claim 1 the '506 patent, literally or under the doctrine of equivalents, for example, by being configured to operate in accordance with section 1 of 3GPP TS 24.301 v8.10.0.

311. The Accused LTE Products satisfy '506 Element 1A of claim 1 of the '506 patent, literally or under the doctrine of equivalents, for example, by being configured to operate in accordance with section 4.3 of 3GPP TS 36.300 v8.12.0 (including section 4.3.2), section 1 of 3GPP TS 24.301 v8.10.0, section 5.3 of 3GPP TS 24.301 v8.10.0 (including section 5.3.1), section 8.2.15 of 3GPP TS 24.301 v8.10.0, and section 9.9.3.27 of 3GPP TS 24.301 v8.10.0.

312. The Accused LTE Products satisfy '506 Element 1B of claim 1 of the '506 patent, literally or under the doctrine of equivalents, for example, by being configured to operate in accordance with section 4.3 of 3GPP TS 36.300 v8.12.0 (including section 4.3.2), Annex D of

3GPP TS 24.301 v8.10.0 (including section D.1), and section 5.3.3 of 3GPP TS 36.331 v8.16.0 (including section 5.3.3).

313. The Accused LTE Products satisfy '506 Element 1C of claim 1 of the '506 patent, literally or under the doctrine of equivalents, for example, by being configured to operate in accordance with Annex D of 3GPP TS 24.301 v8.10.0, including section D.1.

314. Claim 9 of the '506 patent recites:

A method in an evolved packet system (EPS), comprising: ("'506 Preamble 9")

generating, in a non-access stratum (NAS) protocol layer, a NAS service request message comprising an EXTENDED SERVICE REQUEST and identifying a service type related to circuit-switched (CS) fallback; and ("'506 Element 9A")

setting, in an access stratum (AS) protocol layer, a radio resource control (RRC) establishment cause (EC) of an RRC CONNECTION REQUEST message, the EC based upon the service type related to CS fallback identified by the NAS service request message, ("'506 Element 9B")

wherein when a service type of "mobile originating (MO) CS fallback" is generated, setting the RRC EC to "MO data". ("'506 Element 9C")

315. To the extent the preamble is considered a limitation, the Accused LTE Products satisfy the '506 Preamble 9 of claim 9 the '506 patent, literally or under the doctrine of equivalents, for example, by operating in accordance with section 1 of 3GPP TS 24.301 v8.10.0.

316. The Accused LTE Products satisfy '506 Element 9A of claim 9 of the '506 patent, literally or under the doctrine of equivalents, for example, by operating in accordance with section 4.3 of 3GPP TS 36.300 v8.12.0 (including section 4.3.2), section 1 of 3GPP TS 24.301 v8.10.0, section 5.3 of 3GPP TS 24.301 v8.10.0 (including section 5.3.1), section 8.2.15 of 3GPP TS 24.301 v8.10.0, and section 9.9.3.27 of 3GPP TS 24.301 v8.10.0.

317. The Accused LTE Products satisfy '506 Element 9B of claim 9 of the '506 patent, literally or under the doctrine of equivalents, for example, by operating in accordance with

section 4.3 of 3GPP TS 36.300 v8.12.0 (including section 4.3.2), Annex D of 3GPP TS 24.301 v8.10.0 (including section D.1), and section 5.3.3 of 3GPP TS 36.331 v8.16.0 (including section 5.3.3).

318. The Accused LTE Products satisfy '506 Element 9C of claim 9 of the '506 patent, literally or under the doctrine of equivalents, for example, by operating in accordance with Annex D of 3GPP TS 24.301 v8.10.0, including section D.1.

319. On or about November 21, 2015, BlackBerry notified BLU that it infringed the '506 patent by providing a list of patents required to practice, *inter alia*, the 2G, 3G, and LTE standards. The notice contained an offer to license the '506 patent on fair, reasonable, and nondiscriminatory terms.

320. On information and belief, BLU also induces infringement of at least claims 1 and 9 of the '506 patent. BLU's Accused Standard Compliant Products as sold are specifically configured to infringe BlackBerry's '506 patent as described above. BLU actively instructs its customers on how to use its products, including through product manuals and advertising. When used as instructed, BLU's customers use its products to practice the methods and use the apparatus of the '506 patent. BLU's customers thereby directly infringe, either literally or under the doctrine of equivalents, the '506 patent. For example, the Accused Standard Compliant Products practice the '506 patent when an end user uses his or her device in an ordinary manner, such as to transmit or receive data over a LTE communication network. The BLU Vivo XL sales guide, for example, informs and instructs users how to use the phone with a LTE network in an infringing manner. *See, e.g., BLU Vivo XL Sales Guide* 20, Exhibit AD.

321. BLU knew of the '506 patent, or should have known of the '506 patent but was willfully blind to its existence, since at least its incorporation into the LTE standard and its

disclosure to 3GPP and ETSI. BLU was made aware of its infringement through a notice letter sent from BlackBerry on November 21, 2015. Additionally, BLU has had actual knowledge of the '506 patent since at least as early as the filing and/or service of this Complaint.

322. As of the date of its earliest awareness of the '506 patent, BLU knew of the '506 patent and knew that its customers' actions taken during the ordinary and intended use of the Accused LTE Products would constitute infringement of the '506 patent. Alternatively, BLU understood that there is a high probability that its customers would infringe the '506 patent but remained willfully blind to the infringing nature of its customers' actions taken during the ordinary and intended use of the Accused LTE Products.

323. BLU's infringement of the '506 patent has been and continues to be willful, and BLU's conduct renders this case exceptional under 35 U.S.C. § 285. BlackBerry provided BLU notice on November 21, 2015, identifying the '506 patent and the infringement by BLU's products. Despite this notice, BLU failed to negotiate in good faith and has willfully and deliberately continued infringing the claims of the '506 patent to the present day.

324. By its actions, BLU has injured BlackBerry and is liable to BlackBerry for infringement of the '506 patent pursuant to 35 U.S.C. § 271.

FOURTEENTH CAUSE OF ACTION
(Infringement of U.S. Patent No. 7,933,355)

325. BlackBerry realleges and incorporates by reference the allegations set forth in the foregoing paragraphs.

326. On information and belief, BLU has directly infringed and is continuing to directly infringe the '355 patent, either literally or under the doctrine of equivalents, by making, using, selling, offering for sale, marketing, and/or importing in the United States and in this Judicial District, products, software, and/or services that incorporate or make use of one or more

of the inventions covered by the ’355 patent, including but not limited to products or software supporting the 2G standard, including 3GPP TS 44.018 (v9.9.0 and subsequent releases and versions), TS 45.001 (v.9.3.0 and subsequent releases and versions), and TS 45.002 (v9.5.0 and subsequent releases and versions) (collectively the “Accused ’355 Technical Specifications”). The Accused Standard Compliant Products therefore infringe at least claim 1 of the ’355 patent.

327. For example, on information and belief, the BLU Vivo XL contains the features and functionality designed and used to comply with the 2G standard.

328. On information and belief, the Accused Standard Compliant Products, including the BLU Vivo XL, comply with the Accused ’355 Technical Specifications when implementing the 2G standard.

329. On information and belief, by complying with the 2G standard and the Accused ’355 Technical Specifications, the Accused Standard Compliant Products, including the BLU Vivo XL, satisfy each and every element of one or more of the claims ’355 patent, including without limitation, claim 1.

330. Claim 1 of the ’355 patent recites:

A device comprising: a training sequence repository containing at least one training sequence from a set of training sequences consisting of:

Training Sequence
0 1 1 0 0 0 1 0 0 0 1 0 0 1 0 0 1 1 1 1 0 1 0 1 1 1
0 1 0 1 1 1 1 0 1 0 0 1 1 0 1 1 1 0 1 1 1 0 0 0 0 1
0 1 0 0 0 0 0 1 0 1 1 0 0 0 1 1 1 0 1 1 1 0 1 1 0 0
0 0 1 0 1 1 0 1 1 1 0 1 1 1 0 0 1 1 1 1 0 1 0 0 0 0
0 1 1 1 0 1 0 0 1 1 1 1 0 1 0 0 1 1 1 0 1 1 1 1 1 0
0 1 0 0 0 0 0 1 0 0 1 1 0 1 0 1 0 0 1 1 1 1 0 0 1 1
0 0 0 1 0 0 0 0 1 1 0 1 0 0 0 0 1 1 0 1 1 1 0 1 0 1
0 1 0 0 0 1 0 1 1 1 0 0 1 1 1 1 1 1 0 0 1 0 1 0 0 1

and; (“’355 Element 1A”)

a transmitter configured to transmit the at least one training sequence. (“’355 Element 1B”)

331. The Accused Standard Compliant Products satisfy '355 Element 1A of claim 1 of the '355 patent, literally or under the doctrine of equivalents, for example, by being configured to operate in accordance with section 13 of 3GPP TS 45.001 v9.3.0 and section 5.2 of 3GPP TS 45.002 v9.5.0, including section 5.2.3.

332. The Accused Standard Compliant Products satisfy '355 Element 1B of claim 1 of the '355 patent, literally or under the doctrine of equivalents, for example, by being configured to operate in accordance with section 13 of 3GPP TS 45.001 v9.3.0, section 5.2 of 3GPP TS 45.002 v9.5.0 (including section 5.2.3), section 9.1 of 3GPP TS 44.018 v9.9.0 (including section 9.1.18), and section 10.5.2 of 3GPP TS 44.018 v9.9.0 (including section 10.5.2.5).

333. On or about November 21, 2015, BlackBerry notified BLU that it infringed the '355 patent by providing a list of patents required to practice, *inter alia*, the 2G, 3G, and LTE standards. The notice contained an offer to license the '355 patent on fair, reasonable, and nondiscriminatory terms. BLU became aware of the '355 patent at least as of this notice.

334. On information and belief, BLU also induces infringement of at least claim 1 of the '355 patent. BLU's Accused Standard Compliant Products as sold are specifically configured to infringe BlackBerry's '355 patent as described above. BLU actively instructs its customers on how to use its products, including through product manuals and advertising. When used as instructed, BLU's customers use its products to practice the methods and use the apparatus of the '355 patent. BLU's customers thereby directly infringe, either literally or under the doctrine of equivalents, the '355 patent. For example, the Accused Standard Compliant Products practice the '355 patent when an end user uses his or her device in an ordinary manner, such as to transmit or receive data over a 2G communication network. On information and

belief, BLU informs and instructs its customers and users how to use the phone with a 2G network in an infringing manner. *See, e.g.*, *BLU Vivo XL Sales Guide* 20, Exhibit AD.

335. BLU knew of the ’355 patent, or should have known of the ’355 patent but was willfully blind to its existence, since at least its incorporation into the 2G standard and its disclosure to 3GPP and ETSI. BLU was made aware of its infringement through a notice letter sent from BlackBerry on November 21, 2015. Additionally, BLU has had actual knowledge of the ’355 patent since at least as early as the filing and/or service of this Complaint.

336. As of the date of its earliest awareness of the ’355 patent, BLU knew of the ’355 patent and knew that its customers’ actions taken during the ordinary and intended use of the Accused Standard Compliant Products would constitute infringement of the ’355 patent. Alternatively, BLU understood that there is a high probability that its customers would infringe the ’355 patent but remained willfully blind to the infringing nature of its customers’ actions taken during the ordinary and intended use of the Accused Standard Compliant Products.

337. BLU’s infringement of the ’355 patent has been and continues to be willful, and BLU’s conduct renders this case exceptional under 35 U.S.C. § 285. BlackBerry provided BLU notice on November 21, 2015, identifying the ’355 patent and the infringement by BLU’s products. Despite this notice, BLU failed to negotiate in good faith and has willfully and deliberately continued infringing the claims of the ’355 patent to the present day.

338. Additional allegations regarding BLU’s knowledge of the ’355 patent and willful infringement likely will have evidentiary support after a reasonable opportunity for discovery.

339. By its actions, BLU has injured BlackBerry and is liable to BlackBerry for infringement of the ’355 patent pursuant to 35 U.S.C. § 271.

FIFTEENTH CAUSE OF ACTION
(Infringement of U.S. Patent No. 7,050,413)

340. BlackBerry realleges and incorporates by reference the allegations set forth in the foregoing paragraphs.

341. On information and belief, BLU has directly infringed and is continuing to directly infringe the ’413 patent, either literally or under the doctrine of equivalents, by making, using, selling, offering for sale, marketing, and/or importing in the United States and in this Judicial District, products, software, and/or services that incorporate or make use of one or more of the inventions covered by the ’413 patent, including but not limited to products or software supporting the 3G standard, including 3GPP TS 25.211 (v6.10.0 and subsequent releases and versions), TS 25.212 (v6.10.0 and subsequent releases and versions), TS 25.321 (v6.18.0 and subsequent releases and versions), and TS 25.214 (v6.11.0. and subsequent releases and versions) (collectively the “Accused ’413 Technical Specifications”). The Accused Standard Compliant Products therefore infringe at least claims 1 and 4 of the ’413 patent.

342. For example, on information and belief, the BLU Vivo XL contains the features and functionality designed and used to comply with the 3G standard.

See, e.g., BLU Vivo XL Sales Guide 20, Exhibit AD.

343. On information and belief, by complying with the 3G standard and Accused ’413 Technical Specifications, the Accused Standard Compliant Products, including the BLU Vivo

XL, satisfy each and every element of one or more of the claims ’413 patent, including without limitation, claims 1 and 4.

344. Claim 1 of the ’413 patent recites:

> A mobile station configured to perform code division multiple access communication using a plurality of channelization codes, comprising: (“’413 Preamble 1”)
>
> a receiver configured to receive a number of the channelization codes assigned to the mobile station, a modulation scheme for use in the code division multiple access, and an identification code corresponding to a transport block set size; and (“’413 Element 1A”)
>
> an identifier configured to identify the transport block set size based on the number of the channelization codes, the modulation scheme for use in the code division multiple access, and the identification code corresponding to the transport block set size, which are received. (“’413 Element 1B”)

345. To the extent the preamble is considered a limitation, the Accused Standard Compliant Products satisfy the ’413 Preamble 1 of claim 1 the ’413 patent, literally or under the doctrine of equivalents, for example, by being configured to operate in accordance with section 5.3.3 of 3GPP TS 25.211 v6.10.0, including section 5.3.3.13.

346. The Accused Standard Compliant Products satisfy ’413 Element 1A of claim 1 of the ’413 patent, literally or under the doctrine of equivalents, for example, by being configured to operate in accordance with section 6A of 3GPP TS 25.214 v6.11.0, including section 6A.1, and section 4.6 of 3GPP TS 25.212 v6.10.0, including section 4.6.2.

347. The Accused Standard Compliant Products satisfy ’413 Element 1B of claim 1 of the ’413 patent, literally or under the doctrine of equivalents, for example, by being configured to operate in accordance with section 8 of 3GPP TS 25.321 v6.18.0 (including section 8.1), section 9.2 of 3GPP TS 25.321 v6.18.0 (including section 9.2.3), and section 6A of 3GPP TS 25.214 v6.11.0 (including section 6A.1).

348. Claim 4 of the ’413 patent recites:

> An information communication method for performing code division multiple access communication between a base station and mobile stations using a plurality of channelization codes, comprising the steps of: ("'413 Preamble 4")
>
> receiving a number of the channelization codes assigned to a mobile station, a modulation scheme for use in the code division multiple access, and an identification code corresponding to a transport block set size; ("'413 Element 4A")
>
> and identifying the transport block set size based on the number of the channelization codes, the modulation scheme for use in the code division multiple access, and the identification code corresponding to the transport block set size. ("'413 Element 4B")

349. To the extent the preamble is considered a limitation, the Accused Standard Compliant Products satisfy the '413 Preamble 4 of claim 4 the '413 patent, literally or under the doctrine of equivalents, for example, by operating in accordance with section 5.3.3 of 3GPP TS 25.211 v6.10.0, including section 5.3.3.13.

350. The Accused Standard Compliant Products satisfy '413 Element 4A of claim 4 of the '413 patent, literally or under the doctrine of equivalents, for example, by operating in accordance with section 6A of 3GPP TS 25.214 v6.11.0, including section 6A.1, and section 4.6 of 3GPP TS 25.212 v6.10.0, including section 4.6.2.

351. The Accused Standard Compliant Products satisfy '413 Element 4B of claim 4 of the '413 patent, literally or under the doctrine of equivalents, for example, by operating in accordance with section 8 of 3GPP TS 25.321 v6.18.0 (including section 8.1), section 9.2 of 3GPP TS 25.321 v6.18.0 (including section 9.2.3), and section 6A of 3GPP TS 25.214 v6.11.0 (including section 6A.1).

352. On or about November 21, 2015, BlackBerry notified BLU that it infringed the '413 patent by providing a list of patents required to practice, *inter alia*, the 2G, 3G, and LTE

standards. The notice contained an offer to license the '413 patent on fair, reasonable, and nondiscriminatory terms.

353. On information and belief, BLU also induces infringement of at least claims 1 and 4 of the '413 patent. BLU's Accused Standard Compliant Products as sold are specifically configured to infringe BlackBerry's '413 patent as described above. BLU actively instructs its customers on how to use its products, including through product manuals and advertising. When used as instructed, BLU's customers use its products to practice the methods and use the apparatus of the '413 patent. BLU's customers thereby directly infringe, either literally or under the doctrine of equivalents, the '413 patent. For example, the Accused Standard Compliant Products practice the '413 patent when an end user uses his or her device in an ordinary manner, such as to transmit or receive data over a 3G communication network. The BLU Vivo XL sales guide, for example, informs and instructs users how to use the phone with a 3G network in an infringing manner. *See, e.g.*, *BLU Vivo XL Sales Guide* 20, Exhibit AD.

354. BLU knew of the '413 patent, or should have known of the '413 patent but was willfully blind to its existence, since at least its incorporation into the 3G standard and its disclosure to 3GPP and ETSI. BLU was made aware of its infringement through a notice letter sent from BlackBerry on November 21, 2015. Additionally, BLU has had actual knowledge of the '413 patent since at least as early as the filing and/or service of this Complaint.

355. As of the date of its earliest awareness of the '413 patent, BLU knew of the '413 patent and knew that its customers' actions taken during the ordinary and intended use of the Accused Standard Compliant Products would constitute infringement of the '413 patent. Alternatively, BLU understood that there is a high probability that its customers would infringe

the ’413 patent but remained willfully blind to the infringing nature of its customers’ actions taken during the ordinary and intended use of the Accused Standard Compliant Products.

356. BLU’s infringement of the ’413 patent has been and continues to be willful, and BLU’s conduct renders this case exceptional under 35 U.S.C. § 285. BlackBerry provided BLU notice on November 21, 2015, identifying the ’413 patent and the infringement by BLU’s products. Despite this notice, BLU failed to negotiate in good faith and has willfully and deliberately continued infringing the claims of the ’413 patent to the present day.

357. By its actions, BLU has injured BlackBerry and is liable to BlackBerry for infringement of the ’413 patent pursuant to 35 U.S.C. § 271.

PRAYER FOR RELIEF

WHEREFORE, BlackBerry prays that this Court enter judgment against BLU as follows:

A. Adjudge and decree that BLU has infringed each of the patents asserted herein;

B. Adjudge and decree that BLU’s infringement of each of the ’924, ’060, ’118, ’567, ’034, ’506, ’355, and ’413 patents has been willful;

C. Adjudge and decree that each of the patents asserted herein is valid and enforceable;

D. Award to BlackBerry damages adequate to compensate BlackBerry for the patent infringement that has occurred, together with interest and costs;

E. Award to BlackBerry an ongoing royalty for BLU’s post-verdict infringement, payable on each product or service offered by BLU that is found to infringe one or more of the patents asserted herein, and on all future products and services that are not colorably different from those found to infringe;

F. Award to BlackBerry all other damages permitted by 35 U.S.C. § 284, including increased damages up to three times the amount of compensatory damages;

G. Permanently enjoin BLU, its officers, agents, servants, employees, attorneys, all parent and subsidiary corporations and affiliates, its assigns and successors in interest, and those persons in active concert or participation with BLU who receive notice of the injunction, from continuing acts of infringement of any of the ’868, ’466, ’384, ’845, ’605, ’149, and ’449 patents;

H. Find that this is an exceptional case and award to BlackBerry its costs and reasonable attorneys’ fees incurred in this action as provided by 35 U.S.C. § 285; and

I. Award to BlackBerry such other and further relief, including other monetary and equitable relief, as this Court deems just and proper.

DEMAND FOR JURY TRIAL

Pursuant to Fed. R. Civ. P. 38(b), BlackBerry demands a trial by jury on all claims and issues so triable.

Dated: September 12, 2016

By: /s/ Marcos Daniel Jiménez

Marcos Daniel Jiménez (FBN 441503)
mjimenez@mwe.com
McDERMOTT WILL & EMERY LLP
333 SE 2nd Avenue, Suite 4500
Miami, Florida 33131
Telephone: 1 305 358 3500
Facsimile: 1 305 347 6500

Scott R. Lassar (admitted *pro hac vice*)
slassar@sidley.com
David T. Pritikin (admitted *pro hac vice*)
dpritikin@sidley.com
Douglas I. Lewis (admitted *pro hac vice*)
dilewis@sidley.com
SIDLEY AUSTIN LLP
One South Dearborn
Chicago, Illinois 60603
Telephone: 1 312 853 7000
Facsimile: 1 312 853 7036

Ching-Lee Fukuda (admitted *pro hac vice*)
clfukuda@sidley.com
SIDLEY AUSTIN LLP
787 Seventh Avenue
New York, New York 10019
Telephone: 1 212 839 5300
Facsimile: 1 212 839 5599

Thomas N. Tarnay (admitted *pro hac vice*)
ttarnay@sidley.com
SIDLEY AUSTIN LLP
2001 Ross Avenue, Suite 3600
Dallas, Texas 75201
Telephone: 1 214 981 3300
Facsimile: 1 214 981 3400

Attorneys for Plaintiff BlackBerry Limited