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

MOBILE TELECOMMUNICATIONS TECHNOLOGIES, LLC, Plaintiff, v. GOOGLE INC., Defendant.	§ § § § § § § § §	Civil Action No. 2:16-cv-0002-JRG-RSP LEAD CASE JURY TRIAL REQUESTED

MOBILE TELECOMMUNICATIONS TECHNOLOGIES, LLC, Plaintiff, v. MICROSOFT CORPORATION, Defendant.	§ § § § § § § § §	Civil Action No. 2:15-cv-2122-JRG-RSP JURY TRIAL REQUESTED

PLAINTIFF'S THIRD AMENDED COMPLAINT
AGAINST MICROSOFT CORPORATION

Plaintiff Mobile Telecommunications Technologies, LLC ("MTel" or "Plaintiff") files this Amended Complaint against Microsoft Corporation ("Microsoft") for infringement of U.S. Patent Nos. 5,809,428 (the "'428 Patent"), 5,754,946 (the "'946 Patent"), 5,581,804 (the "'804 Patent"), 5,894,506 (the "'506 Patent"), 5,590,403 (the "'403 Patent"), 5,915,210 (the '210 Patent"), and 5,659,891 (the "'891 Patent") (together the "Patents-in-Suit") pursuant to 35 U.S.C. § 271 and alleges as follows.

THE PARTIES

1. Plaintiff MTel is a Delaware limited liability company with its principal place of business at 1720 Lakepointe Drive, Suite 100, Lewisville, Texas 75057.

2. MTel is a wholly owned subsidiary of United Wireless Holdings, Inc. ("United Wireless"), which is a Delaware corporation formed on June 11, 2007. In 2008, United Wireless, through another of its wholly owned subsidiaries, Velocita Wireless, LLC, purchased the SkyTel wireless network, including assets related to SkyTel's more than twenty-year history as a wireless data company. Velocita Wireless, LLC, continued to operate the SkyTel wireless data network after the acquisition. As a result of that transaction, United Wireless gained ownership and control over the business, operations and intellectual property portfolio, including patents developed by the SkyTel-related entities, including Mobile Telecommunication Technologies Corp. (together with its affiliated entities, "MTel Corp."). United Wireless subsequently assigned certain patent assets, including the Patents-in-Suit, together with all rights of recovery related to those patents, to its wholly owned subsidiary, MTel, which is the licensing division of United Wireless and the plaintiff here.

3. MTel Corp. was a pioneer of two-way wireless data communications and in 1995 launched the first nationwide two-way wireless data messaging service, dubbed SkyTel 2-Way. Prior to that launch, in 1993, MTel Corp. received a Pioneer Preference award from the Federal Communications Commission for technological achievement in developing its wireless data network.

4. Upon information and belief, Microsoft Corporation is a Washington corporation which has a regular and established place of business in Texas. Microsoft may be served with process through its registered agent, Corporation Service Company, 211 East 7th Street, Suite 620, Austin, Texas 78701.

5. On information and belief, following the FCC's grant of a Pioneer Preference to MTel Corp, Microsoft and its founders, Bill Gates and Paul Allen, were strategic investors in the

SkyTel 2-Way network, investing tens of millions of dollars in MTel Corp. in 1994 for a reported 8.5% stake in the company. On March 4, 1997, the Wall Street Journal reported that "Microsoft still is high on the potential of two-way pagers as transmitters of e-mail, news and sports. 'MTel is a company with innovative technology. They'll continue to be innovative until they get it right,' says Microsoft's treasurer, Gregory Maffei, an MTel director. He won't say if Microsoft—which owns $25 million of MTel notes as well as 3.2 million shares—would kick in more money. He couldn't confirm if Mr. Gates still owns MTel shares."[1] Because of its extensive investment and its access to information as a result of its seat on MTel's Corp.'s Board of Directors, Microsoft was keenly aware of MTel's operations and technology development, including its patented technologies that are issue in this case.

JURISDICTION AND VENUE

6. This action arises under the patent laws of the United States, Title 35 of the United States Code. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§1331 and 1338(a).

7. Venue lies in this judicial district pursuant to 28 U.S.C. §§1391(b)-(d) and 1400(b). Defendant has transacted business in this district and on information and belief has committed acts of infringement in this District. This Court has personal jurisdiction over Microsoft under the laws of the State of Texas, including the Texas long-arm statute, TEX. CIV. PRAC. & REM. CODE §17.042. Microsoft maintains consumer retail locations and corporate offices in Texas. Microsoft filed a declaratory patent lawsuit in this District captioned *Microsoft Corporation v. Charles E. Hill & Associates, Inc.*, No. 2:07-cv-478 (DF) (United States District Court for the Eastern District of Texas, Marshall Division). MTel's claims against Microsoft in

[1] Heard on the Street, WSJ, available as http://www.wsj.com/articles/SB857424126788098500 (last viewed Dec. 22, 2015). A copy is attached at Exhibit J.

this Complaint arise from or are connected with acts purposefully committed by Microsoft in Texas. Microsoft has conducted and continues to conduct business within the State of Texas, directly or through intermediaries or agents, or offers for sale, sells, or advertises (including through the provision of messaging services and interactive web pages) products or services, or uses or induces others to use products or services in Texas that infringe the Patents-in-Suit or knowingly contributes to infringement of the Patents-in-Suit. Thus, venue lies in this judicial district.

THE PATENTS-IN-SUIT & FACTUAL BACKGROUND

8. On Tuesday, September 15, 1998, the United States Patent and Trademark ("USPTO") duly and legally issued United States Patent No. 5,809,428, ("the '428 Patent") titled "Method and Device for Processing Undelivered Data Messages in a Two-Way Wireless Communications System," after a full and fair examination. A true and correct copy of the '428 Patent is attached hereto as Exhibit A. Plaintiff is the assignee of all right, title, and interest in and to the '428 Patent and possesses the exclusive right of recovery under the '428 Patent, including the exclusive right to recover for past and future infringement of the '428 Patent. The '428 Patent is valid and enforceable.

9. The '428 Patent was found valid and infringed at trial against Apple Inc. in this District.[2]

10. The '428 Patent describes and claims, among other things, methods, systems, and devices for determining whether mobile devices are receiving messages and marking and storing undeliverable messages, such as e-mail messages.

11. The '428 Patent was filed on July 25, 1996 and has a priority date at least as early as July 25, 1996.

[2] Case 2:13-cv-00258-RSP (D.I. 65 Verdict Form) 11/17/14 (Exhibit E).

12. On Tuesday, May 19, 1998, the USPTO duly and legally issued United States Patent No. 5,754,946 titled "Nationwide Communication System," after a full and fair examination. A true and correct copy of the '946 Patent is attached hereto as Exhibit B. Plaintiff is the assignee of all right, title and interest in and to the '946 Patent and possesses the exclusive right of recovery under the '946 Patent, including the exclusive right to recover for past and future infringement of the '946 Patent.

13. The '946 Patent describes and claims, among other things, devices and networks that provide for the transmission of unreceived portions of a message.

14. The '946 Patent is valid and enforceable. The '946 Patent was found valid and infringed at trial against Apple Inc. in this District.[3]

15. The '946 Patent was filed on September 21, 1993 and has a priority date at least as early as November 12, 1992.

16. On Tuesday, December 3, 1996, the USPTO duly and legally issued United States Patent No. 5,581,804 titled "Nationwide Communications System," after a full and fair examination. A true and correct copy of the '804 Patent is attached hereto as Exhibit C. Plaintiff is the assignee of all right, title and interest in and to the '804 Patent, including the exclusive right to recover for past and future infringement of the '804 Patent. The '804 Patent is valid and enforceable.

17. The '804 Patent discloses and claims, *inter alia*, methods and systems for providing two-way communication of messages between a central network and a mobile unit over a relatively large area, and more particularly to such methods and systems for communicating messages which allow for rapid communication of large messages and efficient use of system resources.

[3] Case 2:13-cv-00258-RSP (D.I. 65 Verdict Form) 11/17/14 (Exhibit E).

18. The '804 Patent was filed on February 13, 1995 and has a priority date at least as early as November 12, 1992.

19. On Tuesday, April 13, 1999, the USPTO duly and legally issued United States Patent No. 5,894,506 titled "Method and Apparatus for Generating and Communicating Messages Between Subscribers to an Electronic Messaging Network," after a full and fair examination. A true and correct copy of the '506 Patent is attached hereto as Exhibit D. Plaintiff is the assignee of all right, title and interest in and to the '506 Patent, including the exclusive right to recover for past and future infringement of the '506 Patent. The '506 Patent is valid and enforceable.

20. The '506 Patent was found valid at trial against Apple Inc. in this District.[4]

21. The '506 Patent discloses and claims, *inter alia*, an electronic messaging network comprising a network operations center and message terminals, including memory for storing corresponding files of canned messages, also referred to herein as templated messages, and associated message codes, which improves message compression and conserves communications link capacity.

22. The '506 Patent was filed on September 5, 1996 and has a priority date at least as early as the first quarter of 1995.

23. On December 31, 1996, the USPTO duly and legally issued United States Patent No. 5,590,403, titled "Method and System for Efficiently Providing Two Way Communication Between a Central Network and Mobile Unit," after a full and fair examination. A true and correct copy of the '403 Patent is attached hereto as Exhibit F. MTel is the assignee of all right, title and interest in and to the '403 Patent and possesses the exclusive right of recovery under the

[4] Case 2:13-cv-00258-RSP (D.I. 65 Verdict Form) 11/17/14 (Exhibit E).

'403 Patent, including the exclusive right to recover for past and future infringement of the '403 Patent. The '403 Patent is valid and enforceable.

24. The '403 Patent discloses and claims, *inter alia*, a two-way communications system for communication between a system network and a mobile unit.

25. The '403 Patent was filed on November 12, 1992 and has a priority date at least as early as November 12, 1992.

26. On August 19, 1997, the USPTO duly and legally issued United States Patent No. 5,659,891, titled "Multicarrier Techniques in Bandlimited Channels," after a full and fair examination. A true and correct copy of the '891 Patent is attached hereto as Exhibit G. MTel is the assignee of all right, title and interest in and to the '891 Patent and possesses the exclusive right of recovery under the '891 Patent, including the exclusive right to recover for past and future infringement of the '891 Patent. The '891 Patent is valid and enforceable.

27. The '891 Patent discloses and claims, *inter alia*, using co-located transmitters to achieve higher transmission capacity for two-way digital communications.

28. The '891 Patent was filed on June 7, 1995 and has a priority date at least as early as June 7, 1995.

29. On June 22, 1999, the USPTO duly and legally issued United States Patent No. 5,915,210, titled "Method and System for Providing Multicarrier Simulcast Transmission," after a full and fair examination. A true and correct copy of the '210 Patent is attached hereto as Exhibit H. MTel is the assignee of all right, title and interest in and to the '210 Patent and possesses the exclusive right of recovery under the '210 Patent, including the exclusive right to recover for past and future infringement of the '210 Patent. The '210 Patent is valid and enforceable.

30. The '210 Patent discloses and claims, *inter alia*, a multi-carrier simulcast transmission system for transmitting in a desired frequency band.

31. The '210 Patent was filed on July 24, 1997 and has a priority date at least as early as November 12, 1992.

32. On information and belief, Microsoft was an investor in MTel Corp.

33. On information and belief, Bill Gates, a founder of Microsoft, was an investor in MTel Corp. or a subsidiary of MTel Corp.

34. On information and belief, Paul Allen, a founder of Microsoft, was an investor in MTel Corp. or a subsidiary of MTel Corp.

35. On March 23, 1994, Microsoft Corporation ("Microsoft") and Nationwide Wireless Network Corp. ("NWN") entered into a technology development and marketing agreement (the "Technology Agreement").

36. The Technology Agreement was signed by Microsoft's treasurer, Mike Brown.

37. Section 1.20 of the Technology Agreement includes a definition of "Technology Information" as follows:

> 'Technology Information' shall mean all information exchanged by the parties pursuant to this Agreement, which information is used by the receiving party in developing its products or technologies as described in this Agreement or is reasonably necessary to enable the receiving party to develop and deploy/market the same. However, Technology Information shall not include source or object code for software except where expressly agreed by the providing party.

38. Section 4.1 of the Technology Agreement provided for the exchange of Technology Information as follows:

> 4.1 Information Exchange. Microsoft and [NWN] shall exchange such information as shall be reasonably necessary to allow each of the parties to perform its obligations under this Agreement, including, but not limited to:

> (a) Technology Information that is necessary or appropriate to achieve in a timely manner the development and deployment of the technology in accordance with Article II.
>
> (b) Technology Information that is necessary or appropriate to assure that Pulsar Devices and NWN-enabled Microsoft Software will be capable of sending and receiving information and data through the NWN System.
>
> (c) Technology Information that is necessary or appropriate to the extent necessary to allow third parties to develop hardware or complementary software capable of sending and receiving information and data through the NWN System and/or the Pulsar Subsystem.
>
> The use or disclosure of such Technology Information shall be subject to Section 4.2.

39. Section 1.15 of the Technology Agreement includes a definition of Pulsar Device as follows:

> 'Pulsar Device' shall mean a product which is a combination of hardware and Pulsar Software that, when used in conjunction with a wireless network, enables two-way narrowband PCS data communications through the use of wireless network capability in the spectrum allocated to such services by FCC Order No. 93-329.

40. Section 1.16 of the Technology Agreement includes a definition of Pulsar Software as follows:

> 'Pulsar Software' shall mean the Microsoft Software designed for Pulsar Devices, which software is preliminarily described in Exhibit A, and any future updates, enhancements, error corrections, and new versions thereof released by Microsoft.

41. Section 1.17 of the Technology Agreement includes a definition of Pulsar Subsystem as follows:

> 'Pulsar Subsystem' shall mean the server and related equipment for Pulsar Devices (and for the provision of services to end users of Pulsar Devices), which may or may not by co-located with the NOC and which will be designed by or for Microsoft.

42. Exhibit A to the Technology Agreement includes a description of Pulsar Software as follows:

> Pulsar Software is the operating system and bundled applications for Pulsar Devices (i.e. two-way, wireless communications devices). It is distinguished from other Microsoft operating systems and competing operating systems by several characteristics and technologies:
>
> It is built on the MMOSA kernel, and contains a small object store, two dimensional GDI, and a transport protocol to drive RF communications.
>
> It includes independent event analysis, a reality augmenting metaphor, and a wireless information service environment.
>
> Pulsar Software may include either handwriting recognition or voice recognition or both.

43. Section 1.8 of the Technology Agreement includes a definition of Microsoft Software as follows:

> 'Microsoft Software' shall mean the SDKs, applications and operating systems, including but not limited to, WinPad and Mobile Windows, developed and owned by Microsoft.

44. Section 1.11 of the Technology Agreement includes a definition of NWN Software as follows:

> 'NWN Software' shall mean the collection of systems or application software developed for operation of the NWN System.

45. Section 1.13 of the Technology Agreement includes a definition of NWN System as follows:

> 'NWN System' shall mean the wireless communications network which shall include, among other things, base station transmitters and receivers, the NOC, controllers, enabling software and related message distribution facilities and arrangements which enable the Corporation [(Nationwide Wireless Network Corp.)] to distribute data wirelessly to/from wireless or wireline termination/origination points.

46. Section 4.2(b) of the Technology Agreement is titled "License of Technology Information" and states:

> With respect to Technology Information that is subject to any patent, trade secret, copyright (excluding software), mask work or any similar protection, Corporation grants to Microsoft and irrevocable, world-wide, non-exclusive, royalty-free, non-

> transferable license … for the purpose of developing, licensing, and distributing Pulsar Software, Pulsar Hardware Reference Platform, NWN-enabled Microsoft Software, and the Pulsar Subsystem; provided that (i) Microsoft shall not use or disclose such Technology Information to develop or have developed, or for the development or improvement of, a wireless network that would functionally replace the NWN System or NOC (or any component or subsystem thereof not specifically designed to operate with Pulsar Devices), and (ii) any disclosure or sublicense of such Technology Information to a third party shall be in writing and shall expressly prohibit the use thereof as described in (i)

47. On information and belief, none of the Patents-in-Suit were included with any Technology Information exchanged pursuant to the Technology Agreement.

48. MTel does not accuse any Pulsar Device, Pulsar Software, Pulsar Hardware Reference Platform, NWN-enabled Microsoft Software, or the Pulsar Subsystem of infringement in this case.

49. On January 28, 1999, SkyTel Communications, Inc. ("SkyTel"), Destineer Corporation ("Destineer"), and Microsoft entered into an Omnibus Termination, Release and Mutual Cooperation Agreement (the "Termination Agreement").

50. The Termination Agreement was signed by Microsoft's Vice President and Chief Financial Officer, Gregory B. Maffei.

51. Section 1 of the Termination Agreement states:

> The Destineer Warrant, Destineer Registration Rights Agreement and the Technology Development Agreement (collectively, the "Destineer Agreements") are hereby terminated . . . . In connection with the termination . . . , Microsoft and SkyTel . . . do hereby release and forever discharge one another from any and all . . . covenants, contracts, agreements, damages and liabilities whatsoever of every name and nature, known and unknown, at law and in equity, against the other which the releasing party has or ever had from the beginning of time to the date hereof arising out of or solely in connection with the performance and fulfillment of the other of its obligations under any of the Destineer Agreements.

52. The Termination Agreement contained a mutual release from any and all covenants, contracts and agreements arising out of the Technology Agreement.

53. On information and belief, Microsoft canceled development of all Pulsar Devices no later than October 1996.

54. On information and belief, Microsoft canceled development of all Pulsar Software no later than October 1996.

55. On information and belief, Microsoft canceled development of all Pulsar Subsystems no later than October 1996.

56. On information and belief, Microsoft canceled the development of the Pulsar Hardware Reference Platform no later than October 1996.

57. On information and belief, Microsoft canceled development of all NWN-enabled Microsoft software no later than October 1996.

58. Microsoft stated in the October 1996 Microsoft Systems Journal, that the "Pulsar was also scrapped."[5]

59. On information and belief, since 2009, Microsoft has not developed, used, made, sold, offered for sale, or imported into the United States a Pulsar Device.

60. On information and belief, since 2009, Microsoft has not developed, used, made, sold, offered for sale, or imported into the United States any Pulsar Software.

61. On information and belief, since 2009, Microsoft has not developed, used, made, sold, offered for sale, or imported into the United States a Pulsar Subsystem.

62. On information and belief, since 2009, Microsoft has not developed, used, made, sold, offered for sale, or imported into the United States a Pulsar Hardware Reference Platform.

63. On information and belief, since 2009, Microsoft has not developed, used, made, sold, offered for sale, or imported into the United States NWN-enabled Microsoft software.

[5] Exhibit K, https://www.microsoft.com/msj/archive/S5FD.aspx (last visited April 28. 2016).

64. On information and belief, Microsoft is asserting that Microsoft obtained Technical Information from NWN prior to the execution of the Termination Agreement, which Technical Information included the Patents-in-Suit.

65. On information and belief, Microsoft is asserting that it obtained the technology disclosed in the ’428 Patent prior to the execution of the Termination Agreement.

66. On information and belief, Microsoft is asserting that the technology it obtained relating to the ’428 Patent was covered by the claims issued in the ’428 Patent, including the claims asserted in this case.

67. On information and belief, Microsoft had actual notice of the ’428 Patent prior to 2010.

68. On information and belief, Microsoft is asserting that it obtained the technology disclosed in the ’946 Patent prior to the execution of the Termination Agreement.

69. On information and belief, Microsoft is asserting that the technology it obtained relating to the ’946 Patent was covered by the claims issued in the ’946 Patent, including the claims asserted in this case. On information and belief, Microsoft had actual notice of the ’946 Patent prior to 2010.

70. On information and belief, Microsoft is asserting that it obtained the technology disclosed in the ’804 Patent prior to the execution of the Termination Agreement.

71. On information and belief, Microsoft is asserting that the technology it obtained relating to the ’804 Patent was covered by the claims issued in the ’804 Patent, including the claims asserted in this case.

72. On information and belief, Microsoft had actual notice of the ’804 Patent prior to 2010.

73. On information and belief, Microsoft is asserting that it obtained the technology disclosed in the ’506 Patent prior to the execution of the Termination Agreement.

74. On information and belief, Microsoft is asserting that the technology it obtained relating to the ’506 Patent was covered by the claims issued in the ’506 Patent, including the claims asserted in this case.

75. On information and belief, Microsoft had actual notice of the ’506 Patent prior to 2010.

76. On information and belief, Microsoft is asserting that it obtained the technology disclosed in the ’403 Patent prior to the execution of the Termination Agreement.

77. On information and belief, Microsoft is asserting that the technology it obtained relating to the ’403 Patent was covered by the claims issued in the ’403 Patent, including the claims asserted in this case. On information and belief, Microsoft had actual notice of the ’403 Patent prior to 2010.

78. On information and belief, Microsoft is asserting that it obtained the technology disclosed in the ’210 Patent prior to the execution of the Termination Agreement.

79. On information and belief, Microsoft is asserting that the technology it obtained relating to the ’210 Patent was covered by the claims issued in the ’210 Patent, including the claims asserted in this case.

80. On information and belief, Microsoft had actual notice of the ’210 Patent prior to 2010.

81. On information and belief, Microsoft is asserting that it obtained the technology disclosed in the ’891 Patent prior to the execution of the Termination Agreement.

82. On information and belief, Microsoft is asserting that the technology it obtained relating to the '891 Patent was covered by the claims issued in the '891 Patent, including the claims asserted in this case.

83. On information and belief, Microsoft had actual notice of the '891 Patent prior to 2010.

84. Microsoft's former CFO, Gregory Maffei, served as a member of the Board of Directors of Mobile Telecommunication Technologies Corp. at the same time he was employed by Microsoft.

INFRINGEMENT OF THE PATENTS-IN-SUIT

85. MTel incorporates by reference the preceding paragraphs of this Complaint as if set forth here in full.

86. Microsoft, without authorization or license, has been and is now directly infringing literally or under the doctrine of equivalents, claims of the Patents-in-Suit in violation of 35 U.S.C. §271, as stated below. Microsoft's infringement has been and will continue to be willful.

87. On November 17, 2014, MTel received a favorable jury verdict in *Mobile Telecomms. Techs., LLC v. Apple* No. 2:13-CV-258-RSP (E.D. Tex.). *See* Verdict attached as Exhibit E. The jury in that case found the features of the Apple Push Notification Service and accused Apple devices, including e-mail application(s) that were capable of using the Microsoft Exchange ActiveSync ("EAS") e-mail protocol, infringed some of the same Patents-in-Suit asserted here. Microsoft's messaging devices and messaging services on information and belief contain similar features and perform similar functions as those found to be infringing in *Mobile Telecomms. Techs., LLC v. Apple*.

88. Several patents owned by Nokia or Microsoft evidence that Microsoft has been on notice of MTel's SkyTel wireless communications technology and Patents-in-Suit for many years.[6] Microsoft's United States Patent No. 6,052,735, filed Oct. 24, 1997, reads at col. 15, lines 24-27 ("Those transports may include, for instance, a POP3 transport, a Skytel paging transport, or any other commercially available transport. Such transports are typically supported by different applications in PIM 5."). Microsoft's United States Patent No. 5,537,415, filed Nov. 8, 1994 reads at col. 4, lines 15-18 ("For instance, the first radio channel could be at a paging frequency of around 931 MHz, currently allocated to nationwide paging services such as SkyTel of Jackson, Miss., ***") and at lines 45-50 ("In many cases, communication with primary network 12 will be unidirectional. However, paging networks planned by providers such as Destineer of Jackson, Miss., will in the future provide bi-directional capabilities using reserved time slot protocols.").[7] Nokia's United States Patent No. 7,177,593, filed Apr 3, 2001, cites directly to the '946 Patent-in-suit. Nokia's United States Patent No. 7,088,990, filed Oct. 30, 1998, cites directly to the '506 Patent-in-suit.

FIRST CLAIM FOR RELIEF
(INFRINGEMENT OF U.S. PATENT NO. 5,809,428)

89. MTel incorporates by reference the preceding paragraphs of this Complaint as if set forth here in full.

90. Each and every claim of the '428 Patent is valid and enforceable and each claim enjoys a statutory presumption of validity separate, apart, and in addition to the statutory presumption of validity enjoyed by every other of its claims. 35 U.S.C. §282.

[6] Microsoft purchased Nokia in 2014.

[7] Destineer was an affiliate of MTel Corp. and the original assignee on some MTel Patents.

91. Microsoft, without authorization or license, has been and is now directly or indirectly infringing, literally or under the doctrine of equivalents, Claims 1-3 and Claims 8-10 of the ’428 Patent in violation of 35 U.S.C. §271.

92. The Microsoft networks and infrastructure, which embody the claimed apparatus or practice the claimed methods of Claims 1-3 or 8-10 of the ’428 Patent, and through which Microsoft infringes the ’428 Patent, include but are not limited to Microsoft Azure Services, including App Service & Notification Hubs, Microsoft Exchange, Exchange 365, Office 365 Push Notification Service, Skype, and Skype for Business, Windows Notification Services (WNS), Microsoft Push Notification Service (MPNS), Windows Server 2012, MSDN, Visual Studio and services relying on Windows Communication Foundation and WS-ReliableMessaging, in particular, as incorporated into .NET Framework 3.0, and related and associated network infrastructure hardware, including mail servers, and software components (collectively “Microsoft Network Centers”).

93. Microsoft infringes, literally or under the doctrine of equivalents, by making, using, selling, selling access to, offering to sell, or importing Microsoft Network Centers, which embody or practice Claims 1-3 or Claims 8-10 the ’428 Patent.

94. Applications that utilizes Microsoft Network Centers are installed on mobile devices, including devices with cellular or Wi-Fi wireless communication capability. Such applications operate on one or more operating systems, including Microsoft Windows PC, Windows Mobile, Windows Phone, and Android operating systems, such as those operating on devices made by Samsung and LG. In addition, operating systems such as Windows 7 and 10 utilize Microsoft Network Centers.

95. Microsoft infringes the method claims 8-10 of the ’428 Patent when its software performs each of the steps of the claimed methods and when it operates Microsoft Network Centers.

96. Microsoft infringes apparatus Claims 1-3 of the ’428 Patent by manufacturing, using, selling, offering to sell, selling access to or importing into the United States Microsoft Network Centers.

97. On information and belief, Microsoft Network Centers includes means for transmitting messages to a mobile unit.

98. On information and belief, Microsoft Network Centers includes means for receiving acknowledgment messages from a mobile unit.

99. On information and belief, Microsoft Network Centers includes means for determining whether an acknowledgment message is an acknowledgment to a data message or an acknowledgment to a probe message.

100. On information and belief, Microsoft Network Centers includes means for transmitting a probe message to the mobile unit if, after transmitting a data message to the mobile unit, no data acknowledgment message is received.

101. On information and belief, Microsoft Network Centers includes means for marking a data message as undelivered.

102. On information and belief, Microsoft Network Centers includes means for storing an undelivered data message if, after transmitting a probe message to a mobile unit, no probe acknowledgment message is received.

103. On information and belief, Microsoft Network Centers includes means for receiving registration messages from a mobile unit.

104. On information and belief, Microsoft Network Centers includes means for automatically transmitting undelivered data messages to a mobile unit upon receiving a registration message from the mobile unit.

105. On information and belief, Microsoft Network Centers includes means for allowing dial-in access to undelivered data messages by a subscriber to retrieve an undelivered data message.

106. On information and belief, the operation of Microsoft Network Centers includes the processing of data messages that cannot be successfully transmitted from a network operations center to a wireless mobile unit.

107. On information and belief, the operation of Microsoft Network Centers includes the transmitting of data messages from a network operations center to a mobile unit.

108. On information and belief, the operation of Microsoft Network Centers includes receiving at a network operations center a data acknowledgment message from a mobile unit that acknowledges receipt of the data message sent by the network operations center.

109. On information and belief, the operation of Microsoft Network Centers includes transmitting a probe message from a network operations center to a mobile unit if, after transmitting a data message to a mobile unit, no data acknowledgment message is received at the network operations center.

110. On information and belief, the operation of Microsoft Network Centers includes marking at a network operations center a data message as undelivered if, after transmitting a probe message to a mobile unit, no probe acknowledgment message is received at the network operations center.

111. On information and belief, the operation of Microsoft Network Centers includes storing at a network operations center an undelivered data message.

112. On information and belief, the operation of Microsoft Network Centers includes transmitting undelivered data messages from a network operations center to a mobile unit upon receiving at the network operations center a registration message from the mobile unit.

113. On information and belief, the operation of Microsoft Network Centers includes giving users remote access to the stored messages.

114. Based on all of the foregoing allegations in the preceding paragraphs, which are incorporated herein by reference, Microsoft knew or should have known that there existed an objectively high likelihood that its actions constituted infringement of a valid patent. All of the foregoing allegations set forth above demonstrate a deliberate and conscious decision to infringe, willfully, or at least a reckless disregard for, MTel's patent rights, entitling MTel to up to treble damages.

SECOND CLAIM FOR RELIEF
(INFRINGEMENT OF U.S. PATENT NO. 5,754,946)

115. MTel incorporates by reference the preceding paragraphs of this Complaint as if set forth here in full.

116. Each and every claim of the '946 Patent is valid and enforceable and each claim enjoys a statutory presumption of validity separate, apart, and in addition to the statutory presumption of validity enjoyed by every other of its claims. 35 U.S.C. §282.

117. Microsoft, without authorization or license, has been directly or indirectly infringing, literally or under the doctrine of equivalents, Claims 1, 2, 4, 7-9 of the '946 Patent, in violation of 35 U.S.C. §271, as stated below.

118. Microsoft infringed, literally or under the doctrine of equivalents, apparatus Claims 1, 2, 4, and 8-9 of the '946 Patent when it manufactured, used, sold, offered for sale, provided access to, or imported wireless devices ("Accused Devices") capable of operating with Microsoft Exchange, Microsoft Exchange Online, Office 365, Exchange Hybrid, Exchange Server on-premises, Outlook, Outlook Express, Outlook.com, or Hotmail services (collectively "Microsoft Messaging Services").

119. By way of example only, Accused Devices include: HTC One M8, HTC 8XT, Nokia Lumia 2520, Nokia Lumia 1520, Nokia Lumia 1320, Nokia Lumia 630, Nokia Lumia 635, Nokia Lumia ICON, Nokia Lumia 1020, Nokia Lumia 928, Nokia Lumia 925, Nokia Lumia 920, Nokia Lumia 830, Nokia Lumia 822, Nokia Lumia 820, Nokia Lumia 530, Nokia Lumia 521, Nokia Lumia 520, Windows Phone 8XT, Windows Phone 8X, Samsung Galaxy series, Samsung ATIV SE, Samsung ATIV S Neo, Samsung ATIV Odyssey, Samsung ATIV Smart PC Pro, Samsung ATIV Tab 3, Samsung Series 7, Huawei W1, BLU Win HD, Surface Pro 3, Surface 2, Surface Pro, Surface, HP Pro x2, HP Pavilion X2, HP Pavilion, HP Omni O10, HP Ash, HP Stream 8, HP Stream 7, HP PRo 610, HP ElitePad 1000, HP ElitePad 900, HP ElitePad Mobile, HP EliteBook Revolve, HP Slate, LG Optimus series, Toshiba Encore Mini, Toshiba Encore 2, Toshiba Satellite Radius, Toshiba WT310, Asus VivoTab 8, Asus VivoTab Note 8, Asus VivoTab Smart, Asus Transformer Book, Asus Transformer Pad, Asus TF600T-B1-GR, Dell XPS 10, Dell Tablet Pro 8, Dell Venue 11 Pro, Dell Venue 8 Pro, Dell Inspiron 13, Dell Inspiron 11, Dell Latitude 10, Dell Latitude ST, Lenovo ThinkPad 10, Lenovo ThinkPad 8, Lenovo ThinkPad Yoga, Lenovo Twist S230U, Lenovo Flex 2, Lenovo IdeaTab Miix 2, Lenovo Miix 2, Acer W3-810, Acer P, Acer Iconia, Acer Aspire Switch 11, Acer Aspire Switch 10, Acer TravelMate, Acer Tablet NT, Panasonic Toughpad, Panasonic Toughbook, Fujitsu Stylistic

Q572, Fujitsu Stylistic Q704, Fujitsu Stylistic Q702, Fujitsu Lifebook, Quantum View, NeuTab, Nextbook, Vulcan Excursion X Net, Vulcan Challenger II, Winbook Tw801, Winbook Tw800, Winbook Tw100, CHUWI VX8, Hipstreet 7, Ematic, Contixo I80, Dragon 10.1, MeeGo Pad, Stouch Tablet PC, Azend Envzen, Ramos i10 Pro, Ramos i8 Pro, IVIEW-785QW, and ADDAO-8. These are offered merely as examples.

120. Accused Devices include applications that utilized Microsoft Messaging Services. Such applications were installed and operated on one or more operating systems, including Microsoft Windows for PC, Windows Mobile, Windows Phone, and Android operating systems, such as those that operated on devices made by Samsung and LG. Such applications included Outlook for PC, email applications supporting IMAP4 or Exchange ActiveSync on Windows or Android devices, and the Outlook app for Windows Mobile or Android.

121. Microsoft and all end-users of Microsoft Messaging Services and Accused Devices are direct infringers of the ’946 Patent.

122. Microsoft designed, licensed, and at all times maintained ownership of applications and operating system software that operated on Accused Devices that utilized Microsoft Messaging Services. Microsoft infringed claims 8-9 of the ’946 Patent when its software performed each step of the method claims at the Accused Devices through the associated hardware and software.

123. On information and belief, Accused Devices included a means for receiving a radio frequency message from the network.

124. On information and belief, Accused Devices included a display for displaying said message.

125. On information and belief, Accused Devices included a switch actuatable to specify a portion of the displayed message for which a user desires retransmission from the communications network.

126. On information and belief, Accused Devices included a means for transmitting, only upon actuation of a switch, a signal to a communications network requesting retransmission of a specified portion of a message.

127. On information and belief, Accused Devices included a means for receiving a specified portion retransmitted from a communications network and for displaying the received specified portion on a display.

128. On information and belief, Accused Devices included a means for detecting errors in a received message, the display including means for highlighting errors when a message is displayed on a display.

129. On information and belief, Accused Devices included a means for receiving a radio frequency signal from a communication network including a retransmitted message and an error correcting code.

130. On information and belief, Accused Devices included means for extracting a corrected message from a radio frequency signal.

131. On information and belief, Accused Devices included means indicating to the network that the user has read the message.

132. The use of the Accused Devices when operating the Microsoft Messaging Services also directly infringed methods Claims 8-9 of the ’946 Patent.

133. On information and belief, the operation of the Accused Devices included receiving at the Accused Device a radio frequency message.

134. On information and belief, the operation of the Accused Devices included displaying a message on the Accused Device.

135. On information and belief, the operation of the Accused Devices included receiving an indication of a portion of a displayed message for which a user desires retransmission.

136. On information and belief, the operation of the Accused Devices included transmitting upon receipt of an indication, a signal requesting retransmission of an indicated portion of a message.

137. On information and belief, the operation of the Accused Devices included receiving a retransmission of an indicated portion of a message.

138. On information and belief, the operation of the Accused Devices included displaying a received retransmission of an indicated portion on a mobile unit.

139. On information and belief, the operation of the Accused Devices included detecting errors in a received message.

140. On information and belief, the operation of the Accused Devices included highlighting errors in a message on a mobile unit.

141. Microsoft infringed, literally or under the doctrine of equivalents, apparatus Claim 7 of the ’946 Patent when it manufactured, used, sold, offered for sale, provided access to, or imported servers and associated networking equipment used to facilitate the operation of Microsoft Messaging Services with mobile devices that are capable of communicating with Microsoft Messaging Services (“Microsoft Communication Network”), including devices manufactured by third-party entities that operate Microsoft Messaging Services applications (*e.g.*, Exchange or Outlook mail accounts).

142. On information and belief, the Microsoft Communications Network constituted a communications network for transmitting radio frequency signals to a mobile unit and for receiving radio frequency signals from a mobile unit.

143. On information and belief, the mobile units with which the Microsoft Communications Network transmitted and received radio frequency signals to and from included a mobile unit that has a display and a switch to specify a portion of a message for which a user desires retransmission.

144. On information and belief, the Microsoft Communications Network included a means for transmitting radio frequency signals containing a message to a mobile unit.

145. On information and belief, the Microsoft Communications Network included a means for receiving, from a mobile unit, radio frequency signals representing a portion of a message that a user desires to be retransmitted.

146. On information and belief, the Microsoft Communications Network included a means for retransmitting radio frequency signals containing a portion of a message to a mobile unit.

147. Based on all of the foregoing allegations in the preceding paragraphs, which are incorporated herein by reference, Microsoft knew or should have known that there existed an objectively high likelihood that its actions constituted infringement of a valid patent. All of the foregoing allegations set forth above demonstrate a deliberate and conscious decision to infringe, willfully, or at least a reckless disregard for, MTel's patent rights, entitling MTel to up to treble damages.

THIRD CLAIM FOR RELIEF
(INFRINGEMENT OF U.S. PATENT NO. 5,754,804)

148. MTel incorporates by reference the preceding paragraphs of this Complaint as if set forth here in full.

149. Each and every claim of the ’804 Patent is valid and enforceable and each claim enjoys a statutory presumption of validity separate, apart, and in addition to the statutory presumption of validity enjoyed by every other of its claims. 35 U.S.C. §282.

150. Microsoft, without authorization or license, directly or indirectly infringed, literally or under the doctrine of equivalents, Claims 5-8 and 10 of the ’804 Patent in violation of 35 U.S.C. §271.

151. Microsoft practiced and infringed the method claims of the ’804 Patent through the use of services by which Microsoft determined whether to transmit and receive messages (*e.g.*, Microsoft Push Notification Services (MPNS), Windows Notification Service (WNS), Microsoft Skype, and Lync (Skype for Business) (collectively, “Microsoft Services”)) across cellular or Wi-Fi base transmitters and receivers. Microsoft also practiced and infringed the method claims of the ’804 Patent when Microsoft Services located a mobile unit for the purpose of delivering to the mobile unit a message, wherein such locating involved determining whether the failure of the mobile unit to receive a message was caused by the mobile unit being located in a weak signal area.

152. Microsoft infringed the method claims of the ’804 Patent when its software performs each of the steps of the claimed methods and when it operated Microsoft Services.

153. Applications that utilized Microsoft Services included applications that were installed and operated on multiple operating systems, including Microsoft Windows PC, Windows Mobile, Windows Phone, Windows 7 and Android operating systems.

154. On information and belief, the operation of Microsoft Services included controlling a mobile transceiver, which may communicate with a communication network.

155. On information and belief, Microsoft Services included more than one base transmitter for transmitting messages to a mobile transceiver and base receiver for receiving messages from the mobile transceiver.

156. On information and belief, the mobile transceiver that Microsoft controlled was capable of sending registration signals to be received by a base receiver in the communication network to allow the network to identify the mobile transceiver's approximate location according to the location of the one or more base receivers that received the registration signals and being capable of sending a message acknowledgment signal when a mobile transceiver receives a message from Microsoft Services to indicate successful delivery of the message.

157. On information and belief, Microsoft Services included a process of using received registration signals to determine a set of base transmitters to transmit a message to a mobile transceiver.

158. On information and belief, the operation of Microsoft Services included storing in a network a number of registration signals from a mobile transceiver to the network during a first period of time and the number of messages successfully delivered to the mobile transceiver by the network during a period of time.

159. On information and belief, the operation of Microsoft Services included processing a stored number of registration signals and number of messages successfully delivered to evaluate a likelihood that a registration signal from a mobile transceiver will not be used by the network to determine a set of base transmitters.

160. On information and belief, the operation of Microsoft Services included sending a message to a mobile transceiver to disable the mobile transceiver's capability to transmit a registration signal if the likelihood exceeds a selected value.

161. On information and belief, the operation of Microsoft Services included sending a registration signal from a mobile transceiver to a network when the mobile transceiver crosses zonal boundaries and the mobile transceiver's capability to transmit registration signals is enabled.

162. On information and belief, the operation of Microsoft Services included sending a registration signal from a mobile transceiver to a network when the mobile transceiver returns to a coverage area of a communication network after being out of range for a period of time and the mobile transceiver's capability to transmit registration signals is enabled.

163. On information and belief, the operation of Microsoft Services included sending a registration signal from the mobile transceiver to the network when power is first applied to a mobile transceiver and the mobile transceiver's capability to transmit registration signals is enabled.

164. On information and belief, the operation of Microsoft Services included, in a computer controlled communication network for locating a mobile transceiver within a region of space, the region of space being divided into a plurality of zones with each zone serviced by at least one base transmitter and at least one base receiver, the network storing data corresponding to a zone where the mobile transceiver was last known to be located, transmitting a message signal by a base transmitter servicing a zone where the mobile transceiver was last known to be located.

165. On information and belief, the operation of Microsoft Services included, in a computer controlled communication network for locating a mobile transceiver within a region of space, the region of space being divided into a plurality of zones with each zone serviced by at least one base transmitter and at least one base receiver, the network storing data corresponding to a zone where the mobile transceiver was last known to be located, transmitting a systemwide probe signal by a plurality of base transmitters servicing a plurality of zones if the mobile transceiver does not indicate receipt of the message signal from the base transmitter.

166. On information and belief, the operation of Microsoft Services included, in a computer controlled communication network for locating a mobile transceiver within a region of space, the region of space being divided into a plurality of zones with each zone serviced by at least one base transmitter and at least one base receiver, the network storing data corresponding to a zone where the mobile transceiver was last known to be located, receiving the systemwide probe signal by the mobile transceiver.

167. On information and belief, the operation of Microsoft Services included, in a computer controlled communication network for locating a mobile transceiver within a region of space, the region of space being divided into a plurality of zones with each zone serviced by at least one base transmitter and at least one base receiver, the network storing data corresponding to a zone where the mobile transceiver was last known to be located, transmitting an acknowledgment signal by the mobile transceiver in response to the received systemwide probe signal.

168. On information and belief, the operation of Microsoft Services included, in a computer controlled communication network for locating a mobile transceiver within a region of space, the region of space being divided into a plurality of zones with each zone serviced by at

least one base transmitter and at least one base receiver, the network storing data corresponding to a zone where the mobile transceiver was last known to be located, receiving the acknowledgment signal from the mobile transceiver by a base receiver.

169. On information and belief, the operation of Microsoft Services included, in a computer controlled communication network for locating a mobile transceiver within a region of space, the region of space being divided into a plurality of zones with each zone serviced by at least one base transmitter and at least one base receiver, the network storing data corresponding to a zone where the mobile transceiver was last known to be located, updating the data stored in the network to reflect the zone of the base receiver that received the acknowledgment signal as the last known location of the mobile transceiver.

170. On information and belief, the operation of Microsoft Services included, in a computer controlled communication network for locating a mobile transceiver within a region of space, the region of space being divided into a plurality of zones with each zone serviced by at least one base transmitter and at least one base receiver, the network storing data corresponding to a zone where the mobile transceiver was last known to be located, determining whether failure of the mobile transceiver to receive the message transmitted is likely caused by the mobile unit being located in a weak signal area within a zone.

171. On information and belief, the operation of Microsoft Services included, in a computer controlled communication network for locating a mobile transceiver within a region of space, the region of space being divided into a plurality of zones with each zone serviced by at least one base transmitter and at least one base receiver, the network storing data corresponding to a zone where the mobile transceiver was last known to be located, retransmitting the message signal in the zone where the mobile transceiver was last known to be located using an error

correcting code when the network determines that failure of the mobile transceiver to receive the message signal transmitted is likely caused by the mobile unit being located in the weak signal area within a zone.

172. Based on all of the foregoing allegations in the preceding paragraphs, which are incorporated herein by reference, Microsoft knew or should have known that there existed an objectively high likelihood that its actions constituted infringement of a valid patent. All of the foregoing allegations set forth above demonstrate a deliberate and conscious decision to infringe, willfully, or at least a reckless disregard for, MTel's patent rights, entitling MTel to up to treble damages.

FOURTH CLAIM FOR RELIEF
(INFRINGEMENT OF U.S. PATENT NO. 5,894,506)

173. MTel incorporates by reference the preceding paragraphs of this Complaint as if set forth here in full.

174. Each and every claim of the '506 Patent is valid and enforceable and each claim enjoys a statutory presumption of validity separate, apart, and in addition to the statutory presumption of validity enjoyed by every other of its claims. 35 U.S.C. §282.

175. Microsoft, without authorization or license, has been and is now directly or indirectly infringing, literally or under the doctrine of equivalents, Claims 1-8 and Claims 15-21 of the '506 Patent in violation of 35 U.S.C. §271.

176. Microsoft infringes the apparatus and method claims 1-8 and 15-18 of the '506 Patent by making, using, selling, selling access to, offering to sell, or importing servers and network equipment used to facilitate communication with and between messaging terminals wherein such communication includes Microsoft Office 365, Exchange, Exchange Online, Exchange Hybrid, Exchange on premises, Exchange ActiveSync, Skype, Skype for Business

(and its predecessor Lync), Xbox Live, Yammer, Microsoft Messaging, Outlook, Outlook Express, Outlook.com, and Windows Notification Service (collectively "Accused Networks").

177. Microsoft infringes apparatus claims 19-21 of the '506 Patent when it manufactures, uses, sells, offer for sale, provides access to, or imports devices ("Accused Terminals") capable of operating with Accused Networks. Accused Terminals include applications that utilize Accused Networks. Such applications are installed on Accused Terminals. Such applications operate on multiple operating systems, including Microsoft Windows for PC, Windows Mobile, Windows Phone, Windows 7 and Android operating systems. Such applications include Microsoft Outlook, email and calendar applications that support Exchange ActiveSync on Windows or Android devices, the Outlook app for Windows Mobile or Android, Skype, Yammer, and Xbox Live chat.

178. Microsoft and all end-users of Accused Networks and Accused Terminals are direct infringers of the '506 Patent.

179. Microsoft designs, licenses, and at all times maintains ownership of applications and operating system software operating on Accused Terminals that utilize Accused Networks. Microsoft directly infringes the method claims of the '506 Patent by performing each step of the method claims including those at the Accused Terminals through the associated hardware and software.

180. Microsoft infringes claims 19-21 of the '506 Patent when its software uses the Accused Terminals in order to use the Accused Networks according the claims.

181. By way of example only, Accused Terminals include: HTC One M8, HTC 8XT, Nokia Lumia 2520, Nokia Lumia 1520, Nokia Lumia 1320, Nokia Lumia 630, Nokia Lumia 635, Nokia Lumia ICON, Nokia Lumia 1020, Nokia Lumia 928, Nokia Lumia 925, Nokia Lumia

920, Nokia Lumia 830, Nokia Lumia 822, Nokia Lumia 820, Nokia Lumia 530, Nokia Lumia 521, Nokia Lumia 520, Windows Phone 8XT, Windows Phone 8X, Samsung Galaxy series, Samsung ATIV SE, Samsung ATIV S Neo, Samsung ATIV Odyssey, Samsung ATIV Smart PC Pro, Samsung ATIV Tab 3, Samsung Series 7, Huawei W1, BLU Win HD, Surface Pro 3, Surface 2, Surface Pro, Surface, HP Pro x2, HP Pavilion X2, HP Pavilion, HP Omni O10, HP Ash, HP Stream 8, HP Stream 7, HP PRo 610, HP ElitePad 1000, HP ElitePad 900, HP ElitePad Mobile, HP EliteBook Revolve, HP Slate, LG Optimus series, Toshiba Encore Mini, Toshiba Encore 2, Toshiba Satellite Radius, Toshiba WT310, Asus VivoTab 8, Asus VivoTab Note 8, Asus VivoTab Smart, Asus Transformer Book, Asus Transformer Pad, Asus TF600T-B1-GR, Dell XPS 10, Dell Tablet Pro 8, Dell Venue 11 Pro, Dell Venue 8 Pro, Dell Inspiron 13, Dell Inspiron 11, Dell Latitude 10, Dell Latitude ST, Lenovo ThinkPad 10, Lenovo ThinkPad 8, Lenovo ThinkPad Yoga, Lenovo Twist S230U, Lenovo Flex 2, Lenovo IdeaTab Miix 2, Lenovo Miix 2, Acer W3-810, Acer P, Acer Iconia, Acer Aspire Switch 11, Acer Aspire Switch 10, Acer TravelMate, Acer Tablet NT, Panasonic Toughpad, Panasonic Toughbook, Fujitsu Stylistic Q572, Fujitsu Stylistic Q704, Fujitsu Stylistic Q702, Fujitsu Lifebook, Quantum View, NeuTab, Nextbook, Vulcan Excursion X Net, Vulcan Challenger II, Winbook Tw801, Winbook Tw800, Winbook Tw100, CHUWI VX8, Hipstreet 7, Ematic, Contixo I80, Dragon 10.1, MeeGo Pad, Stouch Tablet PC, Azend Envzen, Ramos i10 Pro, Ramos i8 Pro, IVIEW-785QW, and ADDAO-8. These are offered merely as examples.

182. On information and belief, the operation of Accused Networks for templated messages includes maintaining, at a network operation center, a first file of canned messages and message codes respectively assigned to the canned messages.

183. On information and belief, the operation of Accused Networks for templated messages includes maintaining at a first terminal of a first subscriber a second file of canned messages corresponding to the first file.

184. On information and belief, the operation of Accused Networks for templated messages includes selecting an appropriate canned message from the second file for transmission to a second terminal of a designated second subscriber.

185. On information and belief, the operation of Accused Networks for templated messages includes sending the message code assigned to the selected canned message to the network operation center.

186. On information and belief, the operation of Accused Networks for templated messages includes retrieving the selected canned message from the first file using the message code received from the first terminal.

187. On information and belief, the operation of Accused Networks for templated messages includes determining whether the second terminal can receive the canned message in a text form or message code form.

188. On information and belief, the operation of Accused Networks for templated messages includes determining communicating the selected canned message to the second terminal in either message code form or text code form in response to the determination.

189. On information and belief, the operation of Accused Networks for templated messages includes updating the first and second canned message files.

190. On information and belief, the operation of Accused Networks for templated messages includes displaying the selected canned message at the second terminal.

191. On information and belief, the operation of Accused Networks for templated messages includes adding a parameter to the canned message selected from the second file.

192. On information and belief, the operation of Accused Networks for templated messages includes sending the added parameter with the assigned message code to the network operation center.

193. On information and belief, the operation of Accused Networks for templated messages includes communicating the added parameter with the selected canned message to the second terminal.

194. On information and belief, the operation of Accused Networks for templated messages includes displaying the selected canned message with the added parameter incorporated therein.

195. On information and belief, the operation of Accused Networks for templated messages includes adding multiple response options to the canned message selected from the second file.

196. On information and belief, the operation of Accused Networks for templated messages includes sending the added multiple response options with the assigned message code to the network operation center.

197. On information and belief, the operation of Accused Networks for templated messages includes communicating the added multiple response options with the selected canned message to the second terminal.

198. On information and belief, the operation of Accused Networks for templated messages includes in the displaying step including the step of displaying the selected canned message together with the added multiple response options.

199. On information and belief, the operation of Accused Networks for templated messages includes selecting one of the multiple response options at the second terminal.

200. On information and belief, the operation of Accused Networks for templated messages includes communicating the selected response option to the network routing the selected response option from the network operation center to the first terminal.

201. On information and belief, the operation of Accused Networks for templated messages includes displaying the selected response option at the first terminal.

202. On information and belief, the operation of Accused Networks for templated messages includes sending the added parameter to the network operation center together with the assigned message code and the multiple response options.

203. On information and belief, the operation of Accused Networks for templated messages includes communicating the selected canned message, multiple response options, and added parameter to the second terminal.

204. On information and belief, the operation of Accused Networks for templated messages includes displaying the selected canned message, added parameter, and multiple response options.

205. On information and belief, the operation of Accused Networks for templated messages includes correspondingly updating the first and second canned message files.

206. The manufacture, use, sale, offer for sale, or importing of Accused Networks also directly infringes apparatus Claims 15-21 of the ’506 Patent.

207. On information and belief, the operation of Accused Networks for templated messages includes a memory storing a file of canned messages in text form, each canned message having a unique, abbreviated message code assigned thereto.

208. On information and belief, the operation of Accused Networks for templated messages includes a receiver for receiving a message code from a calling terminal included in the network.

209. On information and belief, the operation of Accused Networks for templated messages includes a means responsive to the received message code for retrieving from the memory the canned message assigned thereto.

210. On information and belief, the operation of Accused Networks for templated messages includes a means for determining whether a receiving terminal in the network can receive the canned message in text form or message code form.

211. On information and belief, the operation of Accused Networks for templated messages includes a transmitter for transmitting the retrieved canned message in text form or message code form in response to the determining means.

212. On information and belief, the operation of Accused Networks for templated messages includes a means routing the received message code directly to the transmitter upon determination that the receiving terminal can receive the canned message in message code form.

213. On information and belief, the operation of Accused Networks for templated messages includes a means for updating the canned message file stored in the memory and a corresponding canned message file stored in a memory in at least the calling terminal.

214. On information and belief, the operation of Accused Networks for templated messages includes a memory that stores a separate file of canned multiple response options having response codes respectively assigned thereto.

215. On information and belief, the operation of Accused Networks for templated messages includes a responsive means further including means for retrieving from the memory

those canned multiple response options assigned to response codes received from the calling terminal by the receiver, the retrieved canned message and multiple response options being transmitted to the receiving terminal by the transmitter.

216. On information and belief, the operation of Accused Networks for templated messages includes a network operation center further including means for routing a selected canned multiple response option received from the receiving terminal to the calling terminal in either text or response code form.

217. On information and belief, the operation of Accused Terminals for templated messages includes a memory storing a file of canned messages and message codes respectively assigned thereto and a file of canned multiple response options and response codes respectively assigned thereto.

218. On information and belief, the operation of Accused Terminals for templated messages includes a means for retrieving the file of canned messages and the file of canned multiple response options from the memory.

219. On information and belief, the operation of Accused Terminals for templated messages includes a display for displaying the canned messages and the multiple response options in the retrieved file.

220. On information and belief, the operation of Accused Terminals for templated messages includes a means for selecting one of the canned messages and at least one of the multiple response options appropriate for the selected canned message for communication to a designated other message terminal.

221. On information and belief, the operation of Accused Terminals for templated messages includes a transmitter for transmitting the message code assigned to the selected

canned message and the response code assigned to the at least one multiple response option over a communications link of the network.

222. On information and belief, the operation of Accused Terminals for templated messages includes a message terminal further including means for adding parameters to the selected canned message for inclusion with the assigned message code transmitted over the communications link.

223. On information and belief, the operation of Accused Terminals for templated messages includes a memory storing a file of canned messages, and message codes respectively assigned thereto and a file of canned multiple response options and response codes respectively assigned thereto.

224. On information and belief, the operation of Accused Terminals for templated messages includes a means for retrieving the file of canned messages and message codes from the memory.

225. On information and belief, the operation of Accused Terminals for templated messages includes a display for displaying the canned messages in the retrieved file.

226. On information and belief, the operation of Accused Terminals for templated messages includes a means for selecting one of the canned messages for communication to a designated other message terminal and for selecting multiple response options appropriate for the selected canned message.

227. On information and belief, the operation of Accused Terminals for templated messages includes a message compiler for compiling the assigned message code and the response codes assigned to the selected multiple response options into a message for transmission by the transmitter.

228. On information and belief, the operation of Accused Terminals for templated messages includes a transmitter for transmitting the message code assigned to the selected canned message over a communications link of the network.

229. Based on all of the foregoing allegations in the preceding paragraphs, which are incorporated herein by reference, Microsoft knew or should have known that there existed an objectively high likelihood that its actions constituted infringement of a valid patent. All of the foregoing allegations set forth above demonstrate a deliberate and conscious decision to infringe, willfully, or at least a reckless disregard for, MTel's patent rights, entitling MTel to up to treble damages

FIFTH CLAIM FOR RELIEF
(INFRINGEMENT OF CLAIMS 1, 10, 11 OF U.S. PATENT NO. 5,590,403)

230. MTel incorporates by reference the preceding paragraphs of this Complaint as if set forth here in full.

231. Microsoft has infringed the '403 Patent by making, using, selling, offering for sell, and/or importing in the United States Wi-Fi Access Points and clients that operate according to the 802.11n and ac standards (collectively "Accused Wi-Fi Devices"). Accused Wi-Fi Devices included Xbox 360 and Xbox One consoles, Surface tablets, and Nokia Lumia devices.

232. Microsoft made, used, sold, and offered to sell, systems and products that embodied the claimed methods of the '403 Patent because, for instance, such systems employed techniques consistent with the MIMO aspects of IEEE 802.11 n or ac standards (*e.g.*, as described in "Wi-Fi CERTIFIED n: Longer-Range, Faster-Throughput, Multimedia-Grade Wi-Fi Networks" at 5-6, available at http://www.wi-fi.org/file/wi-fi-certified-n-longer-range-faster-throughput-multimedia-grade-wi-fi-networks-2009):

> A MIMO system has some number of transmitters (N) and receivers (M) ... Signals from each of the N transmitters can reach each of the M receivers via a

> different path in the channel. A MIMO device with multiple antennas is capable of sending multiple spatial streams – spatially distinct data streams within the same channel. A MIMO device with multiple antennas is capable of receiving multiple spatial streams. Multipath helps decorrelate the received signals enabling transmission of multiple data streams through the same MIMO channel – a technique called spatial multiplexing. MIMO can multiply data rate through a technique called spatial multiplexing - dividing a data stream into several branches and sending it as multiple parallel data streams simultaneously in the same channel.
>
> MIMO can also be used to improve the robustness and range of 802.11n communications through a technique called spatial diversity. When the same data stream is transmitted across multiple spatial streams error rate can be reduced. An additional technique improving range and reliability called Space Time Block Coding (STBC) is also incorporated into Wi-Fi CERTIFIED n .

A copy of this document is attached as Exhibit I.

233. Microsoft infringed by using Accused Wi-Fi Devices that practiced each step of the claims of the ’403 Patent literally and/or under the doctrine of equivalents, by, among other things, using MIMO techniques and dynamically reassigning transmitters due to changing conditions within the network.

234. Microsoft implemented through its Accused Wi-Fi Devices the IEEE 802.11 standard versions n and ac.

235. Microsoft’s Accused Wi-Fi Devices implemented 802.11 standard versions n and ac that are configured to practice MIMO techniques that read on the claims of the ’403 Patent.

236. The relevant MIMO techniques that read on the claims of the ’403 Patent include at least (i) Spatial Multiplexing (SM); (ii) Space Time Block Coding (STBC); (iii) Spatial Expansion (SE); (iv) Beam Forming (BF); and (v) HT Duplicate mode (MCS 32).

237. Dynamic reassignment of transmitters reads on the claims of the ’403 Patent when multiple devices of Accused Wi-Fi Devices are setup to create a single wireless network to communicate with one or more wireless devices. As channel conditions change, these Wi-Fi

networks will reassign transmitters to different zones in order to maintain optimal communication with wireless devices.

238. Microsoft infringed the ’403 Patent when it used Accused Wi-Fi Devices while such Accused Wi-Fi Devices practiced the relevant MIMO techniques, and therefore its use of that equipment necessarily performed the steps of the asserted method claims.

239. Microsoft infringed the ’403 Patent when its service professionals installed, deployed, tested, and validated networks consisting of multiple devices of Accused Wi-Fi Devices that dynamically reassigned transmitters due to changing conditions within the network.

240. Microsoft service professionals used Accused Wi-Fi Devices at least when they installed, tested, deployed, or validated the Accused Wi-Fi Devices, which transmitted data according to the above identified MIMO techniques.

241. Microsoft infringed the ’403 Patent when, for example, its service professionals tested the throughput that such Accused Wi-Fi Devices achieved in various wireless channel conditions.

242. As a result of Microsoft’s unlawful infringement of the ’403 Patent, MTel has suffered damage. MTel is entitled to recover from Microsoft damages adequate to compensate for such infringement.

243. End users of Accused Wi-Fi Devices are also direct infringers of the claims of the ’403 Patent. Microsoft has induced infringement of at least one claim of the ’403 Patent, literally and/or under the doctrine of equivalents, by among other things, actively, knowingly, and/or recklessly aiding and abetting others (including Microsoft’s customers and end users) through activities such as supporting and marketing with the specific intent to induce others to directly

use without license or authority, processes that fall within the scope of at least one claim of the '403 Patent.

244. Microsoft has contributed to the infringement of at least one claim of the '403 Patent, literally and/or under the doctrine of equivalents, by among other things, providing its 802.11n or ac compliant Accused Wi-Fi Devices that embody a material part of the claimed inventions of the '403 Patent, knowing that such products are especially made or especially adapted for use in an infringement of these claims, and that they are not staple articles or commodities of commerce suitable for substantial non-infringing use. Microsoft also contributed to its users' and customers' infringement of the '403 Patent.

245. Based on all of the foregoing allegations in the preceding paragraphs, which are incorporated herein by reference, Microsoft knew or should have known that there existed an objectively high likelihood that its actions constituted infringement of a valid patent. All of the foregoing allegations set forth above demonstrate a deliberate and conscious decision to infringe, willfully, or at least a reckless disregard for, MTel's patent rights, entitling MTel to up to treble damages

SIXTH CLAIM FOR RELIEF
(INFRINGEMENT OF CLAIMS 1, 2, 3, 4, 5 OF U.S. PATENT NO. 5,659,891)

246. MTel incorporates by reference the preceding paragraphs of this Complaint as if set forth here in full.

247. The USPTO duly and lawfully issued the '891 Patent, entitled "Multicarrier Techniques in Bandlimited Channels," on August 19, 1997. MTel is the assignee of all right, title, and interest in and to the '891 Patent and possesses the exclusive right of recovery, including the exclusive right to recover for past, present, and future infringement. Each and every claim of the '891 Patent is valid and enforceable and each enjoys a statutory presumption

of validity separate, apart, and in addition to the statutory presumption of validity enjoyed by every other of its claims. 35 U.S.C. § 282

248. During the term if the ’891 Patent, Microsoft infringed one or more claims of the ’891 Patent by making, using, selling, and offering to sell Accused Wi-Fi Devices, and associated services.

249. Microsoft infringed one or more claims of the ’891 Patent literally and/or under the doctrine of equivalents, by among other things, using Accused Wi-Fi Devices that embodies certain subcarrier frequency structures of the IEEE 802.11 orthogonal frequency-division multiplexing (“OFDM”) scheme.

250. OFDM systems contain individual subcarriers that are orthogonally spaced apart in the frequency domain such that they do not interfere with each other as shown in the figure below. To illustrate this concept, the power spectrum for four modulated subcarriers is shown in the below figure, with solid, dotted, dash-dotted, and dashed lines, respectively. It can be seen that, at the center frequency of each subcarrier, the power spectra of the other subcarriers have nulls in the spectrum and thus do not produce interference.

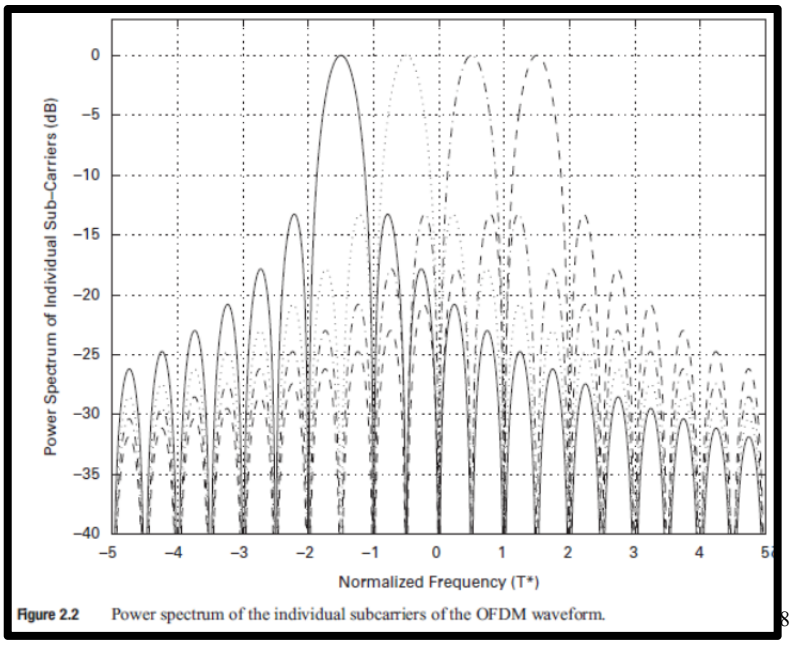

Figure 2.2 Power spectrum of the individual subcarriers of the OFDM waveform.[8]

251. Microsoft infringed claims of the '891 Patent in regards to the 802.11 systems that its Accused Wi-Fi Devices implemented because operating such equipment performed the asserted method steps of the '891 Patent.

252. Microsoft technicians who tested or used Accused Wi-Fi Devices to transmit data in the 20 MHz channel bandwidth option automatically performed the asserted method steps because in the 802.11 systems of interest, the orthogonal subcarrier spacing (ΔF) is 312.5 kHz.

253. In the wireless bandwidths established by Microsoft's Accused Wi-Fi Devices, the frequency separation from the outermost used data subcarrier to the band edge of the mask is more than half the frequency difference between the center frequencies of each adjacent subcarrier.

254. Microsoft infringed the '891 Patent at least when it used Accused Wi-Fi Devices operated according to the IEEE 802.11 OFDM scheme of channelization structure which performs the asserted method steps of the '891 Patent.

[8] E. Perahia and R. Stacey, *Next Generation Wireless LANs 802.11n and 802.11ac*, 2nd edition, Fig. 2.2, Cambridge University Press, 2013.

255. Microsoft infringed the ’891 Patent as discussed above when its service professionals installed, tested, or validated Accused Wi-Fi Devices, which perform the asserted method steps automatically by implementing OFDM.

256. Microsoft infringed the ’891 Patent when its professionals tested the maximum throughput that such Accused Wi-Fi Devices achieved.

257. End users of Accused Wi-Fi Devices are also direct infringers of the claims of the ’891 Patent. Microsoft has induced infringement of at least one claim of the ’891 Patent, literally and/or under the doctrine of equivalents, by among other things, actively, knowingly, and/or recklessly aiding and abetting others (including Microsoft’s customers and end users) through activities such as supporting and marketing with the specific intent to induce others to directly use without license or authority, processes that fall within the scope of at least one claim of the ’891 Patent.

258. Microsoft has contributed to the infringement of at least one claim of the ’891 Patent, literally and/or under the doctrine of equivalents, by among other things, providing its 802.11n or ac compliant Accused Wi-Fi Devices that embody a material part of the claimed inventions of the ’891 Patent, knowing that such products are especially made or especially adapted for use in an infringement of these claims, and that they are not staple articles or commodities of commerce suitable for substantial non-infringing use. Microsoft also contributed to its users’ and customers’ infringement of the ’891 Patent.

259. As a result of Microsoft’s unlawful infringement of the ’891 Patent, MTel has suffered damage. MTel is entitled to recover damages from Microsoft adequate to compensate for such infringement.

260. Based on all of the foregoing allegations in the preceding paragraphs, which are incorporated herein by reference, Microsoft knew or should have known that there existed an objectively high likelihood that its actions constituted infringement of a valid patent. All of the foregoing allegations set forth above demonstrate a deliberate and conscious decision to infringe, willfully, or at least a reckless disregard for, MTel's patent rights, entitling MTel to up to treble damages.

SEVENTH CLAIM FOR RELIEF
(INFRINGEMENT OF CLAIMS 1, 7, 8, 10, 15, 16, 17, 19 OF U.S. PATENT NO. 5,915,210)

261. MTel incorporates by reference the preceding paragraphs of this Complaint as if set forth here in full.

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

263. During the term of the '210 Patent, Microsoft infringed one or more claims of the '210 Patent by making, using, selling, and offering to sell Accused Wi-Fi Devices and associated services, which embody the claims of the '210 Patent.

264. MTel alleges that Microsoft made, used, sold, and offered to sell, systems and products that embodied the claims of the '210 Patent because, for instance, such systems employed certain subcarrier frequency structures in the IEEE 802.11 orthogonal frequency-division multiplexing ("OFDM") scheme and techniques consistent with the MIMO aspects of

IEEE 802.11 n or ac standards (e.g., as described in "Wi-Fi CERTIFIED n: Longer-Range, Faster-Throughput, Multimedia-Grade Wi-Fi Networks" at 5-6, available at http://www.wi-fi.org/file/wi-fi-certified-n-longer-range-faster-throughput-multimedia-grade-wi-fi-networks-2009):

> A MIMO system has some number of transmitters (N) and receivers (M) ... Signals from each of the N transmitters can reach each of the M receivers via a different path in the channel. A MIMO device with multiple antennas is capable of sending multiple spatial streams – spatially distinct data streams within the same channel. A MIMO device with multiple antennas is capable of receiving multiple spatial streams. Multipath helps decorrelate the received signals enabling transmission of multiple data streams through the same MIMO channel – a technique called spatial multiplexing. MIMO can multiply data rate through a technique called spatial multiplexing - dividing a data stream into several branches and sending it as multiple parallel data streams simultaneously in the same channel.
>
> MIMO can also be used to improve the robustness and range of 802.11n communications through a technique called spatial diversity. When the same data stream is transmitted across multiple spatial streams error rate can be reduced. An additional technique improving range and reliability called Space Time Block Coding (STBC) is also incorporated into Wi-Fi CERTIFIED n.

A copy of this document is attached as Exhibit I.

265. Microsoft's Accused Wi-Fi Devices meets the limitations of the asserted claims of the '210 Patent. For example, Microsoft's Accused Wi-Fi Devices embodies the claims of the '210 Patent because Microsoft's Accused Wi-Fi Devices relies on Orthogonal Frequency Division Multiplexing (OFDM), and MIMO techniques including at least (i) Space Time Block Coding (STBC); (ii) Spatial Expansion (SE); (iii) Beam Forming (BF); and (iv) HT Duplicate mode (MCS 32). Accused Wi-Fi Devices that employed both OFDM and one or more of the relevant MIMO techniques reads on the claims of the '210 Patent.

266. Microsoft's use and operation of Accused Wi-Fi Devices infringed one or more claims of the '210 Patent literally and/or under the doctrine of equivalents by, among other

things, employing MIMO functionality and certain multi-carrier frequency structures, such as OFDM, as described above.

267. Microsoft infringed the ’210 Patent at least because Microsoft used, made, sold, and offered to sell Accused Wi-Fi Devices, which embody the claimed system of the ’210 Patent.

268. Microsoft infringed the ’210 Patent when its service professionals used, installed, tested, deployed, or validated Accused Wi-Fi Devices, which embody the claimed system.

269. Microsoft infringed the ’210 Patent when, for example, its service professionals tested the throughput that such Accused Wi-Fi Devices achieved during testing in various wireless channel conditions in which the Accused Wi-Fi Devices uses OFDM and operates in a MIMO transmission mode such as space time block coding, spatial expansion, or transmit beamforming.

270. Microsoft infringed the method claims of the ’210 Patent when its service professionals used, installed, tested, deployed, or validated Accused Wi-Fi Devices at least because the method steps are performed automatically by such Accused Wi-Fi Devices whenever it uses OFDM and operates in certain MIMO transmission modes.

271. End users of Accused Wi-Fi Devices are also direct infringers of the claims of the ’210 Patent. Microsoft has induced infringement of at least one claim of the ’210 Patent, literally and/or under the doctrine of equivalents, by among other things, actively, knowingly, and/or recklessly aiding and abetting others (including Microsoft’s customers and end users) through activities such as supporting and marketing with the specific intent to induce others to directly use without license or authority, processes that fall within the scope of at least one claim of the ’210 Patent.

272. Microsoft has contributed to the infringement of at least one claim of the '210 Patent, literally and/or under the doctrine of equivalents, by among other things, providing its 802.11n or ac compliant Accused Wi-Fi Devices that embody a material part of the claimed inventions of the '210 Patent, knowing that such products are especially made or especially adapted for use in an infringement of these claims, and that they are not staple articles or commodities of commerce suitable for substantial non-infringing use. Microsoft also contributed to its users' and customers' infringement of the '210 Patent.

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

274. Based on all of the foregoing allegations in the preceding paragraphs, which are incorporated herein by reference, Microsoft knew or should have known that there existed an objectively high likelihood that its actions constituted infringement of a valid patent. All of the foregoing allegations set forth above demonstrate a deliberate and conscious decision to infringe, willfully, or at least a reckless disregard for, MTel's patent rights, entitling MTel to up to treble damages.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff MTel prays for the following relief:

A. That Microsoft be adjudged to have infringed the Patents-in-Suit literally and under the doctrine of equivalent, pursuant to 35 U.S.C. §271;

B. That Microsoft be adjudged to have consciously and willfully infringed the Patents-in-Suit;

C. That Microsoft, its officers, agents, servants, employees, attorneys, and those persons in active concert or participation with any of them, be preliminarily and permanently restrained and enjoined from infringing the Patents-in-Suit;

D. That Plaintiff be awarded damages sufficient to compensate Plaintiff for Microsoft's infringement, pursuant to 35 U.S.C. §284;

E. That Microsoft be directed to pay Plaintiff pre-judgment and post-judgment interest and costs for Plaintiff's bringing this lawsuit, in accordance with 35 U.S.C. §284;

F. That Microsoft be directed to pay enhanced damages, including Plaintiff's attorneys' fees incurred in connection with this lawsuit pursuant to 35 U.S.C. §285; and

G. That Plaintiff receives such other and further relief as this Court may deem just or proper.

DEMAND FOR JURY TRIAL

Plaintiff respectfully demands a trial by jury of any and all issues triable of right before a jury.

Dated: June 16, 2016

Respectfully Submitted,

/s/ Daniel R. Scardino

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CERTIFICATE OF SERVICE

I hereby certify that on June 16, 2016, the foregoing document was filed through the CM/ECF system of the U.S. District Court, Eastern District of Texas, which served a copy by electronic mail on all counsel of record deemed to have consented to electronic service.

/s/ Daniel R. Scardino
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