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**UNITED STATES DISTRICT COURT**  
**CENTRAL DISTRICT OF CALIFORNIA**  
**SOUTHERN DIVISION**

MODERN TELECOM SYSTEMS  
LLC, a California limited liability  
company,

Plaintiff,

vs.

TOSHIBA CORPORATION, a Japan  
corporation, and TOSHIBA AMERICA  
INFORMATION SYSTEMS, INC., a  
California corporation,

Defendants.

Case No. 8:14-CV-00923

**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 Toshiba Corporation and Toshiba America Information Systems, Inc. (collectively, “TOSHIBA”):

**THE PARTIES**

1. MTS is a California limited liability company.

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1 TOSHIBA has used, sold, offered for sale, and/or imported infringing products in  
2 this District.

3 **FACTUAL BACKGROUND**

4 7. The technology claimed in the patents asserted in this action was  
5 invented during the research and development activities of the Rockwell,  
6 Conexant, and Mindspeed family of companies. In 1999, Rockwell International  
7 spun off Rockwell Semiconductor group as Conexant Systems Inc. Conexant  
8 inherited Rockwell's mixed signal semiconductor expertise and intellectual  
9 property portfolio, and was focused on developing semiconductor products for a  
10 broad range of communications applications. These applications included wireline  
11 and wireless voice and data communication networks. Conexant's Internet  
12 Infrastructure group was incorporated as Mindspeed Technologies (as a wholly-  
13 owned subsidiary) in 2001 and spun-off as an independent entity in 2003.  
14 Mindspeed's focus is on semiconductor and software solutions for Internet access  
15 devices, switching fabric, and network processors.

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

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

**COUNT I**

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

10. 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.

11. TOSHIBA infringes the ‘886 patent in at least two ways – first, with respect to its V.92 modem products, and second, with respect to its 802.11n compatible devices.

12. TOSHIBA 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, TOSHIBA practices the claimed method while testing and repairing TOSHIBA laptop computers containing dial-up modems that operate

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1 according to the International Telecommunications Union (“ITU”) V.92 (56Kbps)  
2 specification, including the Toshiba Satellite L305D containing the Agere Delphi  
3 D40 Modem AM5 supporting V.92 (56K). See  
4 <https://www.toshibarepairservices.com>.

5 13. TOSHIBA also infringes the ‘886 patent through its 802.11n  
6 compatible products. For example, TOSHIBA sells and offers for sale the  
7 following products in the United States and in this District through its website:

8 a. Toshiba Portege Z30-ASMBN22 Laptop (see  
9 <http://www.toshiba.com/us/computers/laptops/portege/Z30/Z30-ASMBN22>)

10 b. Toshiba Portege Z30-AST3NX1 Ultrabook™ (see  
11 <http://www.toshiba.com/us/computers/laptops/portege/Z30/Z30-AST3NX1>)

12 c. Toshiba Portege Z30-ASMBNX1 Ultrabook™ (see  
13 <http://www.toshiba.com/us/computers/laptops/portege/Z30/Z30-ASMBNX1>)

14 d. Toshiba Portege Z30-A1301 Ultrabook (see  
15 <http://www.toshiba.com/us/computers/laptops/portege/Z30/Z30-A1301>)

16 e. Toshiba Portege Z30-AST3NX2 Ultrabook™ (see  
17 <http://www.toshiba.com/us/computers/laptops/portege/Z30/Z30-AST3NX2>)

18 f. Toshiba Portege Z30-ABT1300 Ultrabook™ (see  
19 <http://www.toshiba.com/us/computers/laptops/portege/Z30/Z30-ABT1300>)

20 g. Toshiba Portege Z30T-A1301 Ultrabook™ (see  
21 <http://www.toshiba.com/us/computers/laptops/portege/Z30/Z30T-A1301>)

22 h. Toshiba Satellite E45T-AST2N01 Ultrabook™ (see  
23 <http://www.toshiba.com/us/computers/laptops/satellite/E40/E45T-AST2N01>)

24 i. Toshiba Satellite E55t-AST2N01 Ultrabook™ (see  
25 <http://www.toshiba.com/us/computers/laptops/satellite/E50/E55t-AST2N01>)

26 14. TOSHIBA has been and now is directly infringing one or more claims  
27 of the ‘886 Patent, in this judicial District and elsewhere in the United States, by,  
28 among other things, practicing a method of communicating a learning sequence

1 descriptor for use in constructing a learning sequence, said method comprising:  
 2 transmitting a first parameter specifying a number of segments in said learning  
 3 sequence; transmitting a second parameter specifying a sign pattern of each of said  
 4 segments; and transmitting a third parameter specifying a training pattern of each  
 5 of said segments, wherein said training pattern is indicative of an ordering of a  
 6 reference symbol and a training symbol in each of said segments. Upon  
 7 information and belief, TOSHIBA practices the claimed method during its internal  
 8 testing and repair of its Toshiba Portege Z30-ASMBN22 Laptop, Toshiba Portege  
 9 Z30-AST3NX1 Ultrabook™, Toshiba Portege Z30-ASMBNX1 Ultrabook™,  
 10 Toshiba Portege Z30-A1301 Ultrabook, Toshiba Portege Z30-AST3NX2  
 11 Ultrabook™, Toshiba Portege Z30-ABT1300 Ultrabook™, Toshiba Portege Z30T-  
 12 A1301 Ultrabook™, Toshiba Satellite E45T-AST2N01 Ultrabook™, and Toshiba  
 13 Satellite E55t-AST2N01 Ultrabook™. See  
 14 <https://www.toshibarepairservices.com>.

## 15 COUNT II

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

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

25 16. TOSHIBA infringes the ‘009 patent in at least two ways – first, with  
 26 respect to its V.92 modem products, and second, with respect to its 802.11n  
 27 compatible devices.  
 28

1           17. TOSHIBA has been and now is directly infringing one or more claims  
2 of 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, TOSHIBA  
13 practices the claimed method while testing and repairing TOSHIBA laptop  
14 computers containing dial-up modems that operate according to the International  
15 Telecommunications Union ("ITU") V.92 (56Kbps) specification, including the  
16 Toshiba Satellite L305D containing the Agere Delphi D40 Modem AM5  
17 supporting V.92 (56K). See <https://www.toshibarepairservices.com>.

18           18. TOSHIBA also infringes the '009 patent through its 802.11n  
19 compatible products. For example, TOSHIBA sells and offers for sale the Toshiba  
20 Portege Z30-ASMBN22 Laptop, Toshiba Portege Z30-AST3NX1 Ultrabook™,  
21 Toshiba Portege Z30-ASMBNX1 Ultrabook™, Toshiba Portege Z30-A1301  
22 Ultrabook, Toshiba Portege Z30-AST3NX2 Ultrabook™, Toshiba Portege Z30-  
23 ABT1300 Ultrabook™, Toshiba Portege Z30T-A1301 Ultrabook™, Toshiba  
24 Satellite E45T-AST2N01 Ultrabook™, and Toshiba Satellite E55t-AST2N01  
25 Ultrabook™ in the United States and in this District through its website.

26           19. TOSHIBA has been and now is directly infringing one or more claims  
27 of the '009 Patent, in this judicial District and elsewhere in the United States, by,  
28 among other things, practicing an impairment learning method for use over a

1 communication channel, said method comprising: transmitting a learning sequence  
2 descriptor over said communication channel, said learning sequence descriptor  
3 having a training symbol order; receiving a learning signal over said  
4 communication channel, said learning signal having a member of segments, each  
5 of said segments being associated with a sequence of symbols configured in  
6 accordance with said learning sequence descriptor, wherein said training symbol  
7 order is indicative of an assignment of a plurality of training symbols to said  
8 number of segments; and learning an impairment of said communication channel  
9 according to said learning signal. Upon information and belief, TOSHIBA  
10 practices the claimed method during its internal testing and repair of its Toshiba  
11 Portege Z30-ASMBN22 Laptop, Toshiba Portege Z30-AST3NX1 Ultrabook™,  
12 Toshiba Portege Z30-ASMBNX1 Ultrabook™, Toshiba Portege Z30-A1301  
13 Ultrabook, Toshiba Portege Z30-AST3NX2 Ultrabook™, Toshiba Portege Z30-  
14 ABT1300 Ultrabook™, Toshiba Portege Z30T-A1301 Ultrabook™, Toshiba  
15 Satellite E45T-AST2N01 Ultrabook™, and Toshiba Satellite E55t-AST2N01  
16 Ultrabook™. See <https://www.toshibarepairservices.com>.

### 17 COUNT III

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

19 20. United States Patent No. 6,570,932 (“the ‘932 patent”), entitled  
20 “Calculation and verification of transmit power levels in a signal point  
21 transmission system,” issued on May 27, 2003 from United States Patent  
22 Application No. 10/026,096 filed on December 21, 2001. Application No.  
23 10/026,096 is a continuation of U.S. Patent Application Ser. No. 09/740,567, filed  
24 Dec. 18, 2000, now U.S. Pat. No. 6,359,932, which is a continuation of U.S. Patent  
25 Application Ser. No. 09/075,719, filed May 11, 1998, now U.S. Pat. No.  
26 6,163,570. A true and correct copy of the ‘932 patent is attached as Exhibit C.

27 21. TOSHIBA has been and now is directly infringing one or more claims  
28 of the ‘932 patent, in this judicial District and elsewhere in the United States, by,

1 among other things, practicing a method of communicating over a communication  
2 channel using a constellation including a plurality of signal points, said method  
3 comprising: determining a probability of transmission of each signal point of said  
4 constellation; calculating an average power of said signal points using a power  
5 formula based on said probability of transmission of each said signal point; and  
6 comparing said average power with a transmit power limit. Upon information and  
7 belief, TOSHIBA practices the claimed method while testing and repairing  
8 TOSHIBA laptop computers containing dial-up modems that operate according to  
9 the International Telecommunications Union (“ITU”) V.92 (56Kbps) specification,  
10 including the Toshiba Satellite L305D containing the Agere Delphi D40 Modem  
11 AM5 supporting V.92 (56K). See <https://www.toshibarepairservices.com>.

12 **COUNT IV**

13 **INFRINGEMENT OF U.S. PATENT NO. 7,062,022**

14 22. United States Patent No. 7,062,022 (“the ‘022 patent”), entitled  
15 “Method and apparatus for fast V.90 modem startup,” issued on June 13, 2006  
16 from a United States Patent Application No. 10/753,570 filed on January 8, 2004.  
17 Application No. 10/753,570 is a Continuation of U.S. Patent Application Ser. No.  
18 09/361,842, filed Jul. 27, 1999 now U.S. Pat. No. 6,819,749, which claims the  
19 benefit of U.S. Provisional Application Ser. No. 60/128,874, filed Apr. 12, 1999.  
20 A true and correct copy of the ‘022 patent is attached as Exhibit D.

21 23. TOSHIBA has been and now is directly infringing one or more claims  
22 of the ‘022 Patent, in this judicial District and elsewhere in the United States, by,  
23 among other things, practicing a method for reducing startup latency associated  
24 with a data transmission system having a first device configured to communicate  
25 with a second device over a communication channel, said method comprising the  
26 steps of: establishing a call between said first device and said second device;  
27 determining whether a characteristic of said communication channel is similar to a  
28 corresponding characteristic associated with a previously established

1 communication channel; and initializing at least one of said first and second  
2 devices using a number of stored parameters associated with said previously  
3 established communication channel, said initializing step being performed if said  
4 determining step determines that said characteristic is similar to said corresponding  
5 characteristic. Upon information and belief, TOSHIBA practices the claimed  
6 method while testing and repairing TOSHIBA laptop computers containing dial-up  
7 modems that operate according to the International Telecommunications Union  
8 (“ITU”) V.92 (56Kbps) specification, including the Toshiba Satellite L305D  
9 containing the Agere Delphi D40 Modem AM5 supporting V.92 (56K). See  
10 <https://www.toshibarepairservices.com>.

11 \*\*\*\*\*

12 24. By engaging in the conduct described herein, TOSHIBA has injured  
13 MTS and is thus liable for infringement of the ‘886 patent, ‘009 patent, ‘932  
14 patent, and ‘022 patent, pursuant to 35 U.S.C. § 271.

15 25. TOSHIBA has committed these acts of infringement without license  
16 or authorization.

17 26. As a result of TOSHIBA’s infringement of the ‘886 patent, ‘009  
18 patent, ‘932 patent, and ‘022 patent, MTS has suffered monetary damages and is  
19 entitled to a money judgment in an amount adequate to compensate for  
20 TOSHIBA’s infringement, but in no event less than a reasonable royalty for the  
21 use made of the invention by TOSHIBA, together with interest and costs as fixed  
22 by the Court.

23 27. MTS has also suffered and will continue to suffer severe and  
24 irreparable harm unless this Court issues a permanent injunction prohibiting  
25 TOSHIBA, its agents, servants, employees, representatives, and all others acting in  
26 active concert therewith from infringing the ‘886 patent, ‘009 patent, ‘932 patent,  
27 and ‘022 patent. In particular, TOSHIBA’s disregard for MTS’s property rights  
28 threatens MTS’s relationships with the actual and potential licensees of this

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

6 28. TOSHIBA's infringement of the '886 patent, '009 patent, '932 patent,  
7 and '022 patent, has been willful and deliberate, entitling MTS to increased  
8 damages under 35 U.S.C. § 284 and to attorneys' fees and costs incurred in  
9 prosecuting this action under 35 U.S.C. § 285. In particular, TOSHIBA was  
10 informed of the '886 patent, '009 patent, '932 patent, '022 patent, and allegations  
11 of infringement no later than February 8, 2008 or shortly thereafter, when  
12 TOSHIBA received a letter regarding same from TTL, a former assignee of the  
13 '886 patent, '009 patent, '932 patent, and '022 patent. Despite awareness of the  
14 '886 patent, '009 patent, '932 patent, '022 patent, and the infringing nature of its  
15 conduct, TOSHIBA has continued such conduct and thereby has willfully infringed  
16 the '886 patent, '009 patent, '932 patent, and '022 patent.

17 **PRAYER FOR RELIEF**

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

19 A. A judgment in favor of MTS that TOSHIBA has infringed the '886  
20 patent, '009 patent, '932 patent, and '022 patent;

21 B. A permanent injunction enjoining TOSHIBA and its officers,  
22 directors, agents, servants, affiliates, employees, divisions, branches, subsidiaries,  
23 parents, and all others acting in active concert therewith from infringement of the  
24 '886 patent, '009 patent, '932 patent, and '022 patent, or such other equitable relief  
25 the Court determines is warranted;

26 C. A judgment and order requiring TOSHIBA to pay MTS its damages,  
27 costs, expenses, and prejudgment and post-judgment interest for Defendant's  
28

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1 infringement of the '886 patent, '009 patent, '932 patent, and '022 patent, as  
2 provided under 35 U.S.C. § 284;

3 D. A judgment and order that TOSHIBA has willfully infringed the '886  
4 patent, '009 patent, '932 patent, and '022 patent, and assessing increased damages  
5 up to three times the amount found or assessed pursuant to 35 U.S.C. § 284;

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

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

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

13 **DEMAND FOR JURY TRIAL**

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

16

17 DATED: June 13, 2014

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