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*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.

ASUSTEK COMPUTER INC., a  
Taiwan corporation, and ASUS  
COMPUTER INTERNATIONAL, a  
California corporation,

Defendants.

Case No. 8:14-CV-00916

**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 ASUSTeK Computer Inc. and ASUS Computer International (collectively, “ASUS”):

**THE PARTIES**

1. MTS is a California limited liability company.
2. On information and belief, ASUSTeK Computer Inc. is a Taiwan corporation with its principal place of business at 15, Li-Te Road, Beitou District,

1 Taipei City, Taiwan. On information and belief, ASUSTeK Computer Inc. does  
2 business in the United States, including in this state and in this district, through its  
3 subsidiary, ASUS Computer International, which is also named as a Defendant in  
4 this action.

5 3. On information and belief, ASUS Computer International is a  
6 California corporation with its principal place of business at 800 Corporate Way,  
7 Fremont, California 94539. On information and belief, ASUS Computer  
8 International can be served through its registered agent, C T Corporation System,  
9 818 W Seventh St, Los Angeles, CA 90017.

### 10 JURISDICTION

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

14 5. This Court has personal jurisdiction over ASUS because, on  
15 information and belief, ASUS has done business in this District, has committed  
16 and continues to commit acts of patent infringement in this District, and/or has  
17 harmed and continues to harm MTS in this District, by, among other things, using,  
18 selling, offering for sale, and/or importing infringing products and services in this  
19 District. In addition, ASUS Computer International is incorporated under the laws  
20 of California, and has its principal place of business in California.

21 6. Venue is proper in this District under 28 U.S.C. §§ 1391(b)-(d) and  
22 1400(b) because, among other reasons, ASUS is subject to personal jurisdiction in  
23 this District, and has committed and continues to commit acts of patent  
24 infringement in this District. On information and belief, for example, ASUS has  
25 used, sold, offered for sale, and/or imported infringing products in this District.

### 26 FACTUAL BACKGROUND

27 7. The technology claimed in the patents asserted in this action was  
28 invented during the research and development activities of the Rockwell,

1     Conexant, and Mindspeed family of companies. In 1999, Rockwell International  
 2     spun off Rockwell Semiconductor group as Conexant Systems Inc. Conexant  
 3     inherited Rockwell’s mixed signal semiconductor expertise and intellectual  
 4     property portfolio, and was focused on developing semiconductor products for a  
 5     broad range of communications applications. These applications included wireline  
 6     and wireless voice and data communication networks. Conexant’s Internet  
 7     Infrastructure group was incorporated as Mindspeed Technologies (as a wholly-  
 8     owned subsidiary) in 2001 and spun-off as an independent entity in 2003.  
 9     Mindspeed’s focus is on semiconductor and software solutions for Internet access  
 10    devices, switching fabric, and network processors.

11         8.     MTS is the owner of the patents asserted in this action and has the  
 12    exclusive right to sue for past, present, and future infringement of these patents.  
 13    MTS assumed all the rights and obligations related to these patents from Glacom  
 14    Patents Licensing, LLC, which in turn assumed all the rights and obligations  
 15    related to these patents from V-Dot Technologies, LLC (formerly V-Dot  
 16    Technologies, Limited) (“VDOT”), which in turn assumed all the rights and  
 17    obligations related to these patents from Telecom Technology Licensing, LLC  
 18    (“TTL”), which in turn assumed all the rights and obligations related to these  
 19    patents from Mindspeed Technologies, Inc.

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

**COUNT I**

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

24         10.    United States Patent No. 6,504,886 (“the ‘886 patent”), entitled  
 25    “Communication of an impairment learning sequence according to an impairment  
 26    learning sequence descriptor,” issued on January 7, 2003 from United States Patent  
 27    No. 6,504,886 (“the ‘886 patent”), entitled  
 28    “Communication of an impairment learning sequence according to an impairment  
 learning sequence descriptor,” issued on January 7, 2003 from United States Patent

1 Application No. 09/956,207 filed on September 19, 2001. Application No.  
2 09/956,207 is a Continuation of U.S. Patent Application Ser. No. 08/969,971,  
3 entitled Method and Apparatus for Generating a Line Impairment Learning Signal  
4 for a Data Communication System, filed Nov. 13, 1997 now U.S. Pat. No.  
5 6,332,009, which is a Continuation-In-Part of U.S. Patent Application Ser. No.  
6 08/922,851, entitled Method and Apparatus for Generating a Programmable  
7 Synchronization Signal for a Data Communication System, filed Sep. 3, 1997, now  
8 U.S. Pat. No. 6,212,247. A true and correct copy of the '886 patent is attached as  
9 Exhibit A.

10 11. ASUS infringes the '886 patent in at least two ways – first, with  
11 respect to its V.90 modem products, and second, with respect to its 802.11n or  
12 802.11ac compatible devices.

13 12. ASUS has been and now is directly infringing one or more claims of  
14 the '886 Patent, in this judicial District and elsewhere in the United States, by,  
15 among other things, practicing a method of communicating a learning sequence  
16 descriptor for use in constructing a learning sequence, said method comprising:  
17 transmitting a first parameter specifying a number of segments in said learning  
18 sequence; transmitting a second parameter specifying a sign pattern of each of said  
19 segments; and transmitting a third parameter specifying a training pattern of each  
20 of said segments, wherein said training pattern is indicative of an ordering of a  
21 reference symbol and a training symbol in each of said segments. Upon  
22 information and belief, ASUS practices or practiced the claimed method during its  
23 internal testing and while servicing or repairing, through its Authorized Service  
24 Centers acting at ASUS' direction and control  
25 (<http://www.service.asus.com/#!/service-centers/c1tqs>), ASUS laptop computers  
26 containing dial-up modems that operate according to the International  
27 Telecommunications Union ("ITU") V.90 (56Kbps) specification, including the  
28

1 ASUS G50V containing the Agere Delphi D40 Modem AM5 supporting V.90  
2 (56K).

3 13. ASUS also infringes the ‘886 patent through its 802.11n and 802.11ac  
4 compatible products. For example, upon information and belief, ASUS sells and  
5 offers for sale, in the United States and in this District, RT-AC68U, RT-AC66U,  
6 and RT-AC56U routers, PCE-AC68, PCE-AC56, USB-AC56, and USB-AC53 Wi-  
7 Fi adapters, and the ASUS ROG G750JH laptop.

8 14. ASUS has been and now is directly infringing one or more claims of  
9 the ‘886 Patent, in this judicial District and elsewhere in the United States, by,  
10 among other things, practicing a method of communicating a learning sequence  
11 descriptor for use in constructing a learning sequence, said method comprising:  
12 transmitting a first parameter specifying a number of segments in said learning  
13 sequence; transmitting a second parameter specifying a sign pattern of each of said  
14 segments; and transmitting a third parameter specifying a training pattern of each  
15 of said segments, wherein said training pattern is indicative of an ordering of a  
16 reference symbol and a training symbol in each of said segments. Upon  
17 information and belief, ASUS practices the claimed method during its internal  
18 testing and while servicing or repairing, through its Authorized Service Centers  
19 acting at ASUS’ direction and control ([http://www.service.asus.com/#!/service-](http://www.service.asus.com/#!/service-centers/c1tqs)  
20 [centers/c1tqs](http://www.service.asus.com/#!/service-centers/c1tqs)), its RT-AC68U, RT-AC66U, and RT-AC56U routers, PCE-AC68,  
21 PCE-AC56, USB-AC56, and USB-AC53 Wi-Fi adapters, and the ASUS ROG  
22 G750JH laptop.

23 15. ASUS has had knowledge of the ‘886 patent since at least the filing of  
24 the Complaint for Patent Infringement or shortly thereafter, and ASUS has induced  
25 its customers, users of RT-AC68U, RT-AC66U, and RT-AC56U routers, PCE-  
26 AC68, PCE-AC56, USB-AC56, and USB-AC53 Wi-Fi adapters, and the ASUS  
27 ROG G750JH laptop, to practice a method of communicating a learning sequence  
28 descriptor for use in constructing a learning sequence, said method comprising:

1 transmitting a first parameter specifying a number of segments in said learning  
2 sequence; transmitting a second parameter specifying a sign pattern of each of said  
3 segments; and transmitting a third parameter specifying a training pattern of each  
4 of said segments, wherein said training pattern is indicative of an ordering of a  
5 reference symbol and a training symbol in each of said segments.

6 16. For example, ASUS instructs its customers, users of RT-AC68U  
7 routers, that “The ASUS RT-AC68U is the world's fastest Wi-Fi router, with  
8 combined dual-band data rates of up to 1900 Mbps. 1300 Mbps 802.11ac at 5 GHz  
9 gives Gigabit wireless data rates, while Broadcom® TurboQAM™ technology  
10 super-charges 2.4 GHz 802.11n performance from 450 Mbps to 600 Mbps with  
11 compatible devices.” (see <http://www.asus.com/Networking/RTAC68U/>). ASUS  
12 also instructs its customers to “Select any of these wireless mode options to  
13 determine the types of wireless devices that can connect to your wireless router:

- 14 • Auto: Select Auto to allow 802.11AC, 802.11n, 802.11g, and 802.11b  
15 devices to connect to the wireless router.
- 16 • Legacy: Select Legacy to allow 802.11b/g/n devices to connect to the  
17 wireless router. Hardware that supports 802.11n natively, however, will only  
18 run at a maximum speed of 54Mbps.
- 19 • N only: Select N only to maximize wireless N performance. This setting  
20 prevents 802.11g and 802.11b devices from connecting to the wireless  
21 router.” (see

22 [http://support.asus.com/Download.aspx?SLanguage=en&m=RT-](http://support.asus.com/Download.aspx?SLanguage=en&m=RT-AC68U&p=11&os=8)  
23 [AC68U&p=11&os=8](http://support.asus.com/Download.aspx?SLanguage=en&m=RT-AC68U&p=11&os=8), E9183\_RT\_AC68U\_Manual.pdf, page 49)

24 17. ASUS also instructs its customers, users of RT-AC66U routers, that  
25 their “5th generation 802.11ac chipset gives you concurrent dual-band  
26 2.4GHz/5GHz for up to super-fast 1.75Gbps” (see  
27 <http://www.asus.com/Networking/RTAC66U/>). ASUS also instructs its customers  
28

1 to “Select any of these wireless mode options to determine the types of wireless  
 2 devices that can connect to your wireless router:

- 3 • Auto: Select Auto to allow 802.11AC, 802.11n, 802.11g, and 802.11b  
 4 devices to connect to the wireless router.
- 5 • Legacy: Select Legacy to allow 802.11b/g/n devices to connect to the  
 6 wireless router. Hardware that supports 802.11n natively, however, will only  
 7 run at a maximum speed of 54Mbps.
- 8 • N only: Select N only to maximize wireless N performance. This setting  
 9 prevents 802.11g and 802.11b devices from connecting to the wireless  
 10 router.” (see [http://dlcdnet.asus.com/pub/ASUS/wireless/RT-  
 11 AC66U/E7891\\_RT\\_AC66U\\_Manual.pdf](http://dlcdnet.asus.com/pub/ASUS/wireless/RT-AC66U/E7891_RT_AC66U_Manual.pdf), page 53)

12 18. ASUS also instructs its customers, users of RT-AC56U routers, that  
 13 their “5th generation 802.11ac chipset gives you concurrent dual-band  
 14 2.4GHz/5GHz at up to super-fast 1167Mbps” (see  
 15 <http://www.asus.com/Networking/RTAC56U/>). ASUS also instructs its customers  
 16 to “Select any of these wireless mode options to determine the types of wireless  
 17 devices that can connect to your wireless router:

- 18 • Auto: Select Auto to allow 802.11AC, 802.11n, 802.11g, and 802.11b  
 19 devices to connect to the wireless router.
- 20 • Legacy: Select Legacy to allow 802.11b/g/n devices to connect to the  
 21 wireless router. Hardware that supports 802.11n natively, however, will only  
 22 run at a maximum speed of 54Mbps.
- 23 • N only: Select N only to maximize wireless N performance. This setting  
 24 prevents 802.11g and 802.11b devices from connecting to the wireless  
 25 router.” (see  
 26 [http://support.asus.com/download.aspx?SLanguage=en&p=11&s=2&m=RT-  
 27 AC56U&os=8](http://support.asus.com/download.aspx?SLanguage=en&p=11&s=2&m=RT-AC56U&os=8), E8556\_RT-AC56U\_Manual.pdf, page 49).

1           19. ASUS also instructs its customers, users of PCE-AC68 Wi-Fi  
2 adapters, that its “5th generation 802.11ac chipset gives you dual-band,  
3 2.4GHz/5GHz for up to super-fast 1.30Gbps” (see  
4 <http://www.asus.com/Networking/PCEAC68/>).

5           20. ASUS also instructs its customers, users of PCE-AC56 Wi-Fi  
6 adapters, that it contains a “Next-generation 802.11ac chipset for super-fast  
7 connections up to 867 Mbps” (see <http://www.asus.com/Networking/PCEAC56/>).

8           21. ASUS also instructs its customers, users of USB-AC56 Wi-Fi  
9 adapters, that it supports “Next-generation 802.11ac Wi-Fi — up to three times  
10 faster than 2x2 802.11n adapters” (see  
11 <http://www.asus.com/Networking/USBAC56/>).

12           22. ASUS also instructs its customers, users of USB-AC53 Wi-Fi  
13 adapters, that this “Dual-band Wireless-AC1200 USB Adapter” has the following  
14 features: “Extra-fast 5th Generation Wi-Fi at up to 867Mbps/300Mbps”,  
15 “Selectable 5GHz/2.4GHz dual bands increase signal clarity for better HD  
16 multimedia”, and “Powerful 2x2 embedded patch antennas (PIFA type) improve  
17 signal range while integrating into the attractive design” (see  
18 <http://www.asus.com/Networking/USBAC53/>).

19           23. ASUS also instructs its customers, users of the ASUS ROG G750JH  
20 laptop, that “ASUS G750JH includes exclusive wireless technology in the form of  
21 Killer™ Wireless-N 1202. Wireless-N 1202 is a dual-band (2.4 and 5GHz), dual-  
22 stream MIMO, 802.11a/b/g/n adapter that delivers fast data-transfer speeds of up  
23 to 300Mbps/s. With built-in Bluetooth, Wi-Fi Direct™ technology for direct (peer-  
24 to-peer) connections and Advanced Stream Detect™ technology that intelligently  
25 prioritizes game-related traffic, Killer Wireless-N 1202 keeps you ahead of the  
26 game.” (see [http://www.asus.com/Notebooks\\_Ultrabooks/ASUS\\_ROG\\_G750JH/](http://www.asus.com/Notebooks_Ultrabooks/ASUS_ROG_G750JH/)).

27           24. In instructing its customers that RT-AC68U, RT-AC66U, and RT-  
28 AC56U routers and PCE-AC68, PCE-AC56, USB-AC56, and USB-AC53 Wi-Fi



1 adapters support Wi-Fi connections made using the 802.11ac protocol, in  
2 instructing its customers when to enable and disable support for the 802.11n  
3 protocol, and in touting the benefits of using the 802.11ac protocol to enjoy “super-  
4 fast” speeds, ASUS specifically intended to encourage its customers to use RT-  
5 AC68U, RT-AC66U, and RT-AC56U routers and PCE-AC68, PCE-AC56, USB-  
6 AC56, and USB-AC53 Wi-Fi adapters to use the 802.11ac protocol in an  
7 infringing manner, knowing that the use of such protocol constituted infringement  
8 of the ‘886 patent. In instructing its customers that the ASUS ROG G750JH laptop  
9 supports Wi-Fi connections made using the 802.11n protocol, and in touting the  
10 benefits of using the 802.11n protocol to enjoy “fast[] data-transfer speeds of up to  
11 300Mbps/s ... [to] keep[] you ahead of the game”, ASUS specifically intended to  
12 encourage its customers to use the ASUS ROG G750JH laptop to use the 802.11n  
13 protocol in an infringing manner, knowing that the use of such protocol constituted  
14 infringement of the ‘886 patent. Thus, ASUS has induced its customers to infringe  
15 the ‘886 Patent literally and/or under the doctrine of equivalents. Upon  
16 information and belief, ASUS acted with the specific intent to induce its customers  
17 to use the method claimed by the ‘886 Patent by continuing the above-mentioned  
18 activities with knowledge of the ‘886 Patent.

## 19 COUNT II

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

21 25. United States Patent No. 6,332,009 (“the ‘009 patent”), entitled  
22 “Method and apparatus for generating a line impairment learning signal for a data  
23 communication system,” issued on December 18, 2001 from United States Patent  
24 Application No. 08/969,971 filed on November 13, 1997. Application No.  
25 08/969,971 is a Continuation-In-Part of U.S. Patent Application Ser. No.  
26 08/922,851, entitled Method and Apparatus for Generating a Programmable  
27 Synchronization Signal for a Data Communication System, filed Sep. 3, 1997. A  
28 true and correct copy of the ‘009 patent is attached as Exhibit B.

1           26. ASUS infringes the ‘009 patent in at least two ways – first, with  
2 respect to its V.90 modem products, and second, with respect to its 802.11n or  
3 802.11ac compatible devices.

4           27. ASUS has been and now is directly infringing one or more claims of  
5 the ‘009 Patent, in this judicial District and elsewhere in the United States, by,  
6 among other things, practicing an impairment learning method for use over a  
7 communication channel, said method comprising: transmitting a learning sequence  
8 descriptor over said communication channel, said learning sequence descriptor  
9 having a training symbol order; receiving a learning signal over said  
10 communication channel, said learning signal having a member of segments, each  
11 of said segments being associated with a sequence of symbols configured in  
12 accordance with said learning sequence descriptor, wherein said training symbol  
13 order is indicative of an assignment of a plurality of training symbols to said  
14 number of segments; and learning an impairment of said communication channel  
15 according to said learning signal. Upon information and belief, ASUS practices or  
16 practiced the claimed method during its internal testing and while servicing or  
17 repairing, through its Authorized Service Centers acting at ASUS’ direction and  
18 control (<http://www.service.asus.com/#!/service-centers/c1tqs>), ASUS laptop  
19 computers containing dial-up modems that operate according to the International  
20 Telecommunications Union (“ITU”) V.90 (56Kbps) specification, including the  
21 ASUS G50V containing the Agere Delphi D40 Modem AM5 supporting V.90  
22 (56K).

23           28. ASUS also infringes the ‘009 patent through its 802.11n and 802.11ac  
24 compatible products. For example, upon information and belief, ASUS sells and  
25 offers for sale, in the United States and in this District, RT-AC68U, RT-AC66U,  
26 and RT-AC56U routers, PCE-AC68, PCE-AC56, USB-AC56, and USB-AC53 Wi-  
27 Fi adapters, and the ASUS ROG G750JH laptop.

28

1           29. ASUS has been and now is directly infringing one or more claims of  
2 the '009 Patent, in this judicial District and elsewhere in the United States, by,  
3 among other things, practicing an impairment learning method for use over a  
4 communication channel, said method comprising: transmitting a learning sequence  
5 descriptor over said communication channel, said learning sequence descriptor  
6 having a training symbol order; receiving a learning signal over said  
7 communication channel, said learning signal having a member of segments, each  
8 of said segments being associated with a sequence of symbols configured in  
9 accordance with said learning sequence descriptor, wherein said training symbol  
10 order is indicative of an assignment of a plurality of training symbols to said  
11 number of segments; and learning an impairment of said communication channel  
12 according to said learning signal. Upon information and belief, ASUS practices  
13 the claimed method during its internal testing of its RT-AC68U, RT-AC66U, and  
14 RT-AC56U routers, PCE-AC68, PCE-AC56, USB-AC56, and USB-AC53 Wi-Fi  
15 adapters, and the ASUS ROG G750JH laptop.

16           30. ASUS has had knowledge of the '009 patent since at least the filing of  
17 the Complaint for Patent Infringement or shortly thereafter, and ASUS has induced  
18 its customers, users of RT-AC68U, RT-AC66U, and RT-AC56U routers, PCE-  
19 AC68, PCE-AC56, USB-AC56, and USB-AC53 Wi-Fi adapters, and the ASUS  
20 ROG G750JH laptop, to practice an impairment learning method for use over a  
21 communication channel, said method comprising: transmitting a learning sequence  
22 descriptor over said communication channel, said learning sequence descriptor  
23 having a training symbol order; receiving a learning signal over said  
24 communication channel, said learning signal having a member of segments, each  
25 of said segments being associated with a sequence of symbols configured in  
26 accordance with said learning sequence descriptor, wherein said training symbol  
27 order is indicative of an assignment of a plurality of training symbols to said  
28

1 number of segments; and learning an impairment of said communication channel  
2 according to said learning signal.

3 31. For example, ASUS instructs its customers, users of RT-AC68U  
4 routers, that “The ASUS RT-AC68U is the world's fastest Wi-Fi router, with  
5 combined dual-band data rates of up to 1900 Mbps. 1300 Mbps 802.11ac at 5 GHz  
6 gives Gigabit wireless data rates, while Broadcom® TurboQAM™ technology  
7 super-charges 2.4 GHz 802.11n performance from 450 Mbps to 600 Mbps with  
8 compatible devices.” (see <http://www.asus.com/Networking/RTAC68U/>). ASUS  
9 also instructs its customers to “Select any of these wireless mode options to  
10 determine the types of wireless devices that can connect to your wireless router:

- 11 • Auto: Select Auto to allow 802.11AC, 802.11n, 802.11g, and 802.11b  
12 devices to connect to the wireless router.
- 13 • Legacy: Select Legacy to allow 802.11b/g/n devices to connect to the  
14 wireless router. Hardware that supports 802.11n natively, however, will only  
15 run at a maximum speed of 54Mbps.
- 16 • N only: Select N only to maximize wireless N performance. This setting  
17 prevents 802.11g and 802.11b devices from connecting to the wireless  
18 router.” (see  
19 [http://support.asus.com/Download.aspx?SLanguage=en&m=RT-  
20 AC68U&p=11&os=8](http://support.asus.com/Download.aspx?SLanguage=en&m=RT-AC68U&p=11&os=8), E9183\_RT\_AC68U\_Manual.pdf, page 49)

21 32. ASUS also instructs its customers, users of RT-AC66U routers, that  
22 their “5th generation 802.11ac chipset gives you concurrent dual-band  
23 2.4GHz/5GHz for up to super-fast 1.75Gbps” (see  
24 <http://www.asus.com/Networking/RTAC66U/>). ASUS also instructs its customers  
25 to “Select any of these wireless mode options to determine the types of wireless  
26 devices that can connect to your wireless router:

- 27 • Auto: Select Auto to allow 802.11AC, 802.11n, 802.11g, and 802.11b  
28 devices to connect to the wireless router.

1 • Legacy: Select Legacy to allow 802.11b/g/n devices to connect to the  
2 wireless router. Hardware that supports 802.11n natively, however, will only  
3 run at a maximum speed of 54Mbps.

4 • N only: Select N only to maximize wireless N performance. This setting  
5 prevents 802.11g and 802.11b devices from connecting to the wireless  
6 router.” (see [http://dlcdnet.asus.com/pub/ASUS/wireless/RT-  
7 AC66U/E7891\\_RT\\_AC66U\\_Manual.pdf](http://dlcdnet.asus.com/pub/ASUS/wireless/RT-AC66U/E7891_RT_AC66U_Manual.pdf), page 53)

8 33. ASUS also instructs its customers, users of RT-AC56U routers, that  
9 their “5th generation 802.11ac chipset gives you concurrent dual-band  
10 2.4GHz/5GHz at up to super-fast 1167Mbps” (see  
11 <http://www.asus.com/Networking/RTAC56U/>). ASUS also instructs its customers  
12 to “Select any of these wireless mode options to determine the types of wireless  
13 devices that can connect to your wireless router:

14 • Auto: Select Auto to allow 802.11AC, 802.11n, 802.11g, and 802.11b  
15 devices to connect to the wireless router.

16 • Legacy: Select Legacy to allow 802.11b/g/n devices to connect to the  
17 wireless router. Hardware that supports 802.11n natively, however, will only  
18 run at a maximum speed of 54Mbps.

19 • N only: Select N only to maximize wireless N performance. This setting  
20 prevents 802.11g and 802.11b devices from connecting to the wireless  
21 router.” (see [http://support.asus.com/download.aspx?SLanguage=en&p=11&s=2&m=RT-  
22 AC56U&os=8](http://support.asus.com/download.aspx?SLanguage=en&p=11&s=2&m=RT-AC56U&os=8), E8556\_RT-AC56U\_Manual.pdf, page 49).

23 34. ASUS also instructs its customers, users of PCE-AC68 Wi-Fi  
24 adapters, that its “5th generation 802.11ac chipset gives you dual-band,  
25 2.4GHz/5GHz for up to super-fast 1.30Gbps” (see  
26 <http://www.asus.com/Networking/PCEAC68/>).

28

1           35. ASUS also instructs its customers, users of PCE-AC56 Wi-Fi  
2 adapters, that it contains a “Next-generation 802.11ac chipset for super-fast  
3 connections up to 867 Mbps” (see <http://www.asus.com/Networking/PCEAC56/>).

4           36. ASUS also instructs its customers, users of USB-AC56 Wi-Fi  
5 adapters, that it supports “Next-generation 802.11ac Wi-Fi — up to three times  
6 faster than 2x2 802.11n adapters” (see  
7 <http://www.asus.com/Networking/USBAC56/>).

8           37. ASUS also instructs its customers, users of USB-AC53 Wi-Fi  
9 adapters, that this “Dual-band Wireless-AC1200 USB Adapter” has the following  
10 features: “Extra-fast 5th Generation Wi-Fi at up to 867Mbps/300Mbps”,  
11 “Selectable 5GHz/2.4GHz dual bands increase signal clarity for better HD  
12 multimedia”, and “Powerful 2x2 embedded patch antennas (PIFA type) improve  
13 signal range while integrating into the attractive design” (see  
14 <http://www.asus.com/Networking/USBAC53/>).

15           38. ASUS also instructs its customers, users of the ASUS ROG G750JH  
16 laptop, that “ASUS G750JH includes exclusive wireless technology in the form of  
17 Killer™ Wireless-N 1202. Wireless-N 1202 is a dual-band (2.4 and 5GHz), dual-  
18 stream MIMO, 802.11a/b/g/n adapter that delivers fast data-transfer speeds of up  
19 to 300Mbps/s. With built-in Bluetooth, Wi-Fi Direct™ technology for direct (peer-  
20 to-peer) connections and Advanced Stream Detect™ technology that intelligently  
21 prioritizes game-related traffic, Killer Wireless-N 1202 keeps you ahead of the  
22 game.” (see [http://www.asus.com/Notebooks\\_Ultrabooks/ASUS\\_ROG\\_G750JH/](http://www.asus.com/Notebooks_Ultrabooks/ASUS_ROG_G750JH/)).

23           39. In instructing its customers that RT-AC68U, RT-AC66U, and RT-  
24 AC56U routers and PCE-AC68, PCE-AC56, USB-AC56, and USB-AC53 Wi-Fi  
25 adapters support Wi-Fi connections made using the 802.11ac protocol, in  
26 instructing its customers when to enable and disable support for the 802.11n  
27 protocol, and in touting the benefits of using the 802.11ac protocol to enjoy “super-  
28 fast” speeds, ASUS specifically intended to encourage its customers to use the RT-

1 AC68U, RT-AC66U, and RT-AC56U routers and PCE-AC68, PCE-AC56, USB-  
2 AC56, and USB-AC53 Wi-Fi adapters to use the 802.11ac protocol in an  
3 infringing manner, knowing that the use of such protocol constituted infringement  
4 of the ‘009 patent. In instructing its customers that the ASUS ROG G750JH laptop  
5 supports Wi-Fi connections made using the 802.11n protocol, and in touting the  
6 benefits of using the 802.11n protocol to enjoy “fast[] data-transfer speeds of up to  
7 300Mbps/s ... [to] keep[] you ahead of the game”, ASUS specifically intended to  
8 encourage its customers to use the ASUS ROG G750JH laptop to use the 802.11n  
9 protocol in an infringing manner, knowing that the use of such protocol constituted  
10 infringement of the ‘009 patent. Thus, ASUS has induced its customers to infringe  
11 the ‘009 Patent literally and/or under the doctrine of equivalents. Upon  
12 information and belief, ASUS acted with the specific intent to induce its customers  
13 to use the method claimed by the ‘009 Patent by continuing the above-mentioned  
14 activities with knowledge of the ‘009 Patent.

### 15 COUNT III

#### 16 INFRINGEMENT OF U.S. PATENT NO. 6,570,932

17 40. United States Patent No. 6,570,932 (“the ‘932 patent”), entitled  
18 “Calculation and verification of transmit power levels in a signal point  
19 transmission system,” issued on May 27, 2003 from United States Patent  
20 Application No. 10/026,096 filed on December 21, 2001. Application No.  
21 10/026,096 is a continuation of U.S. Patent Application Ser. No. 09/740,567, filed  
22 Dec. 18, 2000, now U.S. Pat. No. 6,359,932, which is a continuation of U.S. Patent  
23 Application Ser. No. 09/075,719, filed May 11, 1998, now U.S. Pat. No.  
24 6,163,570. A true and correct copy of the ‘932 patent is attached as Exhibit C.

25 41. ASUS has been and now is directly infringing one or more claims of  
26 the ‘932 patent, in this judicial District and elsewhere in the United States, by,  
27 among other things, practicing a method of communicating over a communication  
28 channel using a constellation including a plurality of signal points, said method

1 comprising: determining a probability of transmission of each signal point of said  
2 constellation; calculating an average power of said signal points using a power  
3 formula based on said probability of transmission of each said signal point; and  
4 comparing said average power with a transmit power limit. Upon information and  
5 belief, ASUS practices or practiced the claimed method during its internal testing  
6 and while servicing or repairing, through its Authorized Service Centers acting at  
7 ASUS' direction and control ([http://www.service.asus.com/#!/service-](http://www.service.asus.com/#!/service-centers/cltqs)  
8 [centers/cltqs](http://www.service.asus.com/#!/service-centers/cltqs)), ASUS laptop computers containing dial-up modems that operate  
9 according to the International Telecommunications Union ("ITU") V.90 (56Kbps)  
10 specification, including the ASUS G50V containing the Agere Delphi D40 Modem  
11 AM5 supporting V.90 (56K).

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13 42. By engaging in the conduct described herein, ASUS has injured MTS  
14 and is thus liable for infringement of the '886 patent, '009 patent, and '932 patent  
15 pursuant to 35 U.S.C. § 271.

16 43. ASUS has committed these acts of infringement without license or  
17 authorization.

18 44. As a result of ASUS's infringement of the '886 patent, '009 patent,  
19 and '932 patent, MTS has suffered monetary damages and is entitled to a money  
20 judgment in an amount adequate to compensate for ASUS's infringement, but in  
21 no event less than a reasonable royalty for the use made of the invention by ASUS,  
22 together with interest and costs as fixed by the Court.

23 45. MTS has also suffered and will continue to suffer severe and  
24 irreparable harm unless this Court issues a permanent injunction prohibiting  
25 ASUS, its agents, servants, employees, representatives, and all others acting in  
26 active concert therewith from infringing the '886 patent, '009 patent, and '932  
27 patent. In particular, ASUS's disregard for MTS's property rights threatens MTS's  
28 relationships with the actual and potential licensees of this intellectual property,



1 inasmuch as ASUS will derive a competitive advantage over any of MTS’s current  
 2 or future licensees by using MTS’s patented technology without paying  
 3 compensation for such use. Accordingly, unless and until ASUS’s continued acts  
 4 of infringement are enjoined, MTS will suffer further irreparable harm for which  
 5 there is no adequate remedy at law.

6 46. ASUS’s infringement of the ‘886 patent, ‘009 patent, and ‘932 patent  
 7 has been willful and deliberate, entitling MTS to increased damages under 35  
 8 U.S.C. § 284 and to attorneys’ fees and costs incurred in prosecuting this action  
 9 under 35 U.S.C. § 285. In particular, ASUS was informed of the ‘886 patent, ‘009  
 10 patent, ‘932 patent, and allegations of infringement no later than September 10,  
 11 2008 or shortly thereafter, when ASUS received a letter regarding same from  
 12 VDOT, a former assignee of the ‘886 patent, ‘009 patent, and ‘932 patent. Despite  
 13 awareness of the ‘886 patent, ‘009 patent, ‘932 patent, and the infringing nature of  
 14 its conduct, ASUS has continued such conduct and thereby has willfully infringed  
 15 the ‘886 patent, ‘009 patent, and ‘932 patent.

16 **PRAYER FOR RELIEF**

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

18 A. A judgment in favor of MTS that ASUS has infringed the ‘886 patent,  
 19 ‘009 patent, and ‘932 patent;

20 B. A permanent injunction enjoining ASUS and its officers, directors,  
 21 agents, servants, affiliates, employees, divisions, branches, subsidiaries, parents,  
 22 and all others acting in active concert therewith from infringement of the ‘886  
 23 patent, ‘009 patent, and ‘932 patent, or such other equitable relief the Court  
 24 determines is warranted;

25 C. A judgment and order requiring ASUS to pay MTS its damages, costs,  
 26 expenses, and prejudgment and post-judgment interest for Defendant’s  
 27 infringement of the ‘886 patent, ‘009 patent, and ‘932 patent, as provided under 35  
 28 U.S.C. § 284;

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D. A judgment and order that ASUS has willfully infringed the ‘886 patent, ‘009 patent, and ‘932 patent, and assessing increased damages up to three times the amount found or assessed pursuant to 35 U.S.C. § 284;

E. 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 ASUS;

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

G. 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.

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