RUSS, AUGUST & KABAT
Alexander C. Giza, SBN 212327
agiza@raklaw.com
Andrew D. Weiss, SBN 232974
aweiss@raklaw.com
Jeffrey Z.Y. Liao, SBN 288994
jliao@raklaw.com
12424 Wilshire Boulevard, 12th Floor
Los Angeles, California 90025
Telephone: (310) 826-7474
Facsimile: (310) 826-6991

Attorneys for Plaintiff
Modern Telecom Systems LLC

UNITED STATES DISTRICT COURT

CENTRAL DISTRICT OF CALIFORNIA

SOUTHERN DIVISION

MODERN TELECOM SYSTEMS LLC, a California limited liability company,

Plaintiff,

vs.

MICROSOFT CORPORATION, a Washington corporation.

Defendant.

Case No. 8:14-cv-00925

COMPLAINT FOR PATENT INFRINGEMENT

JURY TRIAL DEMANDED

This is an action for patent infringement in which Plaintiff Modern Telecom Systems LLC ("MTS") makes the following allegations against Microsoft Corporation ("Microsoft"):

THE PARTIES

1. MTS is a California limited liability company.

2. On information and belief, Microsoft Corporation is a Washington corporation with its principal place of business at One Microsoft Way, Redmond,

Washington 98052-6399. On information and belief, Microsoft Corporation can be served through its registered agent, Corporation Service Company which will do business in California as CSC – Lawyers Incorporating Service, 2710 Gateway Oaks Dr Ste 150N, Sacramento, CA 95833.

JURISDICTION

3. This action arises under the patent laws of the United States, 35 U.S.C. § 1, et seq., including § 271. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

4. This Court has personal jurisdiction over Microsoft because, on information and belief, Microsoft has done business in this District, has committed and continues to commit acts of patent infringement in this District, and/or has harmed and continues to harm MTS in this District, by, among other things, using, selling, offering for sale, and/or importing infringing products and services in this District. In addition, Microsoft is registered to do business in California.

5. Venue is proper in this District under 28 U.S.C. §§ 1391(b)-(d) and 1400(b) because, among other reasons, Microsoft is subject to personal jurisdiction in this District, and has committed and continues to commit acts of patent infringement in this District. On information and belief, for example, Microsoft has used, sold, offered for sale, and/or imported infringing products or services in this District.

FACTUAL BACKGROUND

6. The technology claimed in the patents asserted in this action was invented during the research and development activities of the Rockwell, Conexant, and Mindspeed family of companies. In 1999, Rockwell International spun off Rockwell Semiconductor group as Conexant Systems Inc. Conexant inherited Rockwell's mixed signal semiconductor expertise and intellectual property portfolio, and was focused on developing semiconductor products for a broad range of communications applications. These applications included wireline

and wireless voice and data communication networks. Conexant's Internet Infrastructure group was incorporated as Mindspeed Technologies (as a wholly-owned subsidiary) in 2001 and spun-off as an independent entity in 2003. Mindspeed's focus is on semiconductor and software solutions for Internet access devices, switching fabric, and network processors.

7. MTS is the owner of the patents asserted in this action and has the exclusive right to sue for past, present, and future infringement of these patents. MTS assumed all the rights and obligations related to these patents from Glocom Patents Licensing, LLC, which in turn assumed all the rights and obligations related to these patents from V-Dot Technologies, LLC (formerly V-Dot Technologies, Limited) ("VDOT"), which in turn assumed all the rights and obligations related to these patents from Telecom Technology Licensing, LLC ("TTL"), which in turn assumed all the rights and obligations related to these patents from Mindspeed Technologies, Inc.

8. MTS does not make, offer for sale, or sell within the United States any article covered by the patents asserted in this action, nor does MTS import any article covered by the patents asserted in this action into the United States. Accordingly, MTS has complied with 35 USC § 287.

COUNT I

INFRINGEMENT OF U.S. PATENT NO. 6,504,886

9. United States Patent No. 6,504,886 ("the '886 patent"), entitled "Communication of an impairment learning sequence according to an impairment learning sequence descriptor," issued on January 7, 2003 from United States Patent Application No. 09/956,207 filed on September 19, 2001. Application No. 09/956,207 is a Continuation of U.S. Patent Application Ser. No. 08/969,971, entitled Method and Apparatus for Generating a Line Impairment Learning Signal for a Data Communication System, filed Nov. 13, 1997 now U.S. Pat. No. 6,332,009, which is a Continuation-In-Part of U.S. Patent Application Ser. No.

08/922,851, entitled Method and Apparatus for Generating a Programmable Synchronization Signal for a Data Communication System, filed Sep. 3, 1997, now U.S. Pat. No. 6,212,247. A true and correct copy of the '886 patent is attached as Exhibit A.

10. Microsoft sells and offers for sale, in the United States and in this District, the following products through its website at http://www.microsoftstore.com:

a. Surface RT tablet computers (see http://www.microsoftstore.com/store/msusa/en_US/pdp/Surface-RT/productID.286870700);

b. Surface 2 tablet computers (see http://www.microsoftstore.com/store/msusa/en_US/pdp/Surface-2/productID.286867200);

c. Surface Pro 2 tablet computers (see http://www.microsoftstore.com/store/msusa/pdp/en_US/Surface-Pro-2/productID.286866600?Icid=SurfaceCat_StickyNav_3_SP2_11.10.13);

d. Surface Pro 3 tablet computers (see http://surface.microsoftstore.com/store/msusa/en_US/pdp/Surface-Pro-3/productID.300190600?tid=s7rxSmyp2_dc&cid=5250&pcrid=36612312173&pkw=%2Bmicrosoft%20%2Bsurface%20%2B3%20price&pmt=b&WT.srch=1&WT.mc_id=pointitsem_Microsoft+US_google_5+-+Surface&WT.term=%2Bmicrosoft%20%2Bsurface%20%2B3%20price&WT.campaign=5+-+Surface&WT.content=7rxSmyp2&WT.source=google&WT.medium=cpc)

e. Xbox One Consoles (see http://www.microsoftstore.com/store/msusa/en_US/html/pbPage.PDPS/productID.304306700).

11. Microsoft has been and now is directly infringing one or more claims of the '886 Patent, in this judicial District and elsewhere in the United States, by, among other things, practicing a method of communicating a learning sequence descriptor for use in constructing a learning sequence, said method comprising: transmitting a first parameter specifying a number of segments in said learning sequence; transmitting a second parameter specifying a sign pattern of each of said segments; and transmitting a third parameter specifying a training pattern of each of said segments, wherein said training pattern is indicative of an ordering of a reference symbol and a training symbol in each of said segments. Upon information and belief, Microsoft practices the claimed method during its internal testing and repair of its Surface RT, Surface 2, Surface Pro 2, and Surface Pro 3 tablet computers and Xbox One consoles when such devices are connected to a network using the IEEE 802.11n Wi-Fi protocol standard. See http://www.microsoft.com/surface/en-us/support/warranty-service-and-recovery/how-do-i-get-my-surface-serviced.

12. Microsoft has had knowledge of the '886 patent since at least the filing of this Complaint for Patent Infringement or shortly thereafter, and Microsoft has induced its customers, users of Xbox One consoles, to practice a method of communicating a learning sequence descriptor for use in constructing a learning sequence, said method comprising: transmitting a first parameter specifying a number of segments in said learning sequence; transmitting a second parameter specifying a sign pattern of each of said segments; and transmitting a third parameter specifying a training pattern of each of said segments, wherein said training pattern is indicative of an ordering of a reference symbol and a training symbol in each of said segments.

13. Microsoft instructs its customers, users of the Xbox One console, that "**Superior wireless performance and coverage throughout the home**: Xbox One is equipped with a gigabit Ethernet port and 802.11n wireless. With 802.11n, Xbox

One can use the 5GHz wireless band which eliminates considerable interference from other devices in the home, such as cordless phones, Bluetooth devices and microwaves. Xbox One uses two wireless antennas, versus one in Xbox 360. This provides dramatically better coverage and sustained performance, which means faster internet speeds in more areas of your home." (see http://news.xbox.com/2013/06/connected).

14. In touting the benefits of using 802.11n wireless connections with Xbox One consoles to "eliminate[] considerable interference from other devices in the home, such as cordless phones, Bluetooth devices and microwaves" and enjoy "dramatically better coverage and sustained performance, which means faster internet speeds in more areas of your home", Microsoft specifically intended to encourage its customers to use Xbox One consoles to connect to Wi-Fi networks using the 802.11n protocol in an infringing manner, knowing that the use of such protocols constituted infringement of the '886 patent. Thus, Microsoft has induced its customers to infringe the '886 Patent literally and/or under the doctrine of equivalents. Upon information and belief, Microsoft acted with the specific intent to induce its customers to connect to Wi-Fi networks using the method claimed by the '886 Patent by continuing the above-mentioned activities with knowledge of the '886 Patent.

COUNT II

INFRINGEMENT OF U.S. PATENT NO. 6,332,009

15. United States Patent No. 6,332,009 ("the '009 patent"), entitled "Method and apparatus for generating a line impairment learning signal for a data communication system," issued on December 18, 2001 from United States Patent Application No. 08/969,971 filed on November 13, 1997. Application No. 08/969,971 is a Continuation-In-Part of U.S. Patent Application Ser. No. 08/922,851, entitled Method and Apparatus for Generating a Programmable

Synchronization Signal for a Data Communication System, filed Sep. 3, 1997. A true and correct copy of the '009 patent is attached as Exhibit B.

16. Microsoft has been and now is directly infringing one or more claims of the '009 Patent, in this judicial District and elsewhere in the United States, by, among other things, practicing an impairment learning method for use over a communication channel, said method comprising: transmitting a learning sequence descriptor over said communication channel, said learning sequence descriptor having a training symbol order; receiving a learning signal over said communication channel, said learning signal having a member of segments, each of said segments being associated with a sequence of symbols configured in accordance with said learning sequence descriptor, wherein said training symbol order is indicative of an assignment of a plurality of training symbols to said number of segments; and learning an impairment of said communication channel according to said learning signal. Upon information and belief, Microsoft practices the claimed method during its internal testing and repair of its Surface RT, Surface 2, Surface Pro 2, and Surface Pro 3 tablet computers and Xbox One consoles when such devices are connected to a network using the IEEE 802.11n Wi-Fi protocol standard. See http://www.microsoft.com/surface/en-us/support/warranty-service-and-recovery/how-do-i-get-my-surface-serviced.

17. Microsoft has had knowledge of the '009 patent since at least the filing of this Complaint for Patent Infringement or shortly thereafter, and Microsoft has induced its customers, users of Xbox One consoles, to practice an impairment learning method for use over a communication channel, said method comprising: transmitting a learning sequence descriptor over said communication channel, said learning sequence descriptor having a training symbol order; receiving a learning signal over said communication channel, said learning signal having a member of segments, each of said segments being associated with a sequence of symbols configured in accordance with said learning sequence descriptor, wherein said

training symbol order is indicative of an assignment of a plurality of training symbols to said number of segments; and learning an impairment of said communication channel according to said learning signal.

18. Microsoft also instructs its customers, users of the Xbox One console, that "**Superior wireless performance and coverage throughout the home**: Xbox One is equipped with a gigabit Ethernet port and 802.11n wireless. With 802.11n, Xbox One can use the 5GHz wireless band which eliminates considerable interference from other devices in the home, such as cordless phones, Bluetooth devices and microwaves. Xbox One uses two wireless antennas, versus one in Xbox 360. This provides dramatically better coverage and sustained performance, which means faster internet speeds in more areas of your home." (see http://news.xbox.com/2013/06/connected).

19. In touting the benefits of using 802.11n wireless connections with Xbox One consoles to "eliminate[] considerable interference from other devices in the home, such as cordless phones, Bluetooth devices and microwaves" and enjoy "dramatically better coverage and sustained performance, which means faster internet speeds in more areas of your home", Microsoft specifically intended to encourage its customers to use Xbox One consoles to connect to Wi-Fi networks using the 802.11n protocol in an infringing manner, knowing that the use of such protocols constituted infringement of the '009 patent. Thus, Microsoft has induced its customers to infringe the '009 Patent literally and/or under the doctrine of equivalents. Upon information and belief, Microsoft acted with the specific intent to induce its customers to connect to Wi-Fi networks using the method claimed by the '009 Patent by continuing the above-mentioned activities with knowledge of the '009 Patent.

COUNT III

INFRINGEMENT OF U.S. PATENT NO. 5,970,100

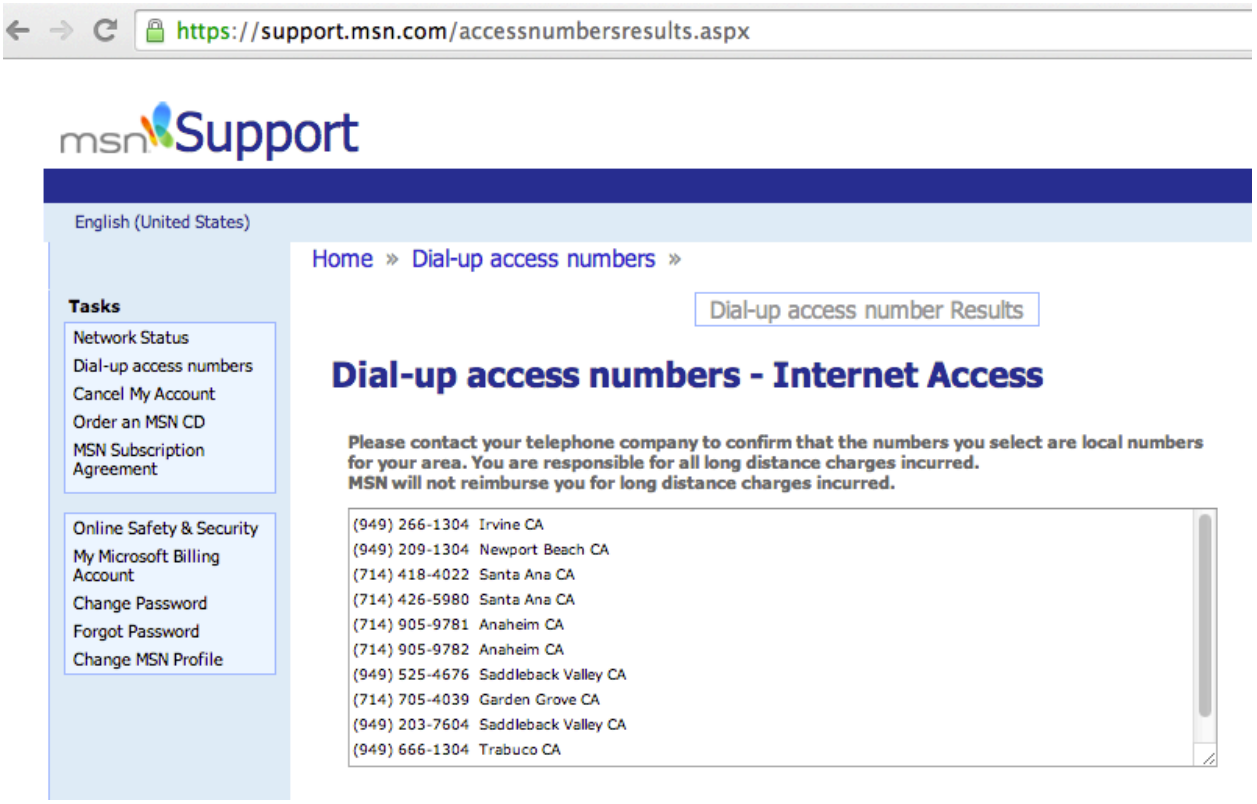
20. United States Patent No. 5,970,100 ("the '100 patent"), entitled "System for controlling and shaping the spectrum and redundancy of signal-point limited transmission," issued on October 19, 1999 from United States Patent Application No. 09/047,802 filed on March 25, 1998. Application No. 09/047,802 is a continuation-in-part of U.S. Pat. Application Serial No. 08/756,383 filed on November 27, 1996. Application No. 08/756,383 is a continuation-in-part of U.S. Pat. Application Ser. No. 08/746,731, filed November 15, 1996. A true and correct copy of the '100 patent is attached as Exhibit C.

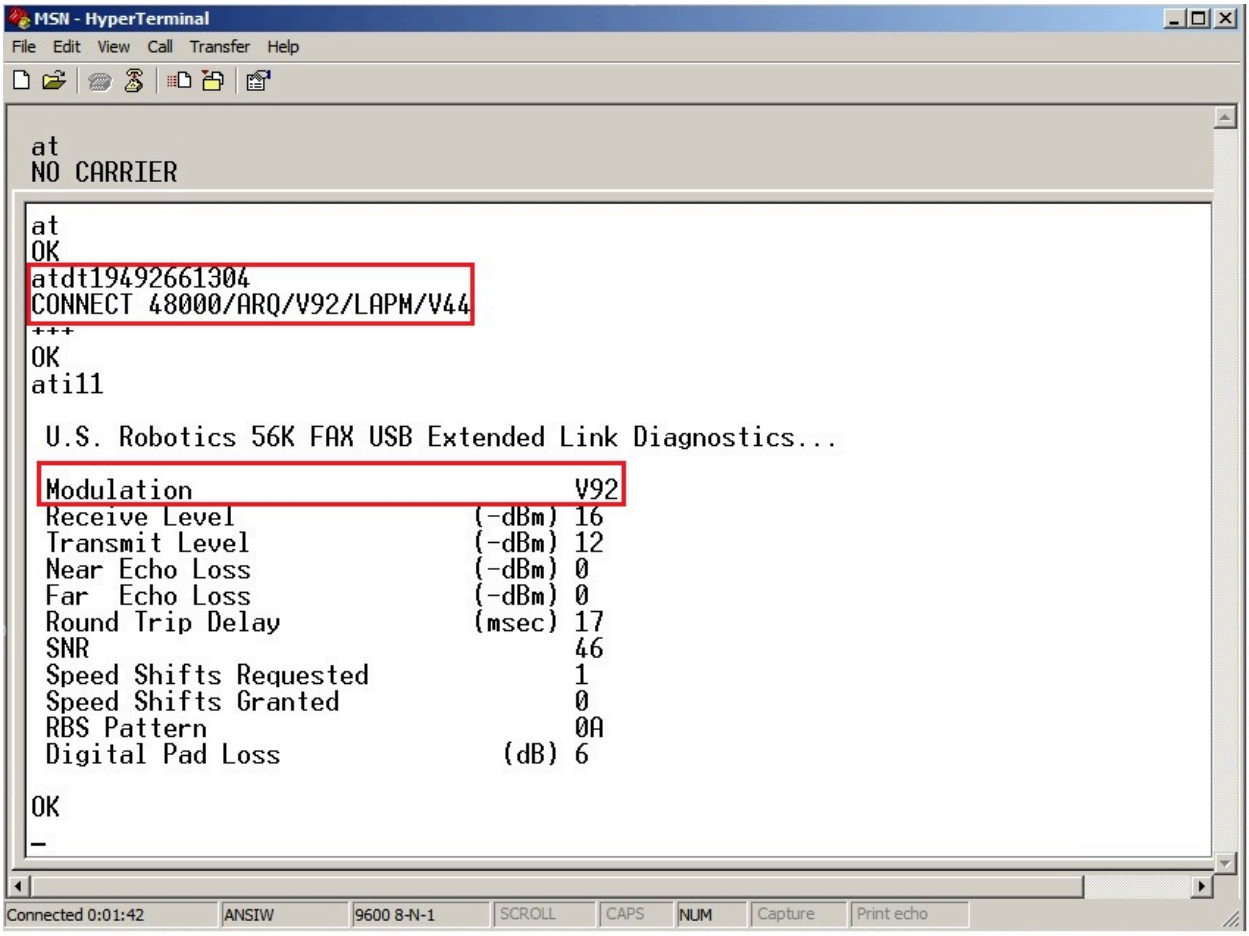
21. Microsoft has been and now is directly infringing one or more claims of the '100 patent, in this judicial District and elsewhere in the United States, by practicing a method of spectrally shaping transmitted samples with a set of predetermined frequency characteristics and a predetermined set of allowable transmitted signal levels, wherein a transmitted sample is either of an unmodified source sample or a dependent sample, the transmitted samples being transmitted in data frames, said method comprising the steps of: (a) calculating, for each of the transmitted samples, a Running Filter Sum of unwanted components up to the current sample, wherein said Running Filter Sum is based on a biquad filter; (b) computing an objective function in accordance with the Running Filter Sum obtained in Step (a); (c) selecting, for each data frame of transmitted samples, at least one redundant sample to be added or modified within the data frame such that the objective function of Step (b) is optimized. Upon information and belief, Microsoft practices the claimed method during testing and commercial operation of its MSN dial-up internet service (see http://get.msn.com) when Microsoft customers connect using the ITU V.90 or V.92 (56Kbps) connection protocol.

22. Microsoft has had knowledge of the '100 patent since at least the filing of the Complaint for Patent Infringement or shortly thereafter, and Microsoft has induced its vendors, providers of dial-up modem banks that support connections using the ITU V.90 or V.92 (56Kbps) protocol, to practice a method

of spectrally shaping transmitted samples with a set of predetermined frequency characteristics and a predetermined set of allowable transmitted signal levels, wherein a transmitted sample is either of an unmodified source sample or a dependent sample, the transmitted samples being transmitted in data frames, said method comprising the steps of: (a) calculating, for each of the transmitted samples, a Running Filter Sum of unwanted components up to the current sample, wherein said Running Filter Sum is based on a biquad filter; (b) computing an objective function in accordance with the Running Filter Sum obtained in Step (a); (c) selecting, for each data frame of transmitted samples, at least one redundant sample to be added or modified within the data frame such that the objective function of Step (b) is optimized.

23. For example, when a V.92-compatible modem is used to dial into the MSN service using a dial-up access number provided by Microsoft at https://support.msn.com/, a V.92 connection will be established:





24. On information and belief, each of the dial-up access numbers provided by Microsoft corresponds to a dial-up modem bank operated by one of Microsoft's vendors. Upon information and belief, in contracting with its vendors to provide dial-up modem banks that support connections using the V.90 or V.92 protocol so that Microsoft can advertise to customers and potential customers that its access numbers support V.90 or V.92 connections, Microsoft specifically intended to encourage its vendors to connect to its customers' modems using the V.90 or V.92 protocol, knowing that the use of such protocols constituted infringement of the '100 patent. Thus, Microsoft has induced its vendors to infringe the '100 Patent literally and/or under the doctrine of equivalents. Upon information and belief, Microsoft acted with the specific intent to induce its vendors to connect to its customers' modems using the methods claimed by the

'100 Patent by continuing the above-mentioned activities with knowledge of the '100 Patent.

COUNT IV

INFRINGEMENT OF U.S. PATENT NO. 6,163,570

25. United States Patent No. 6,163,570 (the '570 patent"), entitled "Methods and apparatus for verifying transmit power levels in a signal point limited transmission system," issued on December 19, 2000 from United States Patent Application No. 09/075,719 filed on May 11, 1998. A true and correct copy of the '570 patent is attached as Exhibit D.

26. Microsoft has been and now is directly infringing one or more claims of the '570 patent, in this judicial District and elsewhere in the United States, by practicing a method for verifying transmit power levels in a signal point limited transmission system, wherein said system having: a first device configured to communicate with a second device over a communication channel; said method comprising the steps of: receiving at said first device, a plurality of signal points from said second device, said plurality of signal points having a first computed transmit power, as determined by said second device, less than or equal to a transmit power limit, said first computed transmit power being calculated in accordance with a transmit power calculation formula; calculating, at said first device, in accordance with said transmit power calculation formula, a second computed transmit power of said plurality of signal points; and comparing, at said first device, said second computed transmit power with said transmit power limit, to determine whether said second computed transmit power is less than or equal to said transmit power limit. Upon information and belief, Microsoft practices the claimed method during testing of and commercial operation of its MSN dial-up internet service (see http://get.msn.com) when Microsoft customers connect using the ITU V.90 or V.92 (56Kbps) connection protocol.

27. Microsoft has had knowledge of the '570 patent since at least the filing of the Complaint for Patent Infringement or shortly thereafter, and Microsoft has induced its vendors, providers of dial-up modem banks that support connections using the ITU V.90 or V.92 (56Kbps) protocol, to practice a method for verifying transmit power levels in a signal point limited transmission system, wherein said system having: a first device configured to communicate with a second device over a communication channel; said method comprising the steps of: receiving at said first device, a plurality of signal points from said second device, said plurality of signal points having a first computed transmit power, as determined by said second device, less than or equal to a transmit power limit, said first computed transmit power being calculated in accordance with a transmit power calculation formula; calculating, at said first device, in accordance with said transmit power calculation formula, a second computed transmit power of said plurality of signal points; and comparing, at said first device, said second computed transmit power with said transmit power limit, to determine whether said second computed transmit power is less than or equal to said transmit power limit.

28. For example, when a V.92-compatible modem is used to dial into the MSN service using a dial-up access number provided by Microsoft at https://support.msn.com/, a V.92 connection will be established:

https://support.msn.com/accessnumbersresults.aspx

msnSupport

English (United States)

Home » Dial-up access numbers »

Tasks

- Network Status
- Dial-up access numbers
- Cancel My Account
- Order an MSN CD
- MSN Subscription Agreement
- Online Safety & Security
- My Microsoft Billing Account
- Change Password
- Forgot Password
- Change MSN Profile

Dial-up access number Results

Dial-up access numbers - Internet Access

Please contact your telephone company to confirm that the numbers you select are local numbers for your area. You are responsible for all long distance charges incurred. MSN will not reimburse you for long distance charges incurred.

(949) 266-1304	Irvine CA
(949) 209-1304	Newport Beach CA
(714) 418-4022	Santa Ana CA
(714) 426-5980	Santa Ana CA
(714) 905-9781	Anaheim CA
(714) 905-9782	Anaheim CA
(949) 525-4676	Saddleback Valley CA
(714) 705-4039	Garden Grove CA
(949) 203-7604	Saddleback Valley CA
(949) 666-1304	Trabuco CA

MSN - HyperTerminal

File Edit View Call Transfer Help

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at
NO CARRIER

at
OK
atdt19492661304
CONNECT 48000/ARQ/V92/LAPM/V44
+++
OK
ati11

 U.S. Robotics 56K FAX USB Extended Link Diagnostics...

Modulation                          V92
Receive Level                (-dBm) 16
Transmit Level               (-dBm) 12
Near Echo Loss               (-dBm) 0
Far  Echo Loss               (-dBm) 0
Round Trip Delay             (msec) 17
SNR                                 46
Speed Shifts Requested              1
Speed Shifts Granted                0
RBS Pattern                         0A
Digital Pad Loss               (dB) 6

OK
-
```

Connected 0:01:42 | ANSIW | 9600 8-N-1 | SCROLL | CAPS | NUM | Capture | Print echo

29. On information and belief, each of the dial-up access numbers provided by Microsoft corresponds to a dial-up modem bank operated by one of Microsoft's vendors. Upon information and belief, in contracting with its vendors to provide dial-up modem banks that support connections using the V.90 or V.92 protocol so that Microsoft can advertise to customers and potential customers that its access numbers support V.90 or V.92 connections, Microsoft specifically intended to encourage its vendors to connect to its customers' modems using the V.90 or V.92 protocol, knowing that the use of such protocols constituted infringement of the '570 patent. Thus, Microsoft has induced its vendors to infringe the '570 Patent literally and/or under the doctrine of equivalents. Upon information and belief, Microsoft acted with the specific intent to induce its vendors to connect to its customers' modems using the methods claimed by the '570 Patent by continuing the above-mentioned activities with knowledge of the '570 Patent.

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30. By engaging in the conduct described herein, Microsoft has injured MTS and is thus liable for infringement of the '886 patent, '009 patent, '100 patent, and '570 patent pursuant to 35 U.S.C. § 271.

31. Microsoft has committed these acts of infringement without license or authorization.

32. As a result of Microsoft's infringement of the '886 patent, '009 patent, '100 patent, and '570 patent, MTS has suffered monetary damages and is entitled to a money judgment in an amount adequate to compensate for Microsoft's infringement, but in no event less than a reasonable royalty for the use made of the invention by Microsoft, together with interest and costs as fixed by the Court.

33. MTS has also suffered and will continue to suffer severe and irreparable harm unless this Court issues a permanent injunction prohibiting Microsoft, its agents, servants, employees, representatives, and all others acting in

active concert therewith from infringing the '886 patent, '009 patent, '100 patent, and '570 patent. In particular, Microsoft's disregard for MTS's property rights threatens MTS's relationships with the actual and potential licensees of this intellectual property, inasmuch as Microsoft will derive a competitive advantage over any of MTS's current or future licensees by using MTS's patented technology without paying compensation for such use. Accordingly, unless and until Microsoft's continued acts of infringement are enjoined, MTS will suffer further irreparable harm for which there is no adequate remedy at law.

PRAYER FOR RELIEF

WHEREFORE, MTS prays that this Court grant it the following relief:

A. A judgment in favor of MTS that Microsoft has infringed the '886 patent, '009 patent, '100 patent, and '570 patent;

B. A permanent injunction enjoining Microsoft and its officers, directors, agents, servants, affiliates, employees, divisions, branches, subsidiaries, parents, and all others acting in active concert therewith from infringement of the '886 patent, '009 patent, '100 patent, and '570 patent, or such other equitable relief the Court determines is warranted;

C. A judgment and order requiring Microsoft to pay MTS its damages, costs, expenses, and prejudgment and post-judgment interest for Defendant's infringement of the '886 patent, '009 patent, '100 patent, and '570 patent as provided under 35 U.S.C. § 284;

D. A judgment and order finding that this is an exceptional case within the meaning of 35 U.S.C. § 285 and awarding to MTS its reasonable attorneys' fees against Microsoft;

E. A judgment and order requiring Microsoft to provide an accounting and to pay supplemental damages to MTS, including without limitation, pre-judgment and post-judgment interest; and

F. Any and all other relief to which MTS may be entitled.

DEMAND FOR JURY TRIAL

MTS, under Rule 38 of the Federal Rules of Civil Procedure, requests a trial by jury of any issues so triable by right.

DATED: June 13, 2014

RUSS, AUGUST & KABAT
Alexander C. Giza, SBN 212327
agiza@raklaw.com
Andrew D. Weiss, SBN 232974
aweiss@raklaw.com
Jeffrey Z.Y. Liao, SBN 288994
jliao@raklaw.com
12424 Wilshire Boulevard, 12th Floor
Los Angeles, California 90025
Telephone: (310) 826-7474
Facsimile: (310) 826-6991

Attorneys for Plaintiff
Modern Telecom Systems LLC