AO 120 (Rev. 08/10)

TO:	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Transferred to Delaware from Alabama on the following

☐ Trademarks or ☑ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
15-cv-121-RGA	7/17/2014	Transferred to Delaware from Alabama

PLAINTIFF	DEFENDANT
ADTRAN, Inc.	TQ Delta, LLC

PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 See Attachment #1		
2		
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In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☑ Answer ☐ Cross Bill ☐ Other Pleading	
3/13/2015		
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 See Attachment #2		
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In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

Attachment #1

Patent or Trademark No.	Date of Patent or Trademark	Holder of Patent or Trademark
1.U.S. 7,453,881 B2	11/18/2008	TQ Delta, LLC
2.U.S. 7,809,028 B2	10/05/2010	TQ Delta, LLC
3.U.S. 7,978,706 B2	7/12/2011	TQ Delta, LLC
4.U.S. 8,422,511 B2	4/16/2013	TQ Delta, LLC
5.U.S. 6,445,730 B1	9/03/2002	TQ Delta, LLC
6.U.S. 7,292,627 B2	11/6/2007	TQ Delta, LLC
7.U.S. 7,451,379 B2	11/11/2008	TQ Delta, LLC
8.U.S. 7,471,721 B2	12/30/2008	TQ Delta, LLC
9.U.S. 7,570,686 B2	8/4/2009	TQ Delta, LLC
10. U.S. 7,831,890 B2	11/09/2010	TQ Delta, LLC
11. U.S. 7,835,430 B2	11/16/2010	TQ Delta, LLC
12. U.S. 7,836,381 B1	11/16/2010	TQ Delta, LLC
13. U.S. 7,844,882 B2	11/30/2010	TQ Delta, LLC
14. U.S. 7,889,784 B2	2/15/2011	TQ Delta, LLC
15. U.S. 7,925,958 B2	04/12/2011	TQ Delta, LLC
16. U.S. 7,978,753 B2	07/12/2011	TQ Delta, LLC
17. U.S. 7,979,778 B2	07/12/2011	TQ Delta, LLC
18. U.S. 8,073,041 B1	12/6/2011	TQ Delta, LLC
19. U.S. 8,090,008 B2	1/3/2012	TQ Delta, LLC
20. U.S. 8,218,610 B2	7/10/2012	TQ Delta, LLC
21. U.S. 8,238,412 B2	08/07/2012	TQ Delta, LLC
22. U.S. 8,276,048 B2	09/25/2012	TQ Delta, LLC
23. U.S. 8,355,427 B2	1/15/2013	TQ Delta, LLC

24. U.S. 8,432,956 B2	4/30/2013	TQ Delta, LLC
25. U.S. 8,437,382 B2	5/7/2013	TQ Delta, LLC
26. U.S. 8,462,835 B2	6/11/2013	TQ Delta, LLC
27. U.S. 8,495,473 B2	7/23/2013	TQ Delta, LLC
28. U.S. 8,516,337 B2	08/20/2013	TQ Delta, LLC

Attachment #2

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	US 7,796,705 B2	9/14/2010	TQ Delta, LLC
2	US 8,335,956 B2	12/18/2012	TQ Delta, LLC
3	US 8,407,546 B2	3/26/2013	TQ Delta, LLC
4	US 8,468,411 B2	6/18/2013	TQ Delta, LLC
5	US 8,645,784 B2	2/4/2014	TQ Delta, LLC
6	US 8,595,577 B2	11/26/2013	TQ Delta, LLC

AO 120 (Rev. 08/10)

TO:	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court District of Delaware on the following

☐ Trademarks or ☑ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
	7/18/2014	District of Delaware

PLAINTIFF	DEFENDANT
TQ Delta, LLC	ADTRAN, Inc.

PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 See Attached		
2 32 Pats		
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In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
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In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE

Copy 1—Upon initiation of action, mail this copy to Director **Copy 3—Upon termination of action, mail this copy to Director**
Copy 2—Upon filing document adding patent(s), mail this copy to Director **Copy 4—Case file copy**

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	US 8,090,008 B2	1/3/2012	TQ Delta, LLC
2	US 8,073,041 B1	12/6/2011	TQ Delta, LLC
3	US 7,292,627 B2	11/6/2007	TQ Delta, LLC
4	US 7,471,721 B2	12/30/2008	TQ Delta, LLC
5	US 8,218,610 B2	7/10/2012	TQ Delta, LLC
6	US 8,355,427 B2	1/15/2013	TQ Delta, LLC
7	US 7,453,881 B2	11/18/2008	TQ Delta, LLC
8	US 7,809,028 B2	10/5/2010	TQ Delta, LLC
9	US 7,978,706 B2	7/12/2011	TQ Delta, LLC
10	US 8,422,511 B2	4/16/2013	TQ Delta, LLC
11	US 7,889,784 B2	2/15/2011	TQ Delta, LLC
12	US 7,835,430 B2	11/16/2010	TQ Delta, LLC
13	US 7,570,686 B2	8/4/2009	TQ Delta, LLC
14	US 8,238,412 B2	8/7/2012	TQ Delta, LLC
15	US 8,432,956 B2	4/30/2013	TQ Delta, LLC
16	US 7,451,379 B2	11/11/2008	TQ Delta, LLC
17	US 8,516,337 B2	8/20/2013	TQ Delta, LLC
18	US 7,979,778 B2	7/12/2011	TQ Delta, LLC
19	US 7,925,958 B2	4/12/2011	TQ Delta, LLC
20	US 8,462,835 B2	6/11/2013	TQ Delta, LLC
21	US 8,594,162 B2	11/26/2013	TQ Delta, LLC
22	US 7,978,753 B2	7/12/2011	TQ Delta, LLC
23	US 6,445,730 B1	9/3/2002	TQ Delta, LLC
24	US 8,611,404 B2	12/17/2013	TQ Delta, LLC
25	US 8,437,382 B2	5/7/2013	TQ Delta, LLC
26	US 7,836,381 B1	11/16/2010	TQ Delta, LLC
27	US 7,844,882 B2	11/30/2010	TQ Delta, LLC
28	US 8,276,048 B2	9/25/2012	TQ Delta, LLC
29	US 8,495,473 B2	7/23/2013	TQ Delta, LLC
30	US 8,607,126 B1	12/10/2013	TQ Delta, LLC
31	US 7,831,890 B2	11/9/2010	TQ Delta, LLC
32	US 8,625,660 B2	1/7/2014	TQ Delta, LLC

Birch, Melvin (Akima)

From:	ded_nefreply@ded.uscourts.gov
Sent:	Wednesday, November 20, 2013 4:56 PM
To:	ded_ecf@ded.uscourts.gov
Subject:	Activity in Case 1:13-cv-01835-RGA TQ Delta LLC v. Pace Americas Inc. Patent/Trademark Report to Commissioner

This is an automatic e-mail message generated by the CM/ECF system. Please DO NOT RESPOND to this e-mail because the mail box is unattended.
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U.S. District Court

District of Delaware

Notice of Electronic Filing

The following transaction was entered by Farnan, Brian on 11/20/2013 at 4:56 PM EST and filed on 11/20/2013

Case Name: TQ Delta LLC v. Pace Americas Inc.
Case Number: 1:13-cv-01835-RGA
Filer:
Document Number: 7

Docket Text:
Report to the Commissioner of Patents and Trademarks for Patent/Trademark Number(s) US 8,090,008 B2; US 8,073,041 B1; US 7,292,627 B2; US 7,471,721 B2; US 8,218,610 B2; US 8,355,427 B2; US 7,453,881 B2; US 7,978,706 B2; US 8,422,511 B2; US 7,889,784 B2; US 7,835,430 B2; US 7,570,686 B2; US 8,238,412 B2; US 8,432,956 B2; US 7,451,379 B2; US 8,516,337 B2; US 7,979,778 B2; US 7,925,958 B2; US 8,462,835 B2; US 7,836,381 B1; US 7,844,882 B2; US 8,276,048 B2; US 8,495,473 B2; US 7,831,890 B2; . (Farnan, Brian)

1:13-cv-01835-RGA Notice has been electronically mailed to:

Brian E. Farnan bfarnan@farnanlaw.com, tfarnan@farnanlaw.com

Michael J. Farnan mfarnan@farnanlaw.com, tfarnan@farnanlaw.com

1:13-cv-01835-RGA Filer will deliver document by other means to:

The following document(s) are associated with this transaction:

From: ded_nefreply@ded.uscourts.gov
Sent: Wednesday, November 20, 2013 5:07 PM
To: ded_ecf@ded.uscourts.gov
Subject: Activity in Case 1:13-cv-01836-RGA TQ Delta LLC v. Zhone Technologies Inc. Patent/Trademark Report to Commissioner

This is an automatic e-mail message generated by the CM/ECF system. Please DO NOT RESPOND to this e-mail because the mail box is unattended.
*****NOTE TO PUBLIC ACCESS USERS*** Judicial Conference of the United States policy permits attorneys of record and parties in a case (including pro se litigants) to receive one free electronic copy of all documents filed electronically, if receipt is required by law or directed by the filer. PACER access fees apply to all other users. To avoid later charges, download a copy of each document during this first viewing. However, if the referenced document is a transcript, the free copy and 30 page limit do not apply.**

U.S. District Court

District of Delaware

Notice of Electronic Filing

The following transaction was entered by Farnan, Brian on 11/20/2013 at 5:07 PM EST and filed on 11/20/2013
Case Name: TQ Delta LLC v. Zhone Technologies Inc.
Case Number: 1:13-cv-01836-RGA
Filer:
Document Number: 7

Docket Text:
Report to the Commissioner of Patents and Trademarks for Patent/Trademark Number(s) US 8,090,008 B2; US 8,073,041 B1; US 7,292,627 B2; US 7,471,721 B2; US 8,218,610 B2; US 8,355,427 B2; US 7,453,881 B2; US 7,809,028 B2; US 7,978,706 B2; US 8,422,511 B2; US 7,796,705 B2; US 7,889,784 B2; US 7,835,430 B2; US 7,570,686 B2; US 8,238,412 B2; US 8,432,956 B2; US 7,451,379 B2; US 8,516,337 B2; US 7,979,778 B2; US 7,925,958 B2; US 8,462,835 B2; US 7,978,753 B2; US 6,445,730 B1; US 8,437,382 B2; US 7,836,381 B1; US 7,844,882 B2; US 8,276,048 B2; US 8,495,473 B2; US 7,831,890 B2; US 8,335,956 B2; US 8,468,411 B2; US 8,407,546 B2 . (Farnan, Brian)

1:13-cv-01836-RGA Notice has been electronically mailed to:

Brian E. Farnan bfarnan@farnanlaw.com, tfarnan@farnanlaw.com

Michael J. Farnan mfarnan@farnanlaw.com, tfarnan@farnanlaw.com

1:13-cv-01836-RGA Filer will deliver document by other means to:

AO 120 (Rev. 08/10)

TO:	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court District of Delaware on the following

☐ Trademarks or ☑ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
	12/9/2013	District of Delaware

PLAINTIFF	DEFENDANT
TQ Delta, LLC	ZyXEL Communications Corporation and ZyXEL Communications, Inc.

PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 See Attached		
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In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
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In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE

Copy 1—Upon initiation of action, mail this copy to Director **Copy 3—Upon termination of action, mail this copy to Director**
Copy 2—Upon filing document adding patent(s), mail this copy to Director **Copy 4—Case file copy**

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	US 8,090,008 B2	1/3/2012	TQ Delta, LLC
2	US 8,073,041 B1	12/6/2011	TQ Delta, LLC
3	US 7,292,627 B2	11/6/2007	TQ Delta, LLC
4	US 7,471,721 B2	12/30/2008	TQ Delta, LLC
5	US 8,218,610 B2	7/10/2012	TQ Delta, LLC
6.	US 8,355,427 B2	1/15/2013	TQ Delta, LLC
7	US 7,453,881 B2	11/18/2008	TQ Delta, LLC
8	US 7,809,028 B2	10/5/2010	TQ Delta, LLC
9	US 7,978,706 B2	7/12/2011	TQ Delta, LLC
10	US 8,422,511 B2	4/16/2013	TQ Delta, LLC
11	US 7,796,705 B2	9/14/2010	TQ Delta, LLC
12	US 7,889,784 B2	2/15/2011	TQ Delta, LLC
13	US 7,835,430 B2	11/16/2010	TQ Delta, LLC
14	US 7,570,686 B2	8/4/2009	TQ Delta, LLC
15	US 8,238,412 B2	8/7/2012	TQ Delta, LLC
16	US 8,432,956 B2	4/30/2013	TQ Delta, LLC
17	US 7,451,379 B2	11/11/2008	TQ Delta, LLC
18	US 8,516,337 B2	8/20/2013	TQ Delta, LLC
19	US 7,979,778 B2	7/12/2011	TQ Delta, LLC
20	US 7,925,958 B2	4/12/2011	TQ Delta, LLC
21	US 8,462,835 B2	6/11/2013	TQ Delta, LLC
22	US 7,978,753 B2	7/12/2011	TQ Delta, LLC
23	US 6,445,730 B1	9/3/2002	TQ Delta, LLC
24	US 8,437,382 B2	5/7/2013	TQ Delta, LLC
25	US 7,836,381 B1	11/16/2010	TQ Delta, LLC
26	US 7,844,882 B2	11/30/2010	TQ Delta, LLC
27	US 8,276,048 B2	9/25/2012	TQ Delta, LLC
28	US 8,495,473 B2	7/23/2013	TQ Delta, LLC
29	US 7,831,890 B2	11/9/2010	TQ Delta, LLC
30	US 8,335,956 B2	12/18/2012	TQ Delta, LLC
31	US 8,468,411 B2	6/18/2013	TQ Delta, LLC
32	US 8,407,546 B2	3/26/2013	TQ Delta, LLC

AO 120 (Rev. 08/10)

TO:	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
Mail Stop 8 **Director of the U.S. Patent and Trademark Office** **P.O. Box 1450** **Alexandria, VA 22313-1450**	

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Northern District of Texas, Dallas Division on the following

☑ Trademarks or ☐ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
3:12-cv-1462-L	5/10/2012	Northern District of Texas, Dallas Division

PLAINTIFF	DEFENDANT
Boulle Ltd	De Boulle Diamond & Jewelry Inc

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	4,086,050	1/17/2012	Boulle Ltd
2			
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In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☑ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
12/9/2013		
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 3,078,625	4/11/2006	De Boulle Diamond & Jewelry Inc
2 3,078,627	4/11/2006	De Boulle Diamond & Jewelry Inc
3		
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In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
Karen Mitchell	s/A. Lowe-Monserrate	12/10/2013

Copy 1—Upon initiation of action, mail this copy to Director **Copy 3—Upon termination of action, mail this copy to Director**
Copy 2—Upon filing document adding patent(s), mail this copy to Director **Copy 4—Case file copy**

AO 120 (Rev. 08/10)

TO:	Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court District of Delaware on the following

☐ Trademarks or ☑ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
	11/4/2013	District of Delaware

PLAINTIFF	DEFENDANT
TQ Delta, LLC	Pace Americas, Inc.

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	See Attached		
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PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
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	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	US 8,090,008 B2	1/3/2012	TQ Delta, LLC
2	US 8,073,041 B1	12/6/2011	TQ Delta, LLC
3	US 7,292,627 B2	11/6/2007	TQ Delta, LLC
4	US 7,471,721 B2	12/30/2008	TQ Delta, LLC
5	US 8,218,610 B2	7/10/2012	TQ Delta, LLC
6.	US 8,355,427 B2	1/15/2013	TQ Delta, LLC
7	US 7,453,881 B2	11/18/2008	TQ Delta, LLC
8	US 7,978,706 B2	7/12/2011	TQ Delta, LLC
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11	US 7,835,430 B2	11/16/2010	TQ Delta, LLC
12	US 7,570,686 B2	8/4/2009	TQ Delta, LLC
13	US 8,238,412 B2	8/7/2012	TQ Delta, LLC
14	US 8,432,956 B2	4/30/2013	TQ Delta, LLC
15	US 7,451,379 B2	11/11/2008	TQ Delta, LLC
16	US 8,516,337 B2	8/20/2013	TQ Delta, LLC
17	US 7,979,778 B2	7/12/2011	TQ Delta, LLC
18	US 7,925,958 B2	4/12/2011	TQ Delta, LLC
19	US 8,462,835 B2	6/11/2013	TQ Delta, LLC

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☐ Trademarks or ☑ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
	11/4/2013	District of Delaware

PLAINTIFF	DEFENDANT
TQ Delta, LLC	Zhone Technologies, Inc.

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	See Attached		
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3	US 7,292,627 B2	11/6/2007	TQ Delta, LLC
4	US 7,471,721 B2	12/30/2008	TQ Delta, LLC
5	US 8,218,610 B2	7/10/2012	TQ Delta, LLC
6.	US 8,355,427 B2	1/15/2013	TQ Delta, LLC
7	US 7,453,881 B2	11/18/2008	TQ Delta, LLC
8	US 7,809,028 B2	10/5/2010	TQ Delta, LLC
9	US 7,978,706 B2	7/12/2011	TQ Delta, LLC
10	US 8,422,511 B2	4/16/2013	TQ Delta, LLC
11	US 7,796,705 B2	9/14/2010	TQ Delta, LLC
12	US 7,889,784 B2	2/15/2011	TQ Delta, LLC
13	US 7,835,430 B2	11/16/2010	TQ Delta, LLC
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19	US 7,979,778 B2	7/12/2011	TQ Delta, LLC
20	US 7,925,958 B2	4/12/2011	TQ Delta, LLC
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22	US 7,978,753 B2	7/12/2011	TQ Delta, LLC
23	US 6,445,730 B1	9/3/2002	TQ Delta, LLC
24	US 8,437,382 B2	5/7/2013	TQ Delta, LLC

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
10/619,691	07/16/2003	David M. Krinsky	

CONFIRMATION NO. 7134

POA ACCEPTANCE LETTER

62574
Jason H. Vick
Sheridan Ross, PC
Suite # 1200
1560 Broadway
Denver, CO 80202

OC000000057783463

Date Mailed: 11/27/2012

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 11/05/2012.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/jtfitzhugh sr/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
10/619,691	07/16/2003	David M. Krinsky	6936-2-CON-2

CONFIRMATION NO. 7134

POWER OF ATTORNEY NOTICE

62574
Jason H. Vick
Sheridan Ross, PC
Suite # 1200
1560 Broadway
Denver, CO 80202

Date Mailed: 11/27/2012

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 11/05/2012.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

/jtfitzhugh sr/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

PTO/AIA/80 (07-12)
Approved for use through 11/30/2014. OMB 0651-0035
U.S. Patent and Trademark Office; U.S DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(c).

I hereby appoint:

■ Practitioners associated with Customer Number: 62574

OR

☐ Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

As attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignments documents attached to this form in accordance with 37 CFR 3.73(c).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(c) to:

■ The address associated with Customer Number: 62574

OR

☐	Firm or Individual Name			
	Address			
	City		State	Zip
	Country			
	Telephone		Email	

Assignee Name and Address: TQ DELTA, LLC
805 Las Cimas Parkway, Suite 240
Austin, Texas 78746

A copy of this form, together with a statement under 37 CFR 3.73(c) (Form PTO/AIA/96 or equivalent) is required to be Filed in each application in which this form is used. The statement under 37 CFR 3.73(c) may be completed by one of The practitioners appointed in this form, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record
The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature	Mark K. Roche	Date	10/4/12
Name	Mark K. Roche	Telephone	512-609-1810
Title	Managing Director		

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Electronic Acknowledgement Receipt	
EFS ID:	14147890
Application Number:	10619691
International Application Number:	
Confirmation Number:	7134
Title of Invention:	SYSTEMS AND METHODS FOR ESTABLISHING A DIAGNOSTIC TRANSMISSION MODE AND COMMUNICATING OVER THE SAME
First Named Inventor/Applicant Name:	David M. Krinsky
Customer Number:	62574
Filer:	Jason Vick/Joanne Vos
Filer Authorized By:	Jason Vick
Attorney Docket Number:	6936-2-CON-2
Receipt Date:	05-NOV-2012
Filing Date:	16-JUL-2003
Time Stamp:	14:05:09
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		EntityStatus_373c_w_POA.pdf	422445 f429657d255a7cfb0cb985ddb690d8f4cdd3b5a5	yes	4

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Miscellaneous Incoming Letter	1	1
	Assignee showing of ownership per 37 CFR 3.73.	2	3
	Power of Attorney	4	4
Warnings:			
Information:			
	Total Files Size (in bytes):	422445	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

<u>New Applications Under 35 U.S.C. 111</u>
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

<u>National Stage of an International Application under 35 U.S.C. 371</u>
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

<u>New International Application Filed with the USPTO as a Receiving Office</u>
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of: David M. Krinsky	Patent No. 7,570,686
Application No.: 10/619,691	Issued: August 4, 2009
Filed: July 16, 2003	Examiner: TRAN, Khanh C.
Atty. File No.: 6936-2-CON-2	Confirmation No.: 7134

For: SYSTEMS AND METHODS FOR ESTABLISHING A DIAGNOSTIC TRANSMISSION MODE AND COMMUNICATING OVER THE SAME

ASSERTION OF ENTITLEMENT TO SMALL ENTITY STATUS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Madam:

In accordance with MPEP §§ 509.02 and 509.03 AND 37 CFR 1.27, this document is being filed to inform the U.S. Patent Office of the change of status for the above-identified patent from large entity status to small entity status. All fees paid to date have been paid as large entity status. No fees have yet been paid as small entity status. Due to the sale of the referenced patent, the Applicant is now entitled to small entity status.

We respectfully request that small entity status be granted for the above-referenced patent application.

Please contact the undersigned if there are any questions regarding this notification.

Respectfully submitted,

SHERIDAN ROSS P.C.

Date: 5 Nov '12

By: _____

Jason H. Vick
Reg. No. 45,285
1560 Broadway, Suite 1200
Denver, Colorado 80202
Telephone: 303-863-9700

PTO/AIA/96 (08-12)
Approved for use through 01/31/2013. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

STATEMENT UNDER 37 CFR 3.73(c)

Applicant/Patent Owner: TQ DELTA, LLC

Application No./Patent No.: 7,570,686 Filed/Issue Date: August 4, 2009

Titled: SYSTEMS AND METHODS FOR ESTABLISHING A DIAGNOSTIC TRANSMISSION MODE AND COMMUNICATING OVER THE SAME

TQ DELTA, LLC, a Corporation

(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

1. ☑ The assignee of the entire right, title, and interest.

2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):

☐ The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.

☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (*e.g.*, bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):

A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

B. ☑ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: David M. Krinsky and Robert Edmund Pizzano, Jr. To: AWARE, INC.

The document was recorded in the United States Patent and Trademark Office at Reel 012216, Frame 0842, or for which a copy thereof is attached.

2. From: AWARE, INC. To: TQ DELTA, LLC

The document was recorded in the United States Patent and Trademark Office at Reel 029154, Frame 0937, or for which a copy thereof is attached.

PTO/AIA/96 (08-12)
Approved for use through 01/31/2013. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

STATEMENT UNDER 37 CFR 3.73(c)

3. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

4. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

5. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☑ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Signature	5 Nov 12 Date
Jason H. Vick Printed or Typed Name	45,285 Title or Registration Number

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Jason H. Vick
Sheridan Ross, PC
Suite # 1200
1560 Broadway
Denver, CO 80202

Mail Date: 04/20/2010

Applicant	: David M. Krinsky	: DECISION ON REQUEST FOR
Patent Number	: 7570686	: RECALCULATION of PATENT
Issue Date	: 08/04/2009	: TERM ADJUSTMENT IN VIEW
Appliction No	: 10/619,691	: OF WYETH
Filed	: 07/16/2003	:
		:

The Patentee's Request for Recalculation is **DISMISSED.**

This Request is deemed ineligible for consideration for one or more of the following reasons:

(A). The patent for which PTA recalculation is requested is either a design or reissue application or is a reexamination proceeding;

(B). The patent for which PTA recalculation is requested resulted from a utility or plant application filed under 35 USC 111(a) before May 29, 2000 and no CPA filed in the application on/after May 29, 2000;

(C). The patent for which PTA recalculation is requested resulted from an international application in which the international filing date was before May 29, 2000 and no CPA filed in the application on/after May 29, 2000;

(D). The patent for which PTA recalculation is requested issued on/after March 2, 2010;

(E). The Request for Recalculation was filed more than 180 days after the grant date of the patent and the request was not filed within two months of a dismissal of a request for reconsideration of the of the patent term under 37 CFR 1.705(d);

(F). The Request for Recalculation is not solely limited to USPTO pre-Wyeth interpretation of 35 U.S.C. 154(b)(2)(A);

or

(G). A civil action was filed pursuant to 35 U.S.C. 154(b)(4)(A)concerning the same patent at issue in this request.

Patentee may file a reply to this decision dismissing the Request for Recalculation. Patentee must file such reply within one month or thirty days, whichever is longer, of the mail date of the decision dismissing the Request for Recalculation. No fee is required if patentee is asserting in the reply that the dismissal for ineligibility is improper.

Patentee should use document code PET.OP if electronically filing a reply to this dismissal. If the USPTO finds that the request was improperly deemed ineligible, the USPTO will mail applicant a recalculation determination.

Patentee should be aware that in order to preserve the right to review in the United States District Court for the District of Columbia of the USPTO patent term adjustment determination, patentee must ensure that he or she also take the steps required under 35 U.S.C. 154(b)(4)(A). Nothing in the request for recalculation should be construed as providing an alternative time frame for commencing a civil action under 35 U.S.C. 154 (b)(4)(A).

Any questions concerning this decision should be directed to the Office of Patent Legal Administration at 571-272-7702.

PTOL-549D (04/10)

Doc Code: PET.PTA.RCAL
Document Description: Request for Recalculation in view of Wyeth

PTO/SB/131 (01-10)
Approved for use through 02/28/2011. OMB 0651-0020
U.S. Patent and Trademark Office; U. S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

REQUEST FOR RECALCULATION OF PATENT TERM ADJUSTMENT IN VIEW OF *WYETH**

Attorney Docket Number: 5550-2-CON2	Patent Number: 7,570,686
Filing Date (or 371(b) or (f) Date): July 16, 2003	Issue Date: August 4, 2009
First Named Inventor: David M. Krinsky	
Title: Systems and Methods for Establishing a Diagnostic Transmission Mode and Communicating Over the Same	

PATENTEE HEREBY REQUESTS RECALCULATION OF THE PATENT TERM ADJUSTMENT (PTA) UNDER 35 USC 154(b) INDICATED ON THE ABOVE-IDENTIFIED PATENT. THE PATENTEE'S SOLE BASIS FOR REQUESTING THE RECALCULATION IS THE USPTO'S PRE-*WYETH* INTERPRETATION OF 35 U.S.C. 154(b)(2)(A).

Note: This form is only for requesting a recalculation of PTA for patents issued before March 2, 2010, if the sole basis for requesting the recalculation is the USPTO's pre-*Wyeth* interpretation of 35 U.S.C. 154(b)(2)(A). See Instruction Sheet on page 2 for more information.

Patentees are reminded that to preserve the right to review in the United States District Court for the District of Columbia of the USPTO's patent term adjustment determination, a patentee must ensure that he or she also takes the steps required under 35 U.S.C. 154(b)(3) and (b)(4) and 37 CFR 1.705 in a timely manner.

**Wyeth v. Kappos*, No. 2009-1120 (Fed. Cir., Jan. 7, 2010).

Signature	Date 8 Feb '10
Name (Print/Typed) Jason H. Vick	Registration Number 45,285

Note: *Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required in accordance with 37 CFR 1.33 and 11.18. Please see 37 CFR 1.4(d) for the form of the signature. If necessary, submit multiple forms for more than one signature, see below**.*

☑ *Total of 1 forms are submitted.

The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Electronic Acknowledgement Receipt	
EFS ID:	6971956
Application Number:	10619691
International Application Number:	
Confirmation Number:	7134
Title of Invention:	SYSTEMS AND METHODS FOR ESTABLISHING A DIAGNOSTIC TRANSMISSION MODE AND COMMUNICATING OVER THE SAME
First Named Inventor/Applicant Name:	David M. Krinsky
Customer Number:	62574
Filer:	Jason Vick/Joanne Vos
Filer Authorized By:	Jason Vick
Attorney Docket Number:	5550-2-CON2
Receipt Date:	08-FEB-2010
Filing Date:	16-JUL-2003
Time Stamp:	18:09:37
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for PTA recalculation in view of Wyeth	PTA_Recalculation.pdf	62038 213d0df0194fc3f8efa9700f23927364f7096466	no	1

Warnings:
Information:

Total Files Size (in bytes):	62038

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,691	08/04/2009	7570686	5550-2-CON2	7134

62574 7590 07/15/2009

Jason H. Vick
Sheridan Ross, PC
Suite # 1200
1560 Broadway
Denver, CO 80202

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 631 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

David M. Krinsky, Acton, MA;
Robert Edmund Pizzano JR., Stoneham, MA;

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,691	07/16/2003	David M. Krinsky	5550-2-CON2	7134

62574 7590 07/06/2009

Jason H. Vick
Sheridan Ross, PC
Suite # 1200
1560 Broadway
Denver, CO 80202

EXAMINER	
TRAN, KHANH C	
ART UNIT	PAPER NUMBER
2611	

NOTIFICATION DATE	DELIVERY MODE
07/06/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jvick@sheridanross.com

Supplemental Notice of Allowability	**Application No.** 10/619,691	**Applicant(s)** KRINSKY ET AL.	
	Examiner KHANH C. TRAN	**Art Unit** 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the correction of the specification*.

2. ☐ The allowed claim(s) is/are _____.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/KHANH C. TRAN/
Primary Examiner, Art Unit 2611

UNITED STATES DEPARTMENT OF COMMERCE
U.S. Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450

APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
10619691	7/16/2003	KRINSKY ET AL.	5550-2-CON2

Jason H. Vick
Sheridan Ross, PC
Suite # 1200
1560 Broadway
Denver, CO 80202

EXAMINER	
KHANH C.. TRAN	
ART UNIT	**PAPER**
2611	20090630

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

This Supplemental Notice of Allowability is directed to the correction of paragraph [0009] of the Specification.

/KHANH C. TRAN/
Primary Examiner, Art Unit 2611

PTO-90C (Rev.04-03)

SUPPLEMENTAL DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Attorney Jason H. Vick on 6/25/2009.

In paragraph [0009] of the Specification, in lines 12-13, "copending Attorney Docket No. 081513.000003" has been changed to -- copending Application No. 09/755,172 (Attorney Docket No. 081513.00003), now became U.S. Patent 6,865,221 --

.

Conclusion

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHANH C. TRAN whose telephone number is (571)272-3007. The examiner can normally be reached on Monday - Friday from 08:00 AM - 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on 571-272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KCT

/KHANH C. TRAN/
Primary Examiner, Art Unit 2611

10/619,691

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet | | of | |

Complete if Known	
Application Number	~~New Divisional Application based on USSN: 09/755,173~~
Filing Date	July 16, 2003
First Named Inventor	David M. Krinsky et al.
Art Unit	2634
Examiner Name	Kevin Kim
Attorney Docket Number	081513-334

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	U.S. Patent Document Number - Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
KCT		US-4,566,100	01-21-1986	Mizuno et al.	
KCT		US-5,128,619	07-07-1992	Bjork et al.	
KCT		US-5,608,643	03-04-1997	Wichter et al.	
KCT		US-5,864,602	01-26-1999	Needle	
KCT		US-5,964,891	~~01~~ 12-12-1999	Caswell et al.	
KCT		US-6,075,821	06-13-2000	Kao et al.	
KCT		US-6,219,378	04-17-2001	Wu	
KCT		US-6,404,774	06-11-2002	Jenness	
KCT		US-6,411,678	06-25-2002	Tomlinson, Jr. et al.	
KCT		US-6,449,307	09-10-2002	Ishikawa et al.	
KCT		US-6,512,789	01-28-2003	Mirfakhraei	

LC 6/08/09

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3] Number[4] Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Application of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
KCT		WO 97/01900	01-16-1997	Pfeiffer		
KCT		WO 99/26375	05-27-1999	Hakanson		
KCT		WO 99/63427	12-09-1999	Eichen et al.		
KCT		WO 00/64130	10-26-2000	Rudinski et al.		
KCT		EP 0 889 615	01-07-1999	Liu et al.		
KCT		GB 2 303 032	02-05-1997	Chun		

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
KCT		Boets P. et al.: *"The Modeling Aspect of Transmission Line Networks"* Proceedings Of The Instrumentation And Measurement Technology Conference, US, New York, IEEE, 12 May 1992, pages 137-141, XP000343913 ISBN: 0-7803-0640-6.	
KCT		LEWIS L. et al. "Extending Trouble Ticket System To Fault Diagnostics" IEEE Network, IEEE Inc. New York, US, 1 November 1993, pages 44-51, XP 000575228.	

Examiner Signature	/Khanh Tran/ (10/27/2006)	Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

[1] Applicant's unique citation designation number (optional). [2] Applicant is to place a check mark here if English language Translation is attached.

NVA270989.1

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,691	07/16/2003	David M. Krinsky	5550-2-CON2	7134

62574 7590 06/02/2009

Jason H. Vick
Sheridan Ross, PC
Suite # 1200
1560 Broadway
Denver, CO 80202

EXAMINER	
TRAN, KHANH C	
ART UNIT	PAPER NUMBER
2611	

NOTIFICATION DATE	DELIVERY MODE
06/02/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jvick@sheridanross.com

Supplemental Notice of Allowability	**Application No.** 10/619,691	**Applicant(s)** KRINSKY ET AL.	
	Examiner KHANH C. TRAN	**Art Unit** 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the IDS filed on 5/20/2009*.

2. ☐ The allowed claim(s) is/are _____.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/KHANH C. TRAN/
Primary Examiner, Art Unit 2611

UNITED STATES DEPARTMENT OF COMMERCE
U.S. Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450

APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
10619691	7/16/2003	KRINSKY ET AL.	5550-2-CON2

Jason H. Vick
Sheridan Ross, PC
Suite # 1200
1560 Broadway
Denver, CO 80202

EXAMINER	
KHANH C.. TRAN	
ART UNIT	**PAPER**
2611	20090528

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

This communication is responsive to the IDS filed on 5/20/2009. THe IDS has been entered.

/KHANH C. TRAN/
Primary Examiner, Art Unit 2611

PTO-90C (Rev.04-03)

PTO/SB/08a (04-09)
Approved for use through 05/31/2009. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	10619691
Filing Date	2003-07-16
First Named Inventor	Krinsky
Art Unit	2611
Examiner Name	TRAN, KHANH C
Attorney Docket Number	5550-2-CON2

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1					

If you wish to add additional U.S. Patent citation information please click the Add button. Add

U.S.PATENT APPLICATION PUBLICATIONS Remove

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1					

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FOREIGN PATENT DOCUMENTS Remove

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							☐

If you wish to add additional Foreign Patent Document citation information please click the Add button Add

NON-PATENT LITERATURE DOCUMENTS Remove

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /KCT/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	10619691
	Filing Date	2003-07-16
	First Named Inventor	Krinsky
	Art Unit	2611
	Examiner Name	TRAN, KHANH C
	Attorney Docket Number	5550-2-CON2

/KCT/	1	Examiner's First Report for Australian Patent Application No. 2008203520, mailed March 9, 2009 (5550-2-PAU4-DIV)	☐

If you wish to add additional non-patent literature document citation information please click the Add button Add

EXAMINER SIGNATURE

Examiner Signature	/Khanh Tran/ (05/28/2009)	Date Considered	05/28/2009

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /KCT/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	10619691
	Filing Date	2003-07-16
	First Named Inventor	Krinsky
	Art Unit	2611
	Examiner Name	TRAN, KHANH C
	Attorney Docket Number	5550-2-CON2

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☒ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☒ Fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☐ None

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Jason H. Vick/	Date (YYYY-MM-DD)	2009-05-20
Name/Print	Jason H. Vick	Registration Number	45285

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /KCT/

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /KCT/

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

62574 7590 05/15/2009

Jason H. Vick
Sheridan Ross, PC
Suite # 1200
1560 Broadway
Denver, CO 80202

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,691	07/16/2003	David M. Krinsky	5550-2-CON2	7134

TITLE OF INVENTION: SYSTEMS AND METHODS FOR ESTABLISHING A DIAGNOSTIC TRANSMISSION MODE AND COMMUNICATING OVER THE SAME

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1510	$300	$0	$1810	08/17/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
TRAN, KHANH C	2611	375-222000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 SHERIDAN ROSS P.C.
2 Jason H. Vick
3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: Aware, Inc.

(B) RESIDENCE: (CITY and STATE OR COUNTRY): Bedford, MA

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:
☒ Issue Fee
☒ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number 19-1970 (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.
☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date 2 June '09

Typed or printed name Jason H. Vick Registration No. 45,285

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Electronic Patent Application Fee Transmittal	
Application Number:	10619691
Filing Date:	16-Jul-2003
Title of Invention:	SYSTEMS AND METHODS FOR ESTABLISHING A DIAGNOSTIC TRANSMISSION MODE AND COMMUNICATING OVER THE SAME
First Named Inventor/Applicant Name:	David M. Krinsky
Filer:	Jason Vick/Christine Jacquet
Attorney Docket Number:	5550-2-CON2
Filed as Large Entity	

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Publ. Fee- early, voluntary, or normal	1504	1	300	300
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Utility Appl issue fee	1501	1	1510	1510

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**1810**

Electronic Acknowledgement Receipt	
EFS ID:	5438566
Application Number:	10619691
International Application Number:	
Confirmation Number:	7134
Title of Invention:	SYSTEMS AND METHODS FOR ESTABLISHING A DIAGNOSTIC TRANSMISSION MODE AND COMMUNICATING OVER THE SAME
First Named Inventor/Applicant Name:	David M. Krinsky
Customer Number:	62574
Filer:	Jason Vick/Christine Jacquet
Filer Authorized By:	Jason Vick
Attorney Docket Number:	5550-2-CON2
Receipt Date:	02-JUN-2009
Filing Date:	16-JUL-2003
Time Stamp:	16:11:00
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$1810
RAM confirmation Number	2563
Deposit Account	191970
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees) Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)	

Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		COMMENTS_REASONS_FOR_ALLOW_AND_ISSUE_FEE_TRANS.pdf	258413 e0847827de95abf5d82db30f07b225abcb0c51b2	yes	2

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Post Allowance Communication - Incoming	1	1
	Issue Fee Payment (PTO-85B)	2	2

Warnings:

Information:

2	Fee Worksheet (PTO-875)	fee-info.pdf	32375 7dfe6ba501fdc75ac6089292e6286ff9e9517e3e	no	2

Warnings:

Information:

Total Files Size (in bytes):	290788

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:	**Confirmation No.: 7134**
First Named Inventor: KRINSKY	Art Unit: 26117
Appln. No.: 10/619,691	Examiner: TRAN
For: SYSTEM AND METHOD FOR ESTABLISHING A DIAGNOSTIC TRANSMISSION MODE AND COMMUNICATING OVER THE SAME	Attorney Docket No. 5550-2-CON-2

* * *

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

COMMENTS ON STATEMENT OF REASONS FOR ALLOWANCE

Dear Sir:

Applicant submits this Comments on Statement of Reasons for Allowance to address further the Notice of Allowability ("Notice") having a mailing date of May 17, 2009.

Based on the Notice, the patentability of all independent and dependent claims is assumed to be based upon the elements as set forth in such claims and that such claims meet all criteria for patentability under §101, §102, §103 and §112.

As is clear from MPEP 1302.14,

> "The statement [of reasons for allowance] is not intended to necessarily state all the reasons for allowance or all the details why claims are allowed and should not be written to specifically or impliedly state that all the reasons for allowance are set forth."

While the stated may be a stated reason for allowing some independent claims, Applicant submits that some independent claims have a different reason for allowance based on different claim features and that some independent claims have other reasons for allowance.

Although the Applicant believes that no fees are due for filing this Comments on Statement of Reasons for Allowance, please charge any fees deemed necessary to Deposit Account No. 19-1970.

Respectfully submitted,
SHERIDAN ROSS P.C.

Date: 25 Jun '09

By: _____
Jason H. Vick, Reg. No. 45,285
1560 Broadway, Suite 1200
Denver, Colorado 80202
Telephone: 303-863-9700

PTO/SB/08a (04-09)
Approved for use through 05/31/2009. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99)**		
	Application Number	10619691
	Filing Date	2003-07-16
	First Named Inventor	Krinsky
	Art Unit	2611
	Examiner Name	TRAN, KHANH C
	Attorney Docket Number	5550-2-CON2

U.S.PATENTS Remove						
Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1					
If you wish to add additional U.S. Patent citation information please click the Add button. Add						

U.S.PATENT APPLICATION PUBLICATIONS Remove						
Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1					
If you wish to add additional U.S. Published Application citation information please click the Add button. Add						

FOREIGN PATENT DOCUMENTS Remove								
Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] ¡	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							☐
If you wish to add additional Foreign Patent Document citation information please click the Add button Add								

NON-PATENT LITERATURE DOCUMENTS Remove			
Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	10619691
	Filing Date	2003-07-16
	First Named Inventor	Krinsky
	Art Unit	2611
	Examiner Name	TRAN, KHANH C
	Attorney Docket Number	5550-2-CON2

	1	Examiner's First Report for Australian Patent Application No. 2008203520, mailed March 9, 2009 (5550-2-PAU4-DIV)	☐

If you wish to add additional non-patent literature document citation information please click the Add button Add

EXAMINER SIGNATURE

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	10619691
	Filing Date	2003-07-16
	First Named Inventor	Krinsky
	Art Unit	2611
	Examiner Name	TRAN, KHANH C
	Attorney Docket Number	5550-2-CON2

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☒ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☒ Fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☐ None

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Jason H. Vick/	Date (YYYY-MM-DD)	2009-05-20
Name/Print	Jason H. Vick	Registration Number	45285

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal	
Application Number:	10619691
Filing Date:	16-Jul-2003
Title of Invention:	SYSTEMS AND METHODS FOR ESTABLISHING A DIAGNOSTIC TRANSMISSION MODE AND COMMUNICATING OVER THE SAME
First Named Inventor/Applicant Name:	David M. Krinsky
Filer:	Jason Vick/Debra Kesner
Attorney Docket Number:	5550-2-CON2
Filed as Large Entity	

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
		Total in USD ($)		**180**

Electronic Acknowledgement Receipt	
EFS ID:	5366976
Application Number:	10619691
International Application Number:	
Confirmation Number:	7134
Title of Invention:	SYSTEMS AND METHODS FOR ESTABLISHING A DIAGNOSTIC TRANSMISSION MODE AND COMMUNICATING OVER THE SAME
First Named Inventor/Applicant Name:	David M. Krinsky
Customer Number:	62574
Filer:	Jason Vick/Debra Kesner
Filer Authorized By:	Jason Vick
Attorney Docket Number:	5550-2-CON2
Receipt Date:	20-MAY-2009
Filing Date:	16-JUL-2003
Time Stamp:	12:31:27
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$180
RAM confirmation Number	7394
Deposit Account	191970
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Filed (SB/08)	IDS_04.pdf	763305 b8050396e1a30fd890a0e4f0647bd3dd619393a3	no	4
Warnings:					
Information:					
A U.S. Patent Number Citation or a U.S. Publication Number Citation is required in the Information Disclosure Statement (IDS) form for autoloading of data into USPTO systems. You may remove the form to add the required data in order to correct the Informational Message if you are citing U.S. References. If you chose not to include U.S. References, the image of the form will be processed and be made available within the Image File Wrapper (IFW) system. However, no data will be extracted from this form. Any additional data such as Foreign Patent Documents or Non Patent Literature will be manually reviewed and keyed into USPTO systems.					
2	NPL Documents	5550-2-PAU4-DIV_OA_3-9-09.pdf	72889 2f41e077d06ead84bbb4e4b1ab9c984ffadeea72	no	2
Warnings:					
Information:					
3	Fee Worksheet (PTO-875)	fee-info.pdf	30517 a70b479b36edec29f01c2cdbe174252d6467fedf	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	866711		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
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National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

62574 7590 05/15/2009

Jason H. Vick
Sheridan Ross, PC
Suite # 1200
1560 Broadway
Denver, CO 80202

EXAMINER	
TRAN, KHANH C	
ART UNIT	PAPER NUMBER
2611	

DATE MAILED: 05/15/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,691	07/16/2003	David M. Krinsky	5550-2-CON2	7134

TITLE OF INVENTION: SYSTEMS AND METHODS FOR ESTABLISHING A DIAGNOSTIC TRANSMISSION MODE AND COMMUNICATING OVER THE SAME

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1510	$300	$0	$1810	08/17/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

62574 7590 05/15/2009

Jason H. Vick
Sheridan Ross, PC
Suite # 1200
1560 Broadway
Denver, CO 80202

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)

(Signature)

(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,691	07/16/2003	David M. Krinsky	5550-2-CON2	7134

TITLE OF INVENTION: SYSTEMS AND METHODS FOR ESTABLISHING A DIAGNOSTIC TRANSMISSION MODE AND COMMUNICATING OVER THE SAME

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1510	$300	$0	$1810	08/17/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
TRAN, KHANH C	2611	375-222000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:

❑ Issue Fee

❑ Publication Fee (No small entity discount permitted)

❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**

❑ A check is enclosed.

❑ Payment by credit card. Form PTO-2038 is attached.

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

❑ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.

❑ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,691	07/16/2003	David M. Krinsky	5550-2-CON2	7134

62574 7590 05/15/2009

Jason H. Vick
Sheridan Ross, PC
Suite # 1200
1560 Broadway
Denver, CO 80202

EXAMINER	
TRAN, KHANH C	
ART UNIT	PAPER NUMBER
2611	

DATE MAILED: 05/15/2009

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 645 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 645 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

Notice of Allowability	Application No. 10/619,691	Applicant(s) KRINSKY ET AL.	
	Examiner KHANH C. TRAN	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the Amendment filed on 2/26/2009*.

2. ☒ The allowed claim(s) is/are *44-83 and 85, which have been renumbered as set forth in the Office action*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/KHANH C. TRAN/
Primary Examiner, Art Unit 2611

1. The Amendment filed on 2/26/2009 has been entered. Claims 44-83 and 85 are still pending in this Office action.

2. Claims 44, 54, 64, 74, 45, 55, 65, 75, 46, 56, 66, 76, 47, 57, 67, 77, 48, 58, 68, 49, 59, 69, 78, 50, 60, 70, 79, 51, 61, 71, 80, 52, 62, 72, 81, 53, 63, 73 and 82-83 have been renumbered as claims 1-41, respectively.

EXAMINER'S AMENDMENT

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Applicants' Attorney Jason H. Vick, Registration No. 45,285 on 5/7/2009.

Regarding claim 82, in line 4, "associating" has been changed to -- associating, at said transceiver, --.

Response to Arguments

4. Applicant's arguments, see Applicants' Remarks, filed on 2/26/2009, with respect to claims 44-83 and 85 have been fully considered and are persuasive. The rejection of claims 44-83 and 85 has been withdrawn after Applicants amended claim.

Reasons for Allowance

The following is an examiner's statement of reasons for allowance:

5. The instant application is directed to a method / system of communicating diagnostic information over a communication channel using multi-carrier modulation in a multi-carrier modulation. Each independent claim identifies uniquely distinct features "*transmitting from the multi-carrier modulation transceiver a diagnostic message using multi-carrier modulation wherein the diagnostic message comprises a plurality of data variables representing diagnostic information about the communication channel and each bit in the diagnostic message is mapped to at least one DMT symbol, and wherein one variable comprises an array representing frequency domain received idle channel noise information*".

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Long et al. U.S. Patent 6,725,176 B1.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHANH C. TRAN whose telephone number is (571)272-3007. The examiner can normally be reached on Monday - Friday from 08:00 AM - 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on 571-272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KCT

/KHANH C. TRAN/
Primary Examiner, Art Unit 2611

Notice of References Cited	Application/Control No. 10/619,691	Applicant(s)/Patent Under Reexamination KRINSKY ET AL.	
	Examiner KHANH C. TRAN	Art Unit 2611	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,725,176	04-2004	Long et al.	702/183
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	10619691	KRINSKY ET AL.
	Examiner	Art Unit
	KHANH C TRAN	2611

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	06/09/2008	10/13/2008	05/08/2009						
	1	-	-	-						
	2	-	-	-						
	3	-	-	-						
	4	-	-	-						
	5	-	-	-						
	6	-	-	-						
	7	-	-	-						
	8	-	-	-						
	9	-	-	-						
	10	-	-	-						
	11	-	-	-						
	12	-	-	-						
	13	-	-	-						
	14	-	-	-						
	15	-	-	-						
	16	-	-	-						
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	25	-	-	-						
	26	-	-	-						
	27	-	-	-						
	28	-	-	-						
	29	-	-	-						
	30	-	-	-						
	31	-	-	-						
	32	-	-	-						
	33	-	-	-						
	34	-	-	-						
	35	-	-	-						
	36	-	-	-						

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CLAIM		DATE								
Final	Original	06/09/2008	10/13/2008	05/08/2009						
	37	-	-	-						
	38	-	-	-						
	39	-	-	-						
	40	-	-	-						
	41	-	-	-						
	42	-	-	-						
	43	-	-	-						
1	44	=	✓	=						
5	45	=	✓	=						
9	46	=	✓	=						
13	47	=	✓	=						
17	48	=	✓	=						
20	49	=	✓	=						
24	50	=	✓	=						
28	51	=	✓	=						
32	52	=	✓	=						
36	53	=	✓	=						
2	54	=	✓	=						
6	55	=	✓	=						
10	56	=	✓	=						
14	57	=	✓	=						
18	58	=	✓	=						
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37	63	=	✓	=						
3	64	=	✓	=						
7	65	=	✓	=						
11	66	=	✓	=						
15	67	=	✓	=						
19	68	=	✓	=						
22	69	=	✓	=						
26	70	=	✓	=						
30	71	=	✓	=						
34	72	=	✓	=						

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	10619691	KRINSKY ET AL.
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	KHANH C TRAN	2611

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	06/09/2008	10/13/2008	05/08/2009						
38	73	=	✓	=						
4	74	=	✓	=						
8	75	=	✓	=						
12	76	=	✓	=						
16	77	=	✓	=						
23	78	=	✓	=						
27	79	=	✓	=						
31	80	=	✓	=						
35	81	=	✓	=						
39	82	=	✓	=						
40	83	=	✓	=						
	84	✓	-	-						
41	85	=	✓	=						

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	"6658052".pn.	US-PGPUB; USPAT	OR	ON	2009/05/08 06:38
L2	7	(diagnostic adj information) same (array) same variables	US-PGPUB; USPAT	OR	ON	2009/05/08 06:53
L3	0	"375"/$.ccls. and ((diagnostic adj information) same (array) same variables)	US-PGPUB; USPAT	OR	ON	2009/05/08 06:53
L4	6	"375"/$.ccls. and ((diagnostic adj information) same variables)	US-PGPUB; USPAT	OR	ON	2009/05/08 06:53
L5	3	"379"/$.ccls. and ((diagnostic adj information) same variables)	US-PGPUB; USPAT	OR	ON	2009/05/08 06:54
L6	21	"370"/$.ccls. and ((diagnostic adj information) same variables)	US-PGPUB; USPAT	OR	ON	2009/05/08 06:54
L7	10	"370"/$.ccls. and ((diagnostic adj information) same variables) and modems	US-PGPUB; USPAT	OR	ON	2009/05/08 06:55
S1	674	"375"/$.CCLS. and (channel adj cod$5) and diversity	US-PGPUB; USPAT	OR	ON	2005/09/09 09:15
S2	230	"375"/$.CCLS. and ((channel adj cod$5) same diversity)	US-PGPUB; USPAT	OR	ON	2007/03/27 07:06
S3	1	"6247158".pn.	US-PGPUB; USPAT	OR	ON	2005/09/08 16:58
S4	7	("4577317" | "5283780" | "5907582" | "5909439" | "5970085" | "6023492" | "6049566").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/08 17:00
S5	1	"6178196".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/08 17:00
S6	1	"6389063".PN.	US-PGPUB; USPAT	OR	ON	2005/09/09 09:16
S7	1	"6603807".PN.	US-PGPUB; USPAT	OR	ON	2005/09/09 09:16

S8	1	"6359926".PN.	US-PGPUB; USPAT	OR	ON	2005/09/09 09:16
S9	15	"375"/260.CCLS. and ((channel adj cod$5) same diversity)	US-PGPUB; USPAT	OR	ON	2005/09/15 15:55
S10	1	"6178196".pn.	US-PGPUB; USPAT	OR	ON	2005/09/15 16:00
S11	1	"6693982".pn.	US-PGPUB; USPAT	OR	ON	2005/09/15 16:41
S12	0	cross adj correlated adj base adj band	US-PGPUB; USPAT	OR	ON	2006/02/24 11:01
S13	762	(cross adj correlated) near2 signal	US-PGPUB; USPAT	OR	ON	2005/09/15 16:42
S14	589	(cross adj correlated) near signal	US-PGPUB; USPAT	OR	ON	2005/09/15 16:42
S15	43	S14 with transmit$5	US-PGPUB; USPAT	OR	ON	2005/09/15 16:50
S16	362	transmitter same diversity same delay	US-PGPUB; USPAT	OR	ON	2005/09/15 16:51
S17	3	transmitter same diversity same (delay adj path)	US-PGPUB; USPAT	OR	ON	2005/09/15 16:51
S18	1196	diversity with delay	US-PGPUB; USPAT	OR	ON	2005/09/15 17:03
S19	139	diversity same (multi adj user)	US-PGPUB; USPAT	OR	ON	2005/09/15 17:04
S20	15	diversity same (plurality adj user) same transmitter	US-PGPUB; USPAT	OR	ON	2005/09/15 17:12
S21	24	diversity same (plurality adj user) same transmission	US-PGPUB; USPAT	OR	ON	2005/09/15 17:06
S22	0	diversity same (plurality adj user) same (different adj PN)	US-PGPUB; USPAT	OR	ON	2005/09/15 17:11
S23	18	diversity same (plurality adj user) same (PN adi code)	US-PGPUB; USPAT	OR	ON	2005/09/15 17:12
S24	0	diversity same (plurality adj user) same (PN adj code)	US-PGPUB; USPAT	OR	ON	2005/09/15 17:12
S25	34	(plurality adj antenna) same (plurality adj user)	US-PGPUB; USPAT	OR	ON	2005/09/15 17:16
S26	17	(plurality adj antenna) same (plurality adj user) same transmi$5	US-PGPUB; USPAT	OR	ON	2005/09/15 17:17

S27	0	(plurality adj antenna) same (distinct adj signal)	US-PGPUB; USPAT	OR	ON	2005/09/15 17:18
S28	3	(plurality adj antenna) same (different adj spread adj code)	US-PGPUB; USPAT	OR	ON	2005/09/15 17:18
S29	12	(diversity) same (different adj spread adj code)	US-PGPUB; USPAT	OR	ON	2005/09/15 17:19
S30	0	multiusers same (channel adj coder) same (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 14:54
S31	3	data same (channel adj coder) same (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 14:54
S32	1	MIMO same (channel adj coder) same (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:03
S33	3	(MIMO same (channel adj coder)) and (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 14:56
S34	86	multi adj user adj data	US-PGPUB; USPAT	OR	ON	2005/09/16 14:58
S35	2	S34 and mimo	US-PGPUB; USPAT	OR	ON	2005/09/16 14:56
S36	10	S34 and diversity	US-PGPUB; USPAT	OR	ON	2005/09/16 14:57
S37	0	S34 and (seial adj parallel)	US-PGPUB; USPAT	OR	ON	2005/09/16 14:58
S38	0	S34 and (serial adj parallel)	US-PGPUB; USPAT	OR	ON	2005/09/16 14:58
S39	194399	data same channel coder same (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 14:59
S40	3	data same (channel adj coder) same (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 14:59
S41	8	data same (coder) same (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:00
S42	31	data and (channel adj coder) and (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:01
S43	3	(channel adj coder) same MIMO	US-PGPUB; USPAT	OR	ON	2005/09/16 15:02
S44	5	(channel adj coder) same (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:03

S45	66	(encoder) same (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:16
S46	5	"6285720"	US-PGPUB; USPAT	OR	ON	2005/09/16 15:06
S47	13	"375"/$.ccls. and (multi adj user adj data)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:19
S48	48	"375"/$.ccls. and ((multi adj user) same TDMA)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:20
S49	9	"375"/$.ccls. and ((multi adj user) same FDD)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:21
S50	10	"370"/$.ccls. and ((multi adj user) same FDD)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:22
S51	1	"370"/$.ccls. and ((channel adj encoder) same FDD)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:24
S52	0	"370"/$.ccls. and ((channel adj coder) same FDD)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:24
S53	1	((channel adj coder) same FDD)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:24
S54	0	((channel adj coder) same (multi adj user))	US-PGPUB; USPAT	OR	ON	2005/09/16 15:24
S55	1	((channel adj encoder) same (multi adj user))	US-PGPUB; USPAT	OR	ON	2005/09/16 15:26
S56	16	((spatial adj diversity) same (multi adj user))	US-PGPUB; USPAT	OR	ON	2005/09/16 15:27
S57	99	((spatial adj diversity) and (multi adj user))	US-PGPUB; USPAT	OR	ON	2005/09/16 15:36
S58	3	"6359864"	US-PGPUB; USPAT	OR	ON	2005/09/16 15:31
S59	106	((FDD and CDMA) and (multi adj user))	US-PGPUB; USPAT	OR	ON	2005/09/16 15:31
S60	11	((spatial adj diversity) and (channel adj coder))	US-PGPUB; USPAT	OR	ON	2005/09/16 15:36
S61	5	("5321725" | "5784417" | "6031474" | "6088408" | "6473878").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:48
S62	38154	data adj source	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:48
S63	19	S62 with (multi adj user)	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:53
S64	3	(frequency adj division adj duplex) same (multi adj user) same CDMA	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:51

S65	5	("5559723" | "5905946" | "5933457" | "6161209" | "6615024").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:52
S66	0	(multi adj user adj source)	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:53
S67	25	((multi adj user) near2 source)	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:53
S68	23266	((multi adj user) near2 source) amd MIMO	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:53
S69	0	((multi adj user) near2 source) and MIMO	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:55
S70	1	"6693982".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 16:11
S71	1	"5886967".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 16:11
S72	1	"5886987".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 16:13
S73	6	(information adj source) near2 (different adj source)	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 16:13
S74	323	"375"/$.ccls. and (multiple adj access adj interference)	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 16:14
S75	32	"375"/$.ccls. and (multiple adj access adj interference) and (demultiplex$5)	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 16:16
S76	7	"375"/$.ccls. and (multiple adj access adj interference) and (demultiplex$5) and coder	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 16:14
S77	28	"375"/$.ccls. and (multiple adj channel) and (channel adj coder)	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 16:16
S78	1	"6741658".pn.	US-PGPUB; USPAT	OR	ON	2005/09/18 08:43
S79	1	"6898248".pn.	US-PGPUB; USPAT	OR	ON	2005/09/18 08:44
S80	1	"6359864".pn.	US-PGPUB; USPAT	OR	ON	2006/02/21 10:50
S81	1	"6310923".pn.	US-PGPUB; USPAT	OR	ON	2006/02/21 10:50
S82	3	375/267.ccls. and (transmit near (different adj information))	US-PGPUB; USPAT	OR	ON	2006/02/24 13:52

S83	1	"6693982".pn.	US-PGPUB; USPAT	OR	ON	2006/02/24 15:16
S84	561	mapper with identif$8	US-PGPUB; USPAT	OR	ON	2006/02/24 15:16
S85	71	"375"/$.ccls. and (mapper with identif$8)	US-PGPUB; USPAT	OR	ON	2006/02/24 15:16
S86	1	"6693982".pn.	US-PGPUB; USPAT	OR	ON	2006/02/27 09:36
S87	171	space adj time adj block adj code	US-PGPUB; USPAT	OR	ON	2006/02/27 13:37
S88	25	S87 and (spread adj spectrum)	US-PGPUB; USPAT	OR	ON	2006/02/27 10:11
S89	2	S87 and (spread adj code)	US-PGPUB; USPAT	OR	ON	2006/02/27 09:36
S90	126	(angle adj diversity)	US-PGPUB; USPAT	OR	ON	2006/02/27 10:12
S91	0	S87 and S90	US-PGPUB; USPAT	OR	ON	2006/02/27 10:11
S92	155	space adj time adj diversity	US-PGPUB; USPAT	OR	ON	2006/02/27 10:12
S93	3	S90 and S92	US-PGPUB; USPAT	OR	ON	2006/02/27 10:12
S94	3	(angle adj diversity) same (fading adj channel)	US-PGPUB; USPAT	OR	ON	2006/02/27 10:17
S95	1	(angle adj diversity) same (directed adj antenna adj beam)	US-PGPUB; USPAT	OR	ON	2006/02/27 10:17
S96	1	((plurality adj antenna) same (code adj rate) same adapt$8)	US-PGPUB; USPAT	OR	ON	2006/02/27 10:54
S97	4	((plurality adj antenna) same (code adj rate)) and adapt$8	US-PGPUB; USPAT	OR	ON	2006/02/27 10:55
S98	0	((plurality adj antenna) same (adapt$8 adj code adj rate))	US-PGPUB; USPAT	OR	ON	2006/02/27 10:55
S99	0	((adaptive adj antenna) same (adapt$8 adj code adj rate))	US-PGPUB; USPAT	OR	ON	2006/02/27 10:55
S100	0	((adaptive adj antenna) and (adapt$8 adj code adj rate))	US-PGPUB; USPAT	OR	ON	2006/02/27 15:02
S101	94	((adaptive adj modulation) and (adaptive adj cod$5))	US-PGPUB; USPAT	OR	ON	2006/02/27 13:11
S102	1	"5383219".pn.	US-PGPUB; USPAT	OR	ON	2006/02/27 13:36

S103	50	S87 and (transmit adj power)	US-PGPUB; USPAT	OR	ON	2006/02/27 13:43
S104	1	"6693982".pn.	US-PGPUB; USPAT	OR	ON	2006/02/27 14:05
S105	5828	channel adj estimat$5	US-PGPUB; USPAT	OR	ON	2006/02/27 14:05
S106	1751	channel adj estimator	US-PGPUB; USPAT	OR	ON	2006/02/27 14:06
S107	48	S106 same (channel adj equalizer)	US-PGPUB; USPAT	OR	ON	2006/02/27 14:08
S108	3	S107 and (space adj time)	US-PGPUB; USPAT	OR	ON	2006/02/27 14:08
S109	7	375/267.ccls. and recod $5	US-PGPUB; USPAT	OR	ON	2006/02/27 15:07
S110	3	("5781845" | "6067324" | "6122260").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/02/27 15:06
S111	3	"375"/$.ccls. and recod $5 and (MAI)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:08
S112	1	"375"/$.ccls. and reencod$5 and (MAI)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:10
S113	7	reencod$5 and (MAI)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:08
S114	0	"375"/148.ccls. and reencod$5 and (MAI)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:14
S115	0	"375"/148.ccls. and reencod$5 and (space adj time adj diversity)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:14
S116	0	"375"/$.ccls. and reencod$5 and (space adj time adj diversity)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:14
S117	0	"375"/$.ccls. and reencod$5 and ((space adj time) near2 code)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:15
S118	0	"375"/$.ccls. and reencod$5 and ((space adj time) with code)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:15
S119	7	"375"/$.ccls. and (re adj encod$5) and ((space adj time) with code)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:15
S120	56	375/260.ccls. and Channeliz$6	US-PGPUB; USPAT	OR	ON	2006/08/10 16:58
S121	180	375/267.ccls. and (space adj time adj cod $8)	US-PGPUB; USPAT	OR	ON	2006/08/11 11:15
S122	1	"6366888".pn.	US-PGPUB; USPAT	OR	ON	2006/08/11 11:15

S123	3	375/267.ccls. and (non adj interleav$8)	US-PGPUB; USPAT	OR	ON	2006/08/11 11:17
S124	11	375/260.ccls. and (non adj interleav$8)	US-PGPUB; USPAT	OR	ON	2006/08/11 11:22
S125	0	"375"/$.ccls. and ((inner adj cod$5) same (outer adj cod$6) same(non adj interleav $8))	US-PGPUB; USPAT	OR	ON	2006/08/11 11:24
S126	2	"375"/$.ccls. and ((inner adj cod$5) same (outer adj cod $6)) and(non adj interleav$8)	US-PGPUB; USPAT	OR	ON	2006/08/11 11:24
S127	0	"375"/$.ccls. and ((outer adj cod$6) same (non adj interleav$8))	US-PGPUB; USPAT	OR	ON	2006/08/11 11:25
S128	3	"375"/267.ccls. and ((cod$6) same(non adj interleav$8))	US-PGPUB; USPAT	OR	ON	2006/08/11 11:25
S129	2	"375"/267.ccls. and ((transmit$5) with(non adj interleav$8))	US-PGPUB; USPAT	OR	ON	2006/08/11 11:27
S130	4	"375"/267.ccls. and ((transmit$5) with (without adj interleav $8))	US-PGPUB; USPAT	OR	ON	2006/08/11 11:27
S131	180	"375"/267.ccls. and (space adj time adj cod $6)	US-PGPUB; USPAT	OR	ON	2006/08/11 11:28
S132	1	"6115427".pn.	US-PGPUB; USPAT	OR	ON	2006/08/16 08:06
S133	1	"6693982".pn.	US-PGPUB; USPAT	OR	ON	2006/08/16 08:06
S134	3	09/393235	US-PGPUB; USPAT	OR	ON	2006/08/16 13:47
S135	353	combin$3 with serializ $3	US-PGPUB; USPAT	OR	ON	2006/08/16 13:48
S136	3383513	number of transmitter antennas	US-PGPUB; USPAT	OR	ON	2007/03/20 07:30
S137	1	10/184054	US-PGPUB; USPAT	OR	ON	2007/03/20 09:21
S138	1	10/619691	US-PGPUB; USPAT	OR	ON	2007/03/20 09:37
S139	1	"6636603".pn.	US-PGPUB; USPAT	OR	ON	2007/03/20 09:41
S140	1	"20040202237"	US-PGPUB; USPAT	OR	ON	2007/03/20 15:17

S141	1	09/798727	US-PGPUB; USPAT	OR	ON	2007/03/20 15:17
S142	1	"6745050".pn.	US-PGPUB; USPAT	OR	ON	2007/03/23 08:55
S143	6	("20020097779" | "4794556" | "4941178" | "5668830" | "6480557" | "RE31943").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:55
S144	695	CDMA same (multi adj user)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:55
S145	374	"375"/$.ccls. and (CDMA same (multi adj user))	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:56
S146	287	"375"/$.ccls. and (CDMA with (multi adj user))	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:56
S147	0	"375"/$.ccls. and (CDMA with (multi adj user)) and (interference adj cancel$&)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:57
S148	89	"375"/$.ccls. and (CDMA with (multi adj user)) and (interference adj cancel$5)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:57
S149	8	("4134071" | "4744093" | "5136612" | "5164959" | "5361219" | "5363403" | "5481533" | "5790590").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:58
S150	14	("5956333").URPN.	USPAT	OR	OFF	2007/03/23 09:01
S151	1	09/326222.app.	US-PGPUB; USPAT; DERWENT; IBM_TDB	OR	OFF	2007/03/23 09:01
S152	11	("4124818" | "4992798" | "5418814" | "5467368" | "5566165" | "5596600" | "5724378" | "5956333" | "6032026" | "6088383" | "6229857").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:03
S153	11	"375"/$.ccls. and (multi adj user adj demodul $8)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 11:53
S154	0	"375"/$.ccls. and (multi adj user) and remodult $6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:09

S155	23	"375"/$.ccls. and (multi adj user) and remodulat$6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:05
S156	0	"370"/$.ccls. and (multi adj user) and remodult $6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:09
S157	0	"455"/$.ccls. and (multi adj user) and remodult $6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:10
S158	0	"455"/$.ccls. and (user) and remodult$6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:10
S159	237	"455"/$.ccls. and (user) and remodulat $6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:10
S160	10	"455"/$.ccls. and (multiuser) and remodulat$6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:11
S161	30	(multiuser) and remodulat$6 and CDMA	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:14
S162	873	(multiuser) and CDMA	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:14
S163	523	"375"/$.ccls. and (multiuser) and CDMA	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:14
S164	299	"375"/$.ccls. and ((multiuser) same CDMA)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:14
S165	1	"5956333".pn.	US-PGPUB; USPAT	OR	ON	2007/03/26 09:23
S166	1	"5644592".pn.	US-PGPUB; USPAT	OR	ON	2007/03/26 09:30
S167	1	10/184054	US-PGPUB; USPAT	OR	ON	2007/03/26 10:06
S168	1	"6115427".pn.	US-PGPUB; USPAT	OR	ON	2007/03/26 10:28
S169	49	375/267.ccls. and (multiuser)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:32
S170	6	375/260.ccls. and (multiuser same diversity)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:33
S171	2	375/295.ccls. and (multiuser same diversity)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:34
S172	8	375/130.ccls. and (multiuser same diversity)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:38
S173	1	375/299.ccls. and (multiuser same diversity)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:35

S174	16	375/299.ccls. and (multiuser)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:35
S175	41	375/130.ccls. and (multiuser)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:38
S176	13	375/130.ccls. and (multiuser and PN)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:40
S177	355	375/299.ccls.	US-PGPUB; USPAT	OR	ON	2007/03/26 10:40
S178	167	375/299.ccls. and user	US-PGPUB; USPAT	OR	ON	2007/03/26 10:40
S179	10	375/299.ccls. and (user same PN)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:53
S180	708	"375"/$.ccls. and (multi adj user) and CDMA	US-PGPUB; USPAT	OR	ON	2007/03/26 10:54
S181	294	"375"/$.ccls. and (multi adj user) and CDMA and diversity	US-PGPUB; USPAT	OR	ON	2007/03/26 10:54
S182	19	"375"/$.ccls. and ((multi adj user) same CDMA same diversity)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:59
S183	14	"455"/$.ccls. and ((multi adj user) same CDMA same diversity)	US-PGPUB; USPAT	OR	ON	2007/03/26 11:03
S184	134	"375"/267.ccls. and ((user) same CDMA)	US-PGPUB; USPAT	OR	ON	2007/03/26 11:18
S185	0	"375"/267.ccls. and (variable near3 rate) same (number adj antenna)	US-PGPUB; USPAT	OR	ON	2007/03/26 11:19
S186	9	"375"/267.ccls. and (variable near3 rate) and (number adj antenna)	US-PGPUB; USPAT	OR	ON	2007/03/26 11:19
S187	7	"375"/$.ccls. and (variable near3 rate) and (number adj antenna) and (variable adj coding adj rate)	US-PGPUB; USPAT	OR	ON	2007/03/26 11:34
S188	1	"6349216".pn.	US-PGPUB; USPAT	OR	ON	2007/03/26 11:35

S189	53	("4041395" | "4147985" | "4165493" | "4348644" | "4356458" | "4370622" | "4442407" | "4546313" | "4647871" | "4827219" | "4890062" | "4924191" | "4985686" | "4990866" | "4994757" | "5060294" | "5101172" | "5113414" | "5119040" | "5170496" | "5195045" | "5220276" | "5251330" | "5251331" | "5276912" | "5278997" | "5300894" | "5302914" | "5329244" | "5339041" | "5351016" | "5361403" | "5408691" | "5420536" | "5428828" | "5483680" | "5553318" | "5564086" | "5589796" | "5598127" | "5640691" | "5673001" | "5694433" | "5742201" | "5880633" | "5901346" | "5905407" | "5907797" | "6020787" | "6069525" | "6141541" | "6160449" | "6166598").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 13:31
S190	1	"6947491".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 14:03
S191	188	(code adj rate) and (increas$5 with antenna)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 14:04
S192	6	(code adj rate) same (increas$5 with antenna)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:23
S193	243	375/267.ccls. and (close loop adj power adj control)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:23
S194	1986913	375/267.ccls. and multiuser (close loop adj power adj control)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:24
S195	7	375/267.ccls. and multiuser and (close loop adj power adj control)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:24

S196	0	375/267.ccls. and multiuser and (close$2 adj loop adj power adj control)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:25
S197	1	"6115406".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:25
S198	6	("4901307" | "5652764" | "5886987" | "5952968" | "5982327" | "5991332").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:31
S199	13	("4835790" | "5267262" | "5347535" | "5412686" | "5485486" | "5548835" | "5559789" | "5574983" | "5581547" | "5590409" | "5598404" | "5604766" | "5646937").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:45
S200	26	("5886987").URPN.	USPAT	OR	OFF	2007/03/26 15:47
S201	13	("4835790" | "5267262" | "5347535" | "5412686" | "5485486" | "5548835" | "5559789" | "5574983" | "5581547" | "5590409" | "5598404" | "5604766" | "5646937").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:57
S202	5	"375"/267.CCLS. and (MIMO and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:06
S203	7	"375"/260.CCLS. and (MIMO and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:07
S204	30	"375"/$.CCLS. and (MIMO and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:08
S205	18	"370"/$.CCLS. and (MIMO and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:09
S206	7	"455"/$.CCLS. and (MIMO and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:09
S207	10	"455"/$.CCLS. and (OFDM and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:12
S208	39	"370"/$.CCLS. and (OFDM and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:10
S209	39	"375"/$.CCLS. and (OFDM and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 08:04
S210	1	"6115427".pn.	US-PGPUB; USPAT	OR	ON	2007/03/27 08:05
S211	81	(code adj rate) same (number near antenna)	US-PGPUB; USPAT	OR	ON	2007/03/27 08:20

S212	1	"6560295".pn.	US-PGPUB; USPAT	OR	ON	2007/03/27 08:52
S213	387	(space adj time) same CDMA	US-PGPUB; USPAT	OR	ON	2007/03/27 08:53
S214	68	375/267.ccls. and ((space adj time) same CDMA)	US-PGPUB; USPAT	OR	ON	2007/03/27 09:15
S215	2	375/267.ccls. and (compar$8 with uplink with downlink)	US-PGPUB; USPAT	OR	ON	2007/03/27 09:16
S216	1	375/222.ccls. and (compar$8 with uplink with downlink)	US-PGPUB; USPAT	OR	ON	2007/03/27 09:21
S217	0	375/222.ccls. and ((compar$8 with uplink with downlink) same interference)	US-PGPUB; USPAT	OR	ON	2007/03/27 09:21
S218	9	"375"/$.ccls. and ((compar$8 with uplink with downlink) same interference)	US-PGPUB; USPAT	OR	ON	2007/03/27 09:22
S219	0	"375"/222.ccls. and (diagnostic adj bit)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 11:54
S220	0	"375"/222.ccls. and (diagnostic adj tone)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 11:54
S221	0	"370"/$.ccls. and (diagnostic adj tone)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 13:14
S222	19	"370"/$.ccls. and (diagnostic with tone)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 13:17
S223	0	375/222.ccls. and (diagnostic adj tone)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:19
S224	0	375/222.ccls. and (diagnostic with tone)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:19
S225	22	375/222.ccls. and (diagnostic with bit)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:26
S226	8	("5889856" | "6137839" | "6263016" | "6374288" | "6400759" | "6442195" | "6477595" | "6594306").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 13:22
S227	0	375/222.ccls. and (diagnostic with DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:43
S228	0	"375"/$.ccls. and (diagnostic with DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:26
S229	0	"370"/$.ccls. and (diagnostic with DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:26
S230	0	"370"/$.ccls. and (diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:27

S231	1	"375"/$.ccls. and (diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:39
S232	113	"375"/$.ccls. and (diagnostic same message)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:39
S233	4	"375"/$.ccls. and (diagnostic same message) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:41
S234	6	"370"/$.ccls. and (diagnostic same message) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:42
S235	0	"370"/$.ccls. and (diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:42
S236	1	"375"/$.ccls. and (diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:45
S237	15	(diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:43
S238	1	375/222.ccls. and (diagnostic adj message)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:43
S239	0	375/260.ccls. and (diagnostic adj message) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:44
S240	0	375/260.ccls. and (diagnostic adj message)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:44
S241	21	375/260.ccls. and (diagnostic)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:44
S242	5	375/260.ccls. and (diagnostic) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:45
S243	5	375/260.ccls. and (diagnostic) and OFDM	US-PGPUB; USPAT	OR	ON	2007/03/27 13:45
S244	1	"379"/$.ccls. and (diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:45
S245	5	"379"/$.ccls. and (diagnostic same bins)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:46
S246	3	"375"/$.ccls. and (diagnostic same bins)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:46
S247	12	"370"/$.ccls. and (diagnostic same bins)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:47
S248	3	"370"/$.ccls. and (bit with diagnostic) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:48
S249	7	"375"/$.ccls. and (bit with diagnostic) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:50
S250	0	"702"/$.ccls. and (bit with diagnostic) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:50

S251	0	"370"/249.ccls. and (bit with diagnostic) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:52
S252	0	"370"/249.ccls. and (diagnostic) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:52
S253	65	"370"/249.ccls. and (diagnostic)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:52
S254	1	"370"/249.ccls. and (diagnostic adj message)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:52
S255	1	"370"/249.ccls. and (initiat$5 near2 diagnostic)	US-PGPUB; USPAT	OR	ON	2007/03/27 14:37
S256	0	dianostic same (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/27 14:37
S257	0	diagnostic same (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/27 14:37
S258	0	"375"/$.ccls. and (diagnostic same (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2007/03/27 14:37
S259	9	"375"/$.ccls. and (diagnostic and (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2007/03/27 14:57
S260	1	"375"/$.ccls. and (diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 14:58
S261	19	"375"/$.ccls. and (bit near2 diagnostic)	US-PGPUB; USPAT	OR	ON	2007/03/27 15:00
S262	1	"375"/$.ccls. and (map $5 with (bit near2 diagnostic))	US-PGPUB; USPAT	OR	ON	2007/03/27 15:00
S263	12	("4566100" | "5128619" | "5608643" | "5864602" | "5964891" | "6075821" | "6188717" | "6219378" | "6404774" | "6411678" | "6449307" | "6512789").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 15:07
S264	0	map$7 with diagnostic with DMT	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 15:08
S265	0	map$7 with diagnostic with DMT	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:09
S266	0	map$7 with (diagnostic adj bit) with DMT	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:09
S267	1	375/260.ccls. and DMT and diagnostic	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:13

S268	13	375/222.ccls. and DMT and diagnostic	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:10
S269	0	375/260.ccls. and (diagnostic adj bit)	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:13
S270	1	"375"/$.ccls. and (diagnostic adj bit)	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:13
S271	1	"379"/$.ccls. and (diagnostic adj bit)	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:14
S272	69	(diagnostic adj bit)	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:15
S273	0	(diagnostic adj bit) and DMT	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:14
S274	0	(diagnostic adj bit) and multicarrier	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:14
S275	0	(diagnostic adj meassage) and (DMT adj symbol)	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:16
S276	1	(diagnostic adj message) and (DMT adj symbol)	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 16:15
S277	4	10/127164	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 16:15
S278	44	("20020006169" | "20020191709" | "20030067995" | "3898566" | "4878232" | "5163181" | "5228055" | "5249201" | "5490172" | "5493587" | "5579342" | "5608760" | "5621762" | "5636247" | "5638404" | "5651028" | "5727026" | "5751705" | "5805640" | "5822360" | "5930678" | "5991262" | "6009090" | "6032029" | "6041081" | "6125103" | "6128351" | "6130918" | "6175551" | "6222873" | "6229995" | "6236864" | "6240141" |	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 16:19

		"6246725" | "6294956" | "6356606" | "6449302" | "6504862" | "6687511" | "6701163" | "6931053" | "6931079" | "6931239" | "6931240").PN.				
S279	1	"5930678".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 16:19
S280	0	(diagnostic adj DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:37
S281	29	(diagnostic adj tone)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:37
S282	0	"375"/$.ccls. and (diagnostic adj tone)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:37
S283	0	"375"/$.ccls. and (diagnostic near tone)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:37
S284	7	"375"/$.ccls. and (diagnostic near bits)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:38
S285	0	"375"/$.ccls. and (diagnos$6 near DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:38
S286	0	"375"/$.ccls. and (diagnos$6 with DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:38
S287	479	"375"/$.ccls. and (bit with DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:39
S288	207	"375"/$.ccls. and (bit near3 DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:39
S289	13	"375"/$.ccls. and (bit near3 DMT) and diagnost$5	US-PGPUB; USPAT	OR	ON	2007/03/28 07:47
S290	1	"375"/$.ccls. and (DMT same diagnost$5)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:47
S291	40	"375"/$.ccls. and (DMT and diagnost$5)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:49
S292	43	"375"/222.ccls. and (diagnos$5 near3 modem)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:50
S293	10	"375"/222.ccls. and (diagnos$5 near3 modem) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/28 07:56
S294	0	"370"/484.ccls. and (diagnos$5 near3 modem) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/28 07:52
S295	0	"370"/484.ccls. and (diagnos$5) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/28 07:52
S296	1	"370"/484.ccls. and (diagnos$5)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:52

S297	16	"370"/480.ccls. and (diagnos$5)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:52
S298	11	"375"/222.ccls. and (diagnos$5 adj mode)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:08
S299	1	"6658052".pn.	US-PGPUB; USPAT	OR	ON	2007/03/28 08:26
S300	96171	(one adj bit)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:27
S301	5	(one adj bit) with (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:28
S302	197	(bit) with (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:28
S303	27	(bit) with (DMT adj symbol) and (diagnos $7)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:30
S304	0	(bit near test$5) with (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:31
S305	0	(diagnost near tone) and (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:31
S306	0	(diagnos$5 near tone) and (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:31
S307	0	(diagnos$5 near tone) and (DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:31
S308	0	(diagnos$5 near carrier) and (DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:36
S309	5	diagnos$5 with (DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 09:12
S310	106	(Pulse adj width adj modulat$6) same (FSK)	US-PGPUB; USPAT	OR	ON	2007/03/28 10:04
S311	1	"6633545".pn.	US-PGPUB; USPAT	OR	ON	2007/03/28 10:48
S312	1	10/619691	US-PGPUB; USPAT	OR	ON	2007/03/28 10:48
S313	1	"6633545".pn.	US-PGPUB; USPAT	OR	ON	2007/03/29 09:09
S314	1	"6673179".pn.	US-PGPUB; USPAT	OR	ON	2007/03/29 09:09
S315	1	"6073179".pn.	US-PGPUB; USPAT	OR	ON	2007/03/29 09:10
S316	0	"375"/$.ccls. and (diagnos$6 same ((frequency adj domain) with (idle adj channel adj noise)))	US-PGPUB; USPAT	OR	ON	2008/05/27 09:52
S317	0	(diagnos$6 same ((frequency adj domain) with (idle adj channel adj noise)))	US-PGPUB; USPAT	OR	ON	2008/05/27 09:52

S318	0	(diagnos$6 and ((frequency adj domain) with (idle adj channel adj noise)))	US-PGPUB; USPAT	OR	ON	2008/05/27 09:52
S319	0	"10619691".pn.	US-PGPUB; USPAT	OR	ON	2008/05/27 10:03
S320	1	"10/619691"	US-PGPUB; USPAT	OR	ON	2008/05/27 10:03
S321	1	"10619691"	US-PGPUB; USPAT	OR	ON	2008/06/08 23:12
S322	0	"375"/$.ccls. and ((diagnostic adj information) same (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/08 23:32
S323	0	"375"/$.ccls. and ((diagnostic) with (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/08 23:32
S324	0	"379"/$.ccls. and ((diagnostic) with (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/08 23:33
S325	0	"375"/$.ccls. and ((diagnostic) with (DMT))	US-PGPUB; USPAT	OR	ON	2008/06/08 23:33
S326	0	"375"/$.ccls. and ((diagnostic) with (DMT))	US-PGPUB; USPAT; DERWENT; IBM_TDB	OR	ON	2008/06/08 23:33
S327	1	"375"/$.ccls. and ((diagnostic) same (DMT))	US-PGPUB; USPAT; DERWENT; IBM_TDB	OR	ON	2008/06/08 23:33
S328	4	"375"/$.ccls. and ((diagnostic) same (multicarrier))	US-PGPUB; USPAT; DERWENT; IBM_TDB	OR	ON	2008/06/08 23:34
S329	3	"375"/$.ccls. and ((diagnostic adj information) same (multicarrier))	US-PGPUB; USPAT; DERWENT; IBM_TDB	OR	ON	2008/06/08 23:34
S330	26	"375"/222.ccls. and ((diagnostic adj information))	US-PGPUB; USPAT; DERWENT; IBM_TDB	OR	ON	2008/06/08 23:35
S331	2	09/925509	US-PGPUB; USPAT	OR	ON	2008/06/09 07:54
S332	12	09/755173	US-PGPUB; USPAT	OR	ON	2008/06/09 07:55
S333	142	idle adj channel adj noise	US-PGPUB; USPAT	OR	ON	2008/06/09 08:08

S334	3	S333 and DMT	US-PGPUB; USPAT	OR	ON	2008/06/09 08:09
S335	2	S333 same (diagnostic)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:11
S336	256150	S333 ande (diagnostic)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:14
S337	20	S333 and (diagnostic)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:14
S338	32	(diagnostic adj symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:21
S339	0	"375"/$.ccls and (diagnostic adj symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:22
S340	0	"370"/$.ccls and (diagnostic adj symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:22
S341	0	"370"/$.ccls with (diagnostic adj symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:22
S342	0	"375"/$.ccls with (diagnostic adj symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:22
S343	0	"375"/$.ccls with (diagnostic same symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:22
S344	0	"370"/$.ccls with (test adj symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:23
S345	0	"370"/$.ccls with (test with symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:23
S346	0	"375"/$.ccls with (test with symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:23
S347	0	"370"/$.ccls with (testing with symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:24
S348	5	(test$6 with (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/09 08:24
S349	0	(diagnos$6 with (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/09 08:25
S350	0	(diagnos$6 same (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/09 08:26
S351	646	(map$7same (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/09 08:26
S352	0	((diagnostic) with (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/09 08:27
S353	0	((diagnostic) same (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/09 08:27
S354	9421	transmit$7 with diagnostic	US-PGPUB; USPAT	OR	ON	2008/06/09 09:42
S355	185	"375"/$.ccls. and (transmit$7 with diagnostic)	US-PGPUB; USPAT	OR	ON	2008/06/09 09:42

S356	79	"375"/$.ccls. and (transmit$7 near3 diagnostic)	US-PGPUB; USPAT	OR	ON	2008/06/09 09:42
S357	11	"375"/222.ccls. and (diagnostic adj mode)	US-PGPUB; USPAT	OR	ON	2008/10/06 09:00
S358	4	"375"/222.ccls. and (idle adj channel adj noise)	US-PGPUB; USPAT	OR	ON	2008/10/06 09:15
S359	1	"6658052".pn.	US-PGPUB; USPAT	OR	ON	2008/10/06 09:17
S360	13	"375"/$.ccls. and modem and (idle adj channel adj noise)	US-PGPUB; USPAT	OR	ON	2008/10/06 09:20
S361	749	(diagnostic with tone)	US-PGPUB; USPAT	OR	ON	2008/10/10 11:04
S362	0	375/222.ccls. and (diagnostic with tone)	US-PGPUB; USPAT	OR	ON	2008/10/10 11:04
S363	0	375/222.ccls. and (diagnostic adj bits)	US-PGPUB; USPAT	OR	ON	2008/10/10 11:04
S364	26	375/222.ccls. and (diagnostic with bits)	US-PGPUB; USPAT	OR	ON	2008/10/10 11:04
S365	0	375/222.ccls. and (diagnostic with DMT)	US-PGPUB; USPAT	OR	ON	2008/10/10 11:07
S366	0	375/222.ccls. and (diagnostic with tone)	US-PGPUB; USPAT	OR	ON	2008/10/10 11:07
S367	10	"375"/$.ccls. and (diagnostic with tone)	US-PGPUB; USPAT	OR	ON	2008/10/10 11:07
S368	6	(diagnostic with DMT)	US-PGPUB; USPAT	OR	ON	2008/10/10 11:08
S369	6	375/222.ccls. and (diagnostic adj information) and DMT	US-PGPUB; USPAT	OR	ON	2008/10/10 11:09
S370	2	"20020031167"	US-PGPUB; USPAT	OR	ON	2008/10/10 14:18
S371	2	"20010047424"	US-PGPUB; USPAT	OR	ON	2008/10/10 14:21
S372	1	"6697969".pn.	US-PGPUB; USPAT	OR	ON	2008/10/10 14:50
S373	1	"6510162".pn.	US-PGPUB; USPAT	OR	ON	2008/10/10 15:10
S374	1	(upgrad$7 adj firmware) with (cable adj modem)	US-PGPUB; USPAT	OR	ON	2008/10/10 15:26
S375	1	(upgrad$7 adj firmware) same (cable adj modem)	US-PGPUB; USPAT	OR	ON	2008/10/10 15:27
S376	0	(upgrad$7 adj firmware) same (CMTS and TFTP)	US-PGPUB; USPAT	OR	ON	2008/10/10 15:27

S377	1	(upgrad$7 adj firmware) and (CMTS and TFTP)	US-PGPUB; USPAT	OR	ON	2008/10/10 15:27
S378	932	(upgrad$7 adj firmware)	US-PGPUB; USPAT	OR	ON	2008/10/10 15:27
S379	29	(upgrad$7 adj firmware) same modem	US-PGPUB; USPAT	OR	ON	2008/10/10 15:28
S380	1	CMTS and ((upgrad$7 adj firmware) same modem)	US-PGPUB; USPAT	OR	ON	2008/10/10 15:29
S381	1	CMTS same (upgrad$7 adj firmware)	US-PGPUB; USPAT	OR	ON	2008/10/10 15:43
S382	282	CMTS same (digital adj subscriber adj line)	US-PGPUB; USPAT	OR	ON	2008/10/10 15:49
S383	186	CMTS with (digital adj subscriber adj line)	US-PGPUB; USPAT	OR	ON	2008/10/10 15:49
S384	28	"375"/$.ccls. and (idle adj channel adj noise)	US-PGPUB; USPAT	OR	ON	2008/10/13 09:07
S385	0	"375"/$.ccls. and (diagnostic same (idle adj channel adj noise))	US-PGPUB; USPAT	OR	ON	2008/10/13 09:12
S386	3	"375"/$.ccls. and (diagnostic and (idle adj channel adj noise))	US-PGPUB; USPAT	OR	ON	2008/10/13 09:12
S387	20	(diagnostic and (idle adj channel adj noise))	US-PGPUB; USPAT	OR	ON	2008/10/13 09:13
S388	1	(diagnostic adj message) and (idle adj channel adj noise)	US-PGPUB; USPAT	OR	ON	2008/10/13 09:15
S389	1	(diagnostic) and (idle adj channel adj noise) and DMT	US-PGPUB; USPAT	OR	ON	2008/10/13 09:15
S390	3	(diagnostic adj mode) and (idle adj channel adj noise)	US-PGPUB; USPAT	OR	ON	2008/10/13 09:15
S391	15	(diagnostic) and (idle adj channel adj noise) and modem	US-PGPUB; USPAT	OR	ON	2008/10/13 09:16
S392	20	(diagnostic) and (idle adj channel adj noise)	US-PGPUB; USPAT	OR	ON	2008/10/13 09:17
S393	1	"6631120".pn.	US-PGPUB; USPAT	OR	ON	2008/10/13 09:27
S394	1	10/619691	US-PGPUB; USPAT	OR	ON	2008/10/13 10:17
S395	12	09/755173	US-PGPUB; USPAT	OR	ON	2008/10/13 10:39
S396	0	09/597926	US-PGPUB; USPAT	OR	ON	2008/10/13 10:44

S397	1	10/619691	US-PGPUB; USPAT	OR	ON	2009/04/28 08:48
S398	1	"6658052".pn.	US-PGPUB; USPAT	OR	ON	2009/04/28 08:52
S399	1353	(diagnostic adj message)	US-PGPUB; USPAT	OR	ON	2009/04/28 08:53
S400	42	(diagnostic adj message) same variables	US-PGPUB; USPAT	OR	ON	2009/04/28 08:53
S401	0	((diagnostic adj message) same variables) and multicarrier	US-PGPUB; USPAT	OR	ON	2009/04/28 08:53
S402	0	((diagnostic adj message) same variables) and DMT	US-PGPUB; USPAT	OR	ON	2009/04/28 08:53
S403	2	((diagnostic adj message) same variables same array)	US-PGPUB; USPAT	OR	ON	2009/04/28 08:54
S404	1	"7251199".pn.	US-PGPUB; USPAT	OR	ON	2009/04/28 09:14
S405	1	11/510121	US-PGPUB; USPAT	OR	ON	2009/04/28 09:31
S406	345	(diagnostic near bits)	US-PGPUB; USPAT	OR	ON	2009/04/29 09:36
S407	0	(diagnostic near bits) same (DMT)	US-PGPUB; USPAT	OR	ON	2009/04/29 09:37
S408	1	(diagnostic near bits) and (DMT near symbol)	US-PGPUB; USPAT	OR	ON	2009/04/29 09:37
S409	1	(diagnostic near bits) same (symbol)	US-PGPUB; USPAT	OR	ON	2009/04/29 09:38
S410	0	375/222.ccls. and ((diagnostic near bits) same DMT)	US-PGPUB; USPAT	OR	ON	2009/04/29 09:39
S411	3	375/222.ccls. and ((diagnostic near bits))	US-PGPUB; USPAT	OR	ON	2009/04/29 09:39
S412	0	375/222.ccls. and ((test near bits) with DMT)	US-PGPUB; USPAT	OR	ON	2009/04/29 09:40
S413	1	375/222.ccls. and ((pattern near bits) with DMT)	US-PGPUB; USPAT	OR	ON	2009/04/29 09:40
S414	2	375/222.ccls. and (diagnostic near message)	US-PGPUB; USPAT	OR	ON	2009/04/29 09:41
S415	13	375/222.ccls. and (diagnostic with messages)	US-PGPUB; USPAT	OR	ON	2009/04/29 09:42

S416	43	375/222.ccls. and (diagnostic with information)	US-PGPUB; USPAT	OR	ON	2009/04/29 09:47
S417	0	375/222.ccls. and ((diagnostic with information) same variables same DMT)	US-PGPUB; USPAT	OR	ON	2009/04/29 09:48
S418	3	375/222.ccls. and ((diagnostic with information) same variables)	US-PGPUB; USPAT	OR	ON	2009/04/29 09:48
S419	0	375/222.ccls. and ((diagnostic with information) same DMT)	US-PGPUB; USPAT	OR	ON	2009/04/29 09:50
S420	9	375/222.ccls. and ((diagnostic with information) and DMT)	US-PGPUB; USPAT	OR	ON	2009/04/29 09:50
S421	0	375/222.ccls. and ((diagnostic with mode) same DMT)	US-PGPUB; USPAT	OR	ON	2009/04/29 09:54
S422	4	375/222.ccls. and ((diagnostic with symbol))	US-PGPUB; USPAT	OR	ON	2009/04/29 09:54
S423	28	375/222.ccls. and ((diagnostic with bits))	US-PGPUB; USPAT	OR	ON	2009/04/29 09:55
S424	3	375/222.ccls. and ((diagnostic with bits)) and (channel near noise)	US-PGPUB; USPAT	OR	ON	2009/04/29 09:55
S425	7	"375"/$.ccls. and ((diagnostic with bits)) and (channel near noise)	US-PGPUB; USPAT	OR	ON	2009/04/29 09:56
S426	3	"375"/$.ccls. and ((diagnostic with symbols)) and (channel near noise)	US-PGPUB; USPAT	OR	ON	2009/04/29 10:02
S427	3	((diagnostic with symbols)) and (channel near noise)	US-PGPUB; USPAT	OR	ON	2009/04/29 10:03
S428	0	((diagnostic with DMT)) and (channel near noise)	US-PGPUB; USPAT	OR	ON	2009/04/29 10:03
S429	188	((diagnostic with information)) and (channel near noise)	US-PGPUB; USPAT	OR	ON	2009/04/29 10:03
S430	3	((diagnostic with information)) same (channel near noise)	US-PGPUB; USPAT	OR	ON	2009/04/29 10:03

S431	0	((diagnostic with DMT)) same (channel near noise)	US-PGPUB; USPAT	OR	ON	2009/04/29 10:04
S432	0	((diagnostic same DMT)) same (channel near noise)	US-PGPUB; USPAT	OR	ON	2009/04/29 10:04
S433	1	"6631130".pn.	US-PGPUB; USPAT	OR	ON	2009/04/29 10:05
S434	1	"6631120".pn.	US-PGPUB; USPAT	OR	ON	2009/04/29 10:06
S435	1	"6788705".pn.	US-PGPUB; USPAT	OR	ON	2009/04/29 10:27
S436	0	(diagonostic with tone)	US-PGPUB; USPAT	OR	ON	2009/05/05 12:00
S437	781	(diagnostic with tone)	US-PGPUB; USPAT	OR	ON	2009/05/05 12:01
S438	10	"375"/$.ccls. and (diagnostic with tone)	US-PGPUB; USPAT	OR	ON	2009/05/05 12:01
S439	158	"375"/$.ccls. and (diagnostic with bits)	US-PGPUB; USPAT	OR	ON	2009/05/05 12:02
S440	11	"375"/$.ccls. and ((diagnostic adj information) with bits)	US-PGPUB; USPAT	OR	ON	2009/05/05 12:02
S441	0	"375"/$.ccls. and (map $7 same (diagnostic adj information) same bits same tone)	US-PGPUB; USPAT	OR	ON	2009/05/05 12:10
S442	8781	"375"/$.ccls. and (map $7 same (diagnostic) ssame tone)	US-PGPUB; USPAT	OR	ON	2009/05/05 12:10
S443	0	"375"/$.ccls. and (map $7 with (diagnostic) with tone)	US-PGPUB; USPAT	OR	ON	2009/05/05 12:10
S444	0	"375"/$.ccls. and (map $7 with (diagnostic) with DMT)	US-PGPUB; USPAT	OR	ON	2009/05/05 12:10
S445	0	(map$7 with (diagnostic) with DMT)	US-PGPUB; USPAT	OR	ON	2009/05/05 12:10
S446	0	(map$7 with (test) with DMT)	US-PGPUB; USPAT	OR	ON	2009/05/05 12:10
S447	0	((diagnostic near bits) with DMT)	US-PGPUB; USPAT	OR	ON	2009/05/05 13:10
S448	0	((diagnostic near bits) same DMT)	US-PGPUB; USPAT	OR	ON	2009/05/05 13:10
S449	2	((diagnostic with bits) same DMT)	US-PGPUB; USPAT	OR	ON	2009/05/05 13:10
S450	0	((diagnostic near bits) same tone)	US-PGPUB; USPAT	OR	ON	2009/05/05 13:11

S451	1	"6658052".pn.	US-PGPUB; USPAT	OR	ON	2009/05/05 13:24
S452	29	"375"/222.ccls. and (diagnostic adj information)	US-PGPUB; USPAT	OR	ON	2009/05/05 14:22
S453	1	10/619691	US-PGPUB; USPAT	OR	ON	2009/05/05 14:32
S454	22	(one adj bit) with DMT	US-PGPUB; USPAT	OR	ON	2009/05/05 14:39
S455	13	09/755173	US-PGPUB; USPAT	OR	ON	2009/05/05 14:51
S456	1	"6658052".pn.	US-PGPUB; USPAT	OR	ON	2009/05/05 14:51
S457	1	"6658052".pn.	US-PGPUB; USPAT	OR	ON	2009/05/07 11:23
S458	1	10/619691	US-PGPUB; USPAT	OR	ON	2009/05/07 11:33

5/8/2009 7:25:49 AM
C:\Documents and Settings\ktran5\My Documents\EAST\workspaces\10619691.wsp

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BIB DATA SHEET

CONFIRMATION NO. 7134

SERIAL NUMBER	FILING or 371(c) DATE / RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
10/619,691	07/16/2003	375	2611	5550-2-CON2

APPLICANTS

David M. Krinsky, Acton, MA;
Robert Edmund Pizzano JR., Stoneham, MA;

**** CONTINUING DATA **************************

This application is a DIV of 09/755,173 01/08/2001 PAT 6,658,052 YES
which claims benefit of 60/224,308 08/10/2000 YES
and claims benefit of 60/174,865 01/07/2000 YES
KCT

**** FOREIGN APPLICATIONS ************************** NO
KCT

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ****

07/07/2004

Foreign Priority claimed	35 USC 119(a-d) conditions met	Verified and Acknowledged	Met after Allowance	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
☐ Yes ☑ No	☐ Yes ☐ No	/KHANH C TRAN/ Examiner's Signature	☐ KCT Initials	MA	2	41 ~~43~~	13 ~~9~~

ADDRESS

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UNITED STATES

TITLE

Systems and methods for establishing a diagnostic transmission mode and communicating over the same

FILING FEE RECEIVED		
2668	FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

BIB (Rev. 05/07).

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	10619691	KRINSKY ET AL.
	Examiner	**Art Unit**
	KHANH C TRAN	2611

ORIGINAL		INTERNATIONAL CLASSIFICATION										
CLASS	SUBCLASS	CLAIMED					NON-CLAIMED					
375	222	H	0	4	B	1 / 38 (2006.01.01)						
CROSS REFERENCE(S)		H	0	4	L	12 / 26 (2006.01.01)						

CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				
370	252				

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1		17		33	20	49	7	65	35	81				
	2		18		34	24	50	11	66	39	82				
	3		19		35	28	51	15	67	40	83				
	4		20		36	32	52	19	68		84				
	5		21		37	36	53	22	69	41	85				
	6		22		38	2	54	26	70						
	7		23		39	6	55	30	71						
	8		24		40	10	56	34	72						
	9		25		41	14	57	38	73						
	10		26		42	18	58	4	74						
	11		27		43	21	59	8	75						
	12		28	1	44	25	60	12	76						
	13		29	5	45	29	61	16	77						
	14		30	9	46	33	62	23	78						
	15		31	13	47	37	63	27	79						
	16		32	17	48	3	64	31	80						

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 41
/KHANH C TRAN/ Primary Examiner.Art Unit 2611 (Primary Examiner)	05/08/2009 (Date)	O.G. Print Claim(s) 1 O.G. Print Figure 1

U.S. Patent and Trademark Office

Part of Paper No. 20090508

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	10619691	KRINSKY ET AL.
	Examiner	Art Unit
	KHANH C TRAN	2611

SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES		
Search Notes	Date	Examiner
Update EAST & NPL Searches	6/8/2008	KCT
Update EAST Searches	10/13/2008	KCT
Double Patenting Searches		
Update EAST and Double Patenting Searches	5/8/2009	KCT

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner
375	all previously cited	5/8/2009	KCT
370	all previously cited		
379	all previously cited		

	/KHANH C TRAN/ Primary Examiner.Art Unit 2611

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No.:	10/619,691	Confirmation No.:	**7134**
Applicant:	KRINSKY et al.	TC/A.U.	2611
Filed:	7-16-2003	Examiner:	TRAN
Docket No.:	5550-2-CON2		
For:	SYSTEMS AND METHODS FOR ESTABLISHING A DIAGNOSTIC TRANSMISSION MODE AND COMMUNICATING OVER THE SAME		

AMENDMENT AND RESPONSE

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicants submit this Amendment and Response to address the Office Action having a mailing date of October 20, 2008. Please credit any overpayment or charge any underpayment to Deposit Account No. 19-1970.

Please amend the above-identified patent application as follows:

Amendments to the Claims are shown in the listing of claims which begins on page 2 of this paper.

Remarks begin on page 12 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. – 43. (Canceled)

44. (Currently Amended) In a multicarrier modulation transceiver, a method of communicating diagnostic information over a communication channel using multicarrier modulation comprising:

transmitting or receiving at the multicarrier modulation transceiver an initiate diagnostic mode message; and

transmitting from the multicarrier modulation transceiver a diagnostic message using multicarrier modulation, wherein the diagnostic message comprises a plurality of data variables representing the diagnostic information about the communication channel and each bit in the diagnostic message is mapped to at least one DMT symbol, and wherein ~~the diagnostic information about the communication channel~~ one variable comprises an array representing ~~is~~ frequency domain received idle channel noise information.

45. (Currently Amended) A diagnostic system capable of communicating diagnostic information over a communication channel using multicarrier modulation comprising:

a transceiver capable of transmitting or receiving an initiate diagnostic mode message; and

a message determination module capable of determining and, in cooperation with the transceiver, transmitting a diagnostic message from the transceiver, wherein the diagnostic message comprises a plurality of data variables representing the diagnostic information about the communication channel and each bit in the diagnostic message is mapped to at least one DMT signal, and wherein one variable comprises an array representing ~~the diagnostic information about the communication channel is~~ frequency domain received idle channel noise information.

46. (Currently Amended) A multicarrier communication transceiver capable of communicating diagnostic information over a communication channel using multicarrier modulation comprising:

means for transmitting or receiving at the multicarrier communication transceiver an initiate diagnostic mode message; and

means for transmitting from the multicarrier communication transceiver a diagnostic message using multicarrier modulation, wherein the diagnostic message comprises a plurality of data variables representing the diagnostic information about the communication channel and each bit in the diagnostic message is mapped to at least one DMT symbol, and wherein ~~the diagnostic information about the communication channel is~~ one variable comprises an array representing frequency domain received idle channel noise information.

47. (Currently Amended) In a multicarrier communication transceiver, a protocol for communicating diagnostic information over a communication channel using multicarrier modulation comprising:

transmitting or receiving at the multicarrier communication transceiver an initiate diagnostic mode message; and

transmitting from the multicarrier communication transceiver a diagnostic message using multicarrier modulation, wherein the diagnostic message comprises a plurality of data variables representing the diagnostic information about the communication channel and each bit in the diagnostic message is mapped to at least one DMT symbol, and wherein ~~the diagnostic information about the communication channel is~~ one variable comprises an array representing frequency domain received idle channel noise information.

48. (Currently Amended) An information storage media comprising instructions that when executed communicate diagnostic information over a communication channel using multicarrier modulation comprising:

instructions that when executed direct a transceiver to receive or transmit an initiate diagnostic mode message; and

instructions that when executed transmit a diagnostic message from the transceiver using multicarrier modulation, wherein the diagnostic message comprises a

plurality of data variables representing the diagnostic information about the communication channel and each bit in the diagnostic message is mapped to at least one DMT symbol, and wherein ~~the diagnostic information about the communication channel is~~ one variable comprises an array representing frequency domain received idle channel noise information.

49. (Currently Amended) In a multicarrier modulation transceiver, a method of communicating diagnostic information over a communication channel using multicarrier modulation comprising:

transmitting or receiving at the multicarrier modulation transceiver an initiate diagnostic mode message; and

transmitting from the multicarrier modulation transceiver a diagnostic message using multicarrier modulation with DMT symbols that are mapped to one bit of the diagnostic message, wherein the diagnostic message comprises a plurality of data variables representing the diagnostic information about the communication channel, and wherein ~~the diagnostic information about the communication channel is~~ one variable comprises an array representing frequency domain received idle channel noise information.

50. (Currently Amended) A diagnostic system capable of communicating diagnostic information over a communication channel using multicarrier modulation comprising:

a transceiver capable of transmitting or receiving an initiate diagnostic mode message; and

a message determination module capable of determining and, in cooperation with the transceiver, transmitting from the transceiver a diagnostic message using multicarrier modulation with DMT symbols that are mapped to one bit of the diagnostic message, wherein the diagnostic message comprises a plurality of data variables representing the diagnostic information about the communication channel, and wherein ~~the diagnostic information about the communication channel is~~ one variable comprises an array representing frequency domain received idle channel noise information.

51. (Currently Amended) A multicarrier communication transceiver capable of communicating diagnostic information over a communication channel using multicarrier modulation comprising:

means for transmitting or receiving at the multicarrier communication transceiver an initiate diagnostic mode message; and

means for transmitting from the multicarrier communication transceiver a diagnostic message using multicarrier modulation with DMT symbols that are mapped to one bit of the diagnostic message, wherein the diagnostic message comprises a plurality of data variables representing the diagnostic information about the communication channel, and wherein ~~the diagnostic information about the communication channel is~~ one variable comprises an array representing frequency domain received idle channel noise information.

52. (Currently Amended) In a multicarrier communication transceiver, a protocol for communicating diagnostic information over a communication channel using multicarrier modulation comprising:

transmitting or receiving at the multicarrier communication transceiver an initiate diagnostic mode message; and

transmitting from the multicarrier communication transceiver a diagnostic message using multicarrier modulation with DMT symbols that are mapped to one bit of the diagnostic message, wherein the diagnostic message comprises a plurality of data variables representing the diagnostic information about the communication channel, and wherein ~~the diagnostic information about the communication channel is~~ one variable comprises an array representing frequency domain received idle channel noise information.

53. (Currently Amended) An information storage media comprising instructions that when executed communicate diagnostic information over a communication channel using multicarrier modulation comprising:

instructions that when executed direct a transceiver to receive or transmit an initiate diagnostic mode message; and

instructions that when executed transmit from the transceiver a diagnostic message using multicarrier modulation with DMT symbols that are mapped to one bit of

the diagnostic message, wherein the diagnostic message comprises a plurality of data variables representing the diagnostic information about the communication channel, and wherein ~~the diagnostic information about the communication channel~~ one variable comprises an array representing is frequency domain received idle channel noise information.

54. (Previously Presented) The method of claim 44, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

55. (Previously Presented) The system of claim 45, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

56. (Previously Presented) The transceiver of claim 46, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

57. (Previously Presented) The protocol of claim 47, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

58. (Previously Presented) The media of claim 48, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

59. (Previously Presented) The method of claim 49, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

60. (Previously Presented) The system of claim 50, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

61. (Previously Presented) The transceiver of claim 51, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

62. (Previously Presented) The protocol of claim 52, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

63. (Previously Presented) The media of claim 53, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

64. (Previously Presented) The method of claim 44, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

65. (Previously Presented) The system of claim 45, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

66. (Previously Presented) The transceiver of claim 46, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

67. (Previously Presented) The protocol of claim 47, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

68. (Previously Presented) The media of claim 48, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

69. (Previously Presented) The method of claim 49, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

70. (Previously Presented) The system of claim 50, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

71. (Previously Presented) The transceiver of claim 51, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

72. (Previously Presented) The protocol of claim 52, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

73. (Previously Presented) The media of claim 53, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

74. (Previously Presented) The method of claim 44, wherein the transceiver is a central office modem or a remote terminal modem.

75. (Previously Presented) The system of claim 45, wherein the transceiver is a central office modem or a remote terminal modem.

76. (Previously Presented) The transceiver of claim 46, wherein the transceiver is a central office modem or a remote terminal modem.

77. (Previously Presented) The protocol of claim 47, wherein the transceiver is a central office modem or a remote terminal modem.

78. (Previously Presented) The method of claim 49, wherein the transceiver is a central office modem or a remote terminal modem.

79. (Previously Presented) The system of claim 50, wherein the transceiver is a central office modem or a remote terminal modem.

80. (Previously Presented) The transceiver of claim 51, wherein the transceiver is a central office modem or a remote terminal modem.

81. (Previously Presented) The protocol of claim 52, wherein the transceiver is a central office modem or a remote terminal modem.

82. (Currently Amended) In a multicarrier modulation transceiver, a method of communicating diagnostic information including a plurality of data variables over a communication channel using multicarrier modulation comprising:

associating, in a diagnostic message and based on an initiate diagnostic mode message, each bit in the diagnostic message with at least one DMT symbol, wherein ~~the diagnostic information about the communication channel is~~one variable comprises an array representing frequency domain received idle channel noise information.

83. (Currently Amended) In a multicarrier modulation transceiver, a method of communicating diagnostic information over a communication channel using multicarrier modulation comprising:

transmitting, during a diagnostic mode, a diagnostic message using multicarrier modulation, wherein the diagnostic message comprises a plurality of data variables representing the diagnostic information about the communication channel and at least one bit in the diagnostic message is mapped to at least one DMT symbol, wherein ~~the diagnostic information about the communication channel is~~ one variable comprises an array representing frequency domain received idle channel noise information.

84. (Canceled)

85. (Previously Presented) Communicating diagnostic information over a communication channel using multicarrier modulation comprising:

communicating from a transceiver a diagnostic message comprising a plurality of data variables representing the diagnostic information, wherein each bit in the diagnostic message is mapped to at least one DMT symbol, wherein ~~the diagnostic information about the communication channel is~~ one variable comprises an array representing frequency domain received idle channel noise information.

REMARKS

Applicants respectfully request reconsideration of this application, as amended.

Applicants would like to thank Examiner Tran for the courtesies extended to Applicant and Applicants Representative during the January 28 personal interview. During the interview, Claim 44 was discussed and a tentative agreement reached to differentiate the claim from the relied upon references. Further to February 19, February 23, and February 25 emails, and a February 25 telephone conference, it was agreed that revised Claim 44 was patentably distinguishable from the relied upon references.

Accordingly, the independent claims have been amended in a similar manner to Claim 44, and it is believed the specifically claimed combination of features is neither taught, suggested, nor disclosed in the relied upon references. Accordingly, with the claims being patentably distinguishable, it is believed the application is in condition for allowance. Should the Examiner believe anything further is desirable in order to place the application in even better condition for allowance; the Examiner is encouraged to contact Applicants undersigned representative at the telephone number listed below.

The Commissioner is hereby authorized to charge to deposit account number 19-1970 any fees under 37 CFR § 1.16 and 1.17 that may be required by this paper and to credit any overpayment to that Account. If any extension of time is required in connection with the filing of this paper and has not been separately requested, such extension is hereby Petitioned.

Respectfully submitted,

SHERIDAN ROSS P.C.

Date: 26 Feb 09

By: _____

Jason H. Vick
Reg. No. 45,285
1560 Broadway, Suite 1200
Denver, Colorado 80202
Telephone: 303-863-9700

PTO/SB/22 (01-09)
Approved for use through 02/28/2009. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARMENT OF COMMERCE

PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a) **FY 2009** ***(Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).)***	Docket Number (Optional) 5550-2-CON2 conf. no. 7134
Application Number 10/619,691	Filed 07/16/2003
For System and Methods for Establishing a Diagnostic Transmission Mode and Communicating Over the Sa	
Art Unit 2611	Examiner Tran

This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above identified application.

The requested extension and fee are as follows (check time period desired and enter the appropriate fee below):

	Fee	Small Entity Fee	
☐ One month (37 CFR 1.17(a)(1))	$130	$65	$
☑ Two months (37 CFR 1.17(a)(2))	$490	$245	$ 490
☐ Three months (37 CFR 1.17(a)(3))	$1110	$555	$
☐ Four months (37 CFR 1.17(a)(4))	$1730	$865	$
☐ Five months (37 CFR 1.17(a)(5))	$2350	$1175	$

☐ Applicant claims small entity status. See 37 CFR 1.27.

☐ A check in the amount of the fee is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☐ The Director has already been authorized to charge fees in this application to a Deposit Account.

☑ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number 191970.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

I am the

☐ applicant/inventor.

☐ assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed (Form PTO/SB/96).

☐ attorney or agent of record. Registration Number _____

☑ attorney or agent under 37 CFR 1.34.
Registration number if acting under 37 CFR 1.34 45285

Signature	February 26, 2009 Date
Jason H. Vick Typed or printed name	(303) 863-9700 Telephone Number

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☐ Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.136(a). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 6 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Electronic Patent Application Fee Transmittal	
Application Number:	10619691
Filing Date:	16-Jul-2003
Title of Invention:	Systems and methods for establishing a diagnostic transmission mode and communicating over the same
First Named Inventor/Applicant Name:	David M. Krinsky
Filer:	Jason Vick/Christine Jacquet
Attorney Docket Number:	5550-2-CON2
Filed as Large Entity	

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Extension - 2 months with $0 paid	1252	1	490	490

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
		Total in USD ($)		**490**

Electronic Acknowledgement Receipt	
EFS ID:	4867342
Application Number:	10619691
International Application Number:	
Confirmation Number:	7134
Title of Invention:	Systems and methods for establishing a diagnostic transmission mode and communicating over the same
First Named Inventor/Applicant Name:	David M. Krinsky
Customer Number:	62574
Filer:	Jason Vick/Christine Jacquet
Filer Authorized By:	Jason Vick
Attorney Docket Number:	5550-2-CON2
Receipt Date:	26-FEB-2009
Filing Date:	16-JUL-2003
Time Stamp:	16:55:17
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$490
RAM confirmation Number	2788
Deposit Account	191970
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees) Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)	

Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		AMEND_AND_EOT_2_26_09.pdf	1264882 f983afcd06d518352ebe08b95d2f1e7e33a2c794	yes	13

Multipart Description/PDF files in .zip description

Document Description	Start	End
Amendment/Req. Reconsideration-After Non-Final Reject	1	1
Claims	2	11
Applicant Arguments/Remarks Made in an Amendment	12	12
Extension of Time	13	13

Warnings:

Information:

2	Fee Worksheet (PTO-06)	fee-info.pdf	30451 227f520c27ffefd914f8ee3820d5bdb2945ca05b	no	2

Warnings:

Information:

Total Files Size (in bytes):	1295333

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 10/619,691	Filing Date 07/16/2003	☐ To be Mailed

APPLICATION AS FILED – PART I

	(Column 1)	(Column 2)	SMALL ENTITY ☐		OR	OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE ($)	FEE ($)		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II

		(Column 1)		(Column 2)	(Column 3)	SMALL ENTITY			OTHER THAN SMALL ENTITY	
	02/26/2009	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)		RATE ($)	ADDITIONAL FEE ($)
AMENDMENT	Total (37 CFR 1.16(i))	* 41	Minus	** 43	= 0	X $ =		OR	X $52=	0
	Independent (37 CFR 1.16(h))	* 13	Minus	***14	= 0	X $ =		OR	X $220=	0
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	0

		(Column 1)		(Column 2)	(Column 3)					
		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)		RATE ($)	ADDITIONAL FEE ($)
AMENDMENT	Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =		OR	X $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =		OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:
/VERNON A. TOWLER/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,691	07/16/2003	David M. Krinsky	5550-2-CON2	7134

62574 7590 10/20/2008

Jason H. Vick
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EXAMINER	
TRAN, KHANH C	
ART UNIT	PAPER NUMBER
2611	

NOTIFICATION DATE	DELIVERY MODE
10/20/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jvick@sheridanross.com

Office Action Summary	Application No.	Applicant(s)	
	10/619,691	KRINSKY ET AL.	
	Examiner	Art Unit	
	KHANH C. TRAN	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 July 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *44-83 and 85* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *44-83 and 85* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *7/16/2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The Amendment filed on 7/1/2008 has been entered. Claims 44-83 and 85 are still pending in this Office action.

Response to Arguments

2. Applicant's arguments with respect to claim 84 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 44-83 and 85 are rejected under 35 U.S.C. 103(a) as being unpatentable over Milbrandt U.S. Patent 6,631,120 B1 in view of Czerwiec U.S. Patent 5,361,293.

Regarding claim 44, in column 10 lines 40-60, see also FIG. 2, Milbrandt discloses modems 60 may collect information defining the operational characteristics of subscriber lines 16 while providing data services to subscribers 12. This process of gathering subscriber line information 28 is referred to as "modem training". Although the

following description of ***modem training is detailed with reference to ADSL modems that employ discrete multi-tone (DMT) modulation technology***, it should be understood that other types of modems employing other modulation technology may gather information defining the operational characteristics of a subscriber line 16 using suitable techniques. Therefore, one of skill in the art can appreciate ***that the transmit power spectrum density and data rate determination features and functions performed by server 18 are not limited to any particular type of communication protocol or modulation technology***.

In column 11 lines 5-50, see also FIGS. 1 and 2, Milbrandt teaches that during modem training, an ADSL modem 60 employing DMT modulation technology may collect subscriber line information 28 used to determine attenuation information and noise information for each channel of the data frequency spectrum for a particular subscriber line 16. To collect subscriber line information 28 for subscriber line 16 during the downlink transmission of data, for example, modem 60 transmits a data signal at a known transmit power spectrum density, Q_f, for each channel of the data frequency spectrum allocated for downlink transmission.

Milbrandt further teaches that in some situations, modems 60 and 42 may not establish a connection over the entire frequency spectrum of a subscriber line 16. Rather, the modems 60 and 42 may only connect over a sub-range of frequencies. In these instances where a modem 60 fails to operate over the entire frequency spectrum supported by a subscriber line 16, central office 14 may enter a modem 60 into a diagnostic mode. In the ***diagnostic mode***, a modem 60 communicates to modem 42 a

signal pulse at a known transmit power spectrum density, Q_f, for one or more sub-frequencies within the frequency spectrum over which the modems 60 and 42 may still connect. In light of the foregoing disclosure, the transmit power spectrum density, Q_f, corresponds to the claimed diagnostic message

Milbrandt does not explicitly disclose each bit in the diagnostic message is mapped to at least one DMT symbol as claimed in the application claim.

As recited above, ***modem training is detailed with reference to ADSL modems that employ discrete multi-tone (DMT) modulation technology***. In view of that, because modem employs DMT modulation technology, one of ordinary skill in the art at the time the invention was made would have recognized that the transmit power spectrum density, Q_f, represent bits of diagnostic message, the bits being mapped to DMT symbol containing sub-range of frequencies.

Milbrandt does not disclose, in the diagnostic mode, the transmit power spectrum density, Q_f, includes frequency domain received idle channel noise information as claimed in the application claim.

Czerwiec invention relates to telecommunications and, more particularly, to a system for subscriber loop testing; see column 1 lines 15-20. Czerwiec teaches the transmission tests include two types of return loss measurements are performed: (1) a measure of round trip channel loss performed with the RT channel unit terminated by a reflective termination and a (2) a measure of echo-return loss with the RT channel unit terminated by an absorptive termination. A ***round trip*** *idle channel noise* ***test*** is also

made by turning off a swept oscillator in the PGTC channel tester unit while the RT channel unit has an AC reflective termination.

As further disclosed by Milbrandt in col. 12 lines 45-60, the noise information for a particular subscriber line 16 may be determined by measuring noise characteristics of a subscriber line 16 during operation or by calculating the noise information using subscriber line information 28 for subscriber line 16. For example, a modem 42 of a subscriber 12 may operate as a spectrum analyzer during operation to sample a time domain signal communicated by central office 14 using subscriber line 16. Modem 42, operating as a spectrum analyzer, measures the noise variance of the time domain signal over a statistically significant period of time and ***converts the measured noise variance from the time domain to the frequency domain by performing, for example, a Fast Fourier Transform***.

In light of that, because the noise information is part of the modem training and characterization, therefore, one of ordinary skill in the art at the time the invention was made would have been motivated to modify Milbrandt teachings to include the idle channel noise information in the diagnostic mode for testing purposes as taught in Czerwiec invention.

Regarding claim 45, claim is rejected on the same ground as for claim 44 because of similar scope. Further in col. 11 lines 30-50, Milbrandt further teaches in the diagnostic mode, a modem 60 communicates to modem 42 a signal pulse at a known transmit power spectrum density, Q_f, for one or more sub-frequencies within the

frequency spectrum over which the modems 60 and 42 may still connect, such as over a sub-frequency in the voice frequency spectrum. Modem 42 at subscriber premises 12 receives the data signal that is communicated by modem 60 and determines subscriber line information 28, such as attenuation information, noise information, received signal power spectrum density, S_f, or any other information describing the physical or operating characteristics of subscriber line 16 at the one or more sub-frequencies over which the connection between modem 60 and 42 is established.

Regarding claim 46, claim is rejected on the same ground as for claim 44 because of similar scope.

Regarding claim 47, claim is rejected on the same ground as for claim 44 because of similar scope.

Regarding claim 48, claim is rejected on the same ground as for claim 44 because of similar scope. Furthermore, a communication server 58 comprises any suitable combination of hardware and software that resides at central office 14, at a remote terminal, or any other suitable access point in system 10 that allows coupling to local loops formed by subscriber lines 16; see column 6 lines 30-40, also FIG. 1.

Regarding claim 49, claim is rejected on the same ground as for claim 44 because of similar scope. Furthermore, as recited in claim 44 rejection, in the diagnostic

mode, a modem 60 communicates to modem 42 a signal pulse at a known transmit power spectrum density, Q_f, for one or more sub-frequencies within the frequency spectrum over which the modems 60 and 42 may still connect. ADSL modem 60 employs DMT modulation technology. In view of that, DMT symbols are mapped to the signal pulse, representing bits of diagnostic message.

Regarding claim 50, claim is rejected on the same ground as for claim 49 because of similar scope.

Regarding claim 51, claim is rejected on the same ground as for claim 49 because of similar scope.

Regarding claim 52, claim is rejected on the same ground as for claim 49 because of similar scope.

Regarding claim 53, claim is rejected on the same ground as for claim 49 because of similar scope.

Regarding claims 54-63, in column 11 lines 20-35, Milbrandt teaches in some situations, modems 60 and 42 may not establish a connection over the entire frequency spectrum of a subscriber line 16. In these instances where a modem 60 fails to operate over the entire frequency spectrum supported by a subscriber line 16, central office 14 may enter a modem 60 into a diagnostic mode. Hence, the foregoing disclosure

addresses the claimed limitations “the initiate diagnostic mode message based on a bit rate failure”.

Regarding claims 64-73, in column 11 lines 20-35, Milbrandt further teaches in the diagnostic mode, a modem 60 communicates to modem 42 *a signal pulse at a known transmit power spectrum density, Q_f,* for one or more sub-frequencies within the frequency spectrum over which the modems 60 and 42 may still connect.

Regarding claims 74-81, see also FIG2. 1-2, modems 60 and 42 are CO modem and subscriber modem; see also column 8 lines 55-67.

Regarding claim 82, claim is rejected on the same ground as for claim 44 because of similar scope.

Regarding claim 83, claim is rejected on the same ground as for claim 44 because of similar scope.

Regarding claim 85, claim is rejected on the same ground as for claim 44 because of similar scope.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHANH C. TRAN whose telephone number is (571)272-3007. The examiner can normally be reached on Monday - Friday from 08:00 AM - 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on 571-272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KCT

/KHANH C. TRAN/
Primary Examiner, Art Unit 2611

Notice of References Cited	Application/Control No. 10/619,691	Applicant(s)/Patent Under Reexamination KRINSKY ET AL.	
	Examiner KHANH C. TRAN	Art Unit 2611	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-5,361,293	11-1994	Czerwiec, Richard M.	379/27.02
*	B	US-6,631,120	10-2003	Milbrandt, Celite	370/252
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

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BIB DATA SHEET

CONFIRMATION NO. 7134

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
10/619,691	07/16/2003	375	2611	5550-2-CON2

APPLICANTS

David M. Krinsky, Acton, MA;
Robert Edmund Pizzano JR., Stoneham, MA;

**** CONTINUING DATA **************************

This application is a DIV of 09/755,173 01/08/2001 PAT 6,658,052 YES
which claims benefit of 60/224,308 08/10/2000 YES
and claims benefit of 60/174,865 01/07/2000 YES
KCT

**** FOREIGN APPLICATIONS ************************** NO
KCT

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ****

07/07/2004

Foreign Priority claimed ☐ Yes ☑ No 35 USC 119(a-d) conditions met ☐ Yes ☐ No Verified and Acknowledged /KHANH C TRAN/ Examiner's Signature	☐ Met after Allowance KCT Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
		MA	2	41 ~~43~~	9

ADDRESS

Jason H. Vick
Sheridan Ross, PC
Suite # 1200
1560 Broadway
Denver, CO 80202
UNITED STATES

TITLE

Systems and methods for establishing a diagnostic transmission mode and communicating over the same

FILING FEE RECEIVED		
2668	FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

BIB (Rev. 05/07).

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	28	"375"/$.ccls. and (idle adj channel adj noise)	US-PGPUB; USPAT	OR	ON	2008/10/13 09:07
L2	0	"375"/$.ccls. and (diagnostic same (idle adj channel adj noise))	US-PGPUB; USPAT	OR	ON	2008/10/13 09:12
L3	3	"375"/$.ccls. and (diagnostic and (idle adj channel adj noise))	US-PGPUB; USPAT	OR	ON	2008/10/13 09:12
L4	20	(diagnostic and (idle adj channel adj noise))	US-PGPUB; USPAT	OR	ON	2008/10/13 09:13
L5	1	(diagnostic adj message) and (idle adj channel adj noise)	US-PGPUB; USPAT	OR	ON	2008/10/13 09:15
L6	1	(diagnostic) and (idle adj channel adj noise) and DMT	US-PGPUB; USPAT	OR	ON	2008/10/13 09:15
L7	3	(diagnostic adj mode) and (idle adj channel adj noise)	US-PGPUB; USPAT	OR	ON	2008/10/13 09:15
L8	15	(diagnostic) and (idle adj channel adj noise) and modem	US-PGPUB; USPAT	OR	ON	2008/10/13 09:16
L9	20	(diagnostic) and (idle adj channel adj noise)	US-PGPUB; USPAT	OR	ON	2008/10/13 09:17
L10	1	"6631120".pn.	US-PGPUB; USPAT	OR	ON	2008/10/13 09:27
L11	1	10/619691	US-PGPUB; USPAT	OR	ON	2008/10/13 10:17
S1	674	"375"/$.CCLS. and (channel adj cod$5) and diversity	US-PGPUB; USPAT	OR	ON	2005/09/09 09:15
S2	230	"375"/$.CCLS. and ((channel adj cod$5) same diversity)	US-PGPUB; USPAT	OR	ON	2007/03/27 07:06
S3	1	"6247158".pn.	US-PGPUB; USPAT	OR	ON	2005/09/08 16:58
S4	7	("4577317" | "5283780" | "5907582" | "5909439" | "5970085" | "6023492" | "6049566").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/08 17:00
S5	1	"6178196".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/08 17:00

S6	1	"6389063".PN.	US-PGPUB; USPAT	OR	ON	2005/09/09 09:16
S7	1	"6603807".PN.	US-PGPUB; USPAT	OR	ON	2005/09/09 09:16
S8	1	"6359926".PN.	US-PGPUB; USPAT	OR	ON	2005/09/09 09:16
S9	15	"375"/260.CCLS. and ((channel adj cod$5) same diversity)	US-PGPUB; USPAT	OR	ON	2005/09/15 15:55
S10	1	"6178196".pn.	US-PGPUB; USPAT	OR	ON	2005/09/15 16:00
S11	1	"6693982".pn.	US-PGPUB; USPAT	OR	ON	2005/09/15 16:41
S12	0	cross adj correlated adj base adj band	US-PGPUB; USPAT	OR	ON	2006/02/24 11:01
S13	762	(cross adj correlated) near2 signal	US-PGPUB; USPAT	OR	ON	2005/09/15 16:42
S14	589	(cross adj correlated) near signal	US-PGPUB; USPAT	OR	ON	2005/09/15 16:42
S15	43	S14 with transmit$5	US-PGPUB; USPAT	OR	ON	2005/09/15 16:50
S16	362	transmitter same diversity same delay	US-PGPUB; USPAT	OR	ON	2005/09/15 16:51
S17	3	transmitter same diversity same (delay adj path)	US-PGPUB; USPAT	OR	ON	2005/09/15 16:51
S18	1196	diversity with delay	US-PGPUB; USPAT	OR	ON	2005/09/15 17:03
S19	139	diversity same (multi adj user)	US-PGPUB; USPAT	OR	ON	2005/09/15 17:04
S20	15	diversity same (plurality adj user) same transmitter	US-PGPUB; USPAT	OR	ON	2005/09/15 17:12
S21	24	diversity same (plurality adj user) same transmission	US-PGPUB; USPAT	OR	ON	2005/09/15 17:06
S22	0	diversity same (plurality adj user) same (different adj PN)	US-PGPUB; USPAT	OR	ON	2005/09/15 17:11
S23	18	diversity same (plurality adj user) same (PN adi code)	US-PGPUB; USPAT	OR	ON	2005/09/15 17:12
S24	0	diversity same (plurality adj user) same (PN adj code)	US-PGPUB; USPAT	OR	ON	2005/09/15 17:12
S25	34	(plurality adj antenna) same (plurality adj user)	US-PGPUB; USPAT	OR	ON	2005/09/15 17:16

S26	17	(plurality adj antenna) same (plurality adj user) same transmi$5	US-PGPUB; USPAT	OR	ON	2005/09/15 17:17
S27	0	(plurality adj antenna) same (distinct adj signal)	US-PGPUB; USPAT	OR	ON	2005/09/15 17:18
S28	3	(plurality adj antenna) same (different adj spread adj code)	US-PGPUB; USPAT	OR	ON	2005/09/15 17:18
S29	12	(diversity) same (different adj spread adj code)	US-PGPUB; USPAT	OR	ON	2005/09/15 17:19
S30	0	multiusers same (channel adj coder) same (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 14:54
S31	3	data same (channel adj coder) same (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 14:54
S32	1	MIMO same (channel adj coder) same (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:03
S33	3	(MIMO same (channel adj coder)) and (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 14:56
S34	86	multi adj user adj data	US-PGPUB; USPAT	OR	ON	2005/09/16 14:58
S35	2	S34 and mimo	US-PGPUB; USPAT	OR	ON	2005/09/16 14:56
S36	10	S34 and diversity	US-PGPUB; USPAT	OR	ON	2005/09/16 14:57
S37	0	S34 and (seial adj parallel)	US-PGPUB; USPAT	OR	ON	2005/09/16 14:58
S38	0	S34 and (serial adj parallel)	US-PGPUB; USPAT	OR	ON	2005/09/16 14:58
S39	194399	data same channel coder same (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 14:59
S40	3	data same (channel adj coder) same (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 14:59
S41	8	data same (coder) same (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:00
S42	31	data and (channel adj coder) and (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:01
S43	3	(channel adj coder) same MIMO	US-PGPUB; USPAT	OR	ON	2005/09/16 15:02

S44	5	(channel adj coder) same (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:03
S45	66	(encoder) same (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:16
S46	5	"6285720"	US-PGPUB; USPAT	OR	ON	2005/09/16 15:06
S47	13	"375"/$.ccls. and (multi adj user adj data)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:19
S48	48	"375"/$.ccls. and ((multi adj user) same TDMA)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:20
S49	9	"375"/$.ccls. and ((multi adj user) same FDD)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:21
S50	10	"370"/$.ccls. and ((multi adj user) same FDD)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:22
S51	1	"370"/$.ccls. and ((channel adj encoder) same FDD)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:24
S52	0	"370"/$.ccls. and ((channel adj coder) same FDD)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:24
S53	1	((channel adj coder) same FDD)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:24
S54	0	((channel adj coder) same (multi adj user))	US-PGPUB; USPAT	OR	ON	2005/09/16 15:24
S55	1	((channel adj encoder) same (multi adj user))	US-PGPUB; USPAT	OR	ON	2005/09/16 15:26
S56	16	((spatial adj diversity) same (multi adj user))	US-PGPUB; USPAT	OR	ON	2005/09/16 15:27
S57	99	((spatial adj diversity) and (multi adj user))	US-PGPUB; USPAT	OR	ON	2005/09/16 15:36
S58	3	"6359864"	US-PGPUB; USPAT	OR	ON	2005/09/16 15:31
S59	106	((FDD and CDMA) and (multi adj user))	US-PGPUB; USPAT	OR	ON	2005/09/16 15:31
S60	11	((spatial adj diversity) and (channel adj coder))	US-PGPUB; USPAT	OR	ON	2005/09/16 15:36
S61	5	("5321725" | "5784417" | "6031474" | "6088408" | "6473878").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:48
S62	38154	data adj source	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:48
S63	19	S62 with (multi adj user)	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:53

S64	3	(frequency adj division adj duplex) same (multi adj user) same CDMA	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:51
S65	5	("5559723" | "5905946" | "5933457" | "6161209" | "6615024").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:52
S66	0	(multi adj user adj source)	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:53
S67	25	((multi adj user) near2 source)	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:53
S68	23266	((multi adj user) near2 source) amd MIMO	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:53
S69	0	((multi adj user) near2 source) and MIMO	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:55
S70	1	"6693982".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 16:11
S71	1	"5886967".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 16:11
S72	1	"5886987".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 16:13
S73	6	(information adj source) near2 (different adj source)	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 16:13
S74	323	"375"/$.ccls. and (multiple adj access adj interference)	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 16:14
S75	32	"375"/$.ccls. and (multiple adj access adj interference) and (demultiplex$5)	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 16:16
S76	7	"375"/$.ccls. and (multiple adj access adj interference) and (demultiplex$5) and coder	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 16:14
S77	28	"375"/$.ccls. and (multiple adj channel) and (channel adj coder)	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 16:16
S78	1	"6741658".pn.	US-PGPUB; USPAT	OR	ON	2005/09/18 08:43
S79	1	"6898248".pn.	US-PGPUB; USPAT	OR	ON	2005/09/18 08:44
S80	1	"6359864".pn.	US-PGPUB; USPAT	OR	ON	2006/02/21 10:50
S81	1	"6310923".pn.	US-PGPUB; USPAT	OR	ON	2006/02/21 10:50

S82	3	375/267.ccls. and (transmit near (different adj information))	US-PGPUB; USPAT	OR	ON	2006/02/24 13:52
S83	1	"6693982".pn.	US-PGPUB; USPAT	OR	ON	2006/02/24 15:16
S84	561	mapper with identif$8	US-PGPUB; USPAT	OR	ON	2006/02/24 15:16
S85	71	"375"/$.ccls. and (mapper with identif$8)	US-PGPUB; USPAT	OR	ON	2006/02/24 15:16
S86	1	"6693982".pn.	US-PGPUB; USPAT	OR	ON	2006/02/27 09:36
S87	171	space adj time adj block adj code	US-PGPUB; USPAT	OR	ON	2006/02/27 13:37
S88	25	S87 and (spread adj spectrum)	US-PGPUB; USPAT	OR	ON	2006/02/27 10:11
S89	2	S87 and (spread adj code)	US-PGPUB; USPAT	OR	ON	2006/02/27 09:36
S90	126	(angle adj diversity)	US-PGPUB; USPAT	OR	ON	2006/02/27 10:12
S91	0	S87 and S90	US-PGPUB; USPAT	OR	ON	2006/02/27 10:11
S92	155	space adj time adj diversity	US-PGPUB; USPAT	OR	ON	2006/02/27 10:12
S93	3	S90 and S92	US-PGPUB; USPAT	OR	ON	2006/02/27 10:12
S94	3	(angle adj diversity) same (fading adj channel)	US-PGPUB; USPAT	OR	ON	2006/02/27 10:17
S95	1	(angle adj diversity) same (directed adj antenna adj beam)	US-PGPUB; USPAT	OR	ON	2006/02/27 10:17
S96	1	((plurality adj antenna) same (code adj rate) same adapt$8)	US-PGPUB; USPAT	OR	ON	2006/02/27 10:54
S97	4	((plurality adj antenna) same (code adj rate)) and adapt$8	US-PGPUB; USPAT	OR	ON	2006/02/27 10:55
S98	0	((plurality adj antenna) same (adapt$8 adj code adj rate))	US-PGPUB; USPAT	OR	ON	2006/02/27 10:55
S99	0	((adaptive adj antenna) same (adapt$8 adj code adj rate))	US-PGPUB; USPAT	OR	ON	2006/02/27 10:55
S100	0	((adaptive adj antenna) and (adapt$8 adj code adj rate))	US-PGPUB; USPAT	OR	ON	2006/02/27 15:02

S101	94	((adaptive adj modulation) and (adaptive adj cod$5))	US-PGPUB; USPAT	OR	ON	2006/02/27 13:11
S102	1	"5383219".pn.	US-PGPUB; USPAT	OR	ON	2006/02/27 13:36
S103	50	S87 and (transmit adj power)	US-PGPUB; USPAT	OR	ON	2006/02/27 13:43
S104	1	"6693982".pn.	US-PGPUB; USPAT	OR	ON	2006/02/27 14:05
S105	5828	channel adj estimat$5	US-PGPUB; USPAT	OR	ON	2006/02/27 14:05
S106	1751	channel adj estimator	US-PGPUB; USPAT	OR	ON	2006/02/27 14:06
S107	48	S106 same (channel adj equalizer)	US-PGPUB; USPAT	OR	ON	2006/02/27 14:08
S108	3	S107 and (space adj time)	US-PGPUB; USPAT	OR	ON	2006/02/27 14:08
S109	7	375/267.ccls. and recod $5	US-PGPUB; USPAT	OR	ON	2006/02/27 15:07
S110	3	("5781845" | "6067324" | "6122260").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/02/27 15:06
S111	3	"375"/$.ccls. and recod $5 and (MAI)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:08
S112	1	"375"/$.ccls. and reencod$5 and (MAI)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:10
S113	7	reencod$5 and (MAI)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:08
S114	0	"375"/148.ccls. and reencod$5 and (MAI)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:14
S115	0	"375"/148.ccls. and reencod$5 and (space adj time adj diversity)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:14
S116	0	"375"/$.ccls. and reencod$5 and (space adj time adj diversity)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:14
S117	0	"375"/$.ccls. and reencod$5 and ((space adj time) near2 code)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:15
S118	0	"375"/$.ccls. and reencod$5 and ((space adj time) with code)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:15
S119	7	"375"/$.ccls. and (re adj encod$5) and ((space adj time) with code)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:15
S120	56	375/260.ccls. and Channeliz$6	US-PGPUB; USPAT	OR	ON	2006/08/10 16:58

S121	180	375/267.ccls. and (space adj time adj cod $8)	US-PGPUB; USPAT	OR	ON	2006/08/11 11:15
S122	1	"6366888".pn.	US-PGPUB; USPAT	OR	ON	2006/08/11 11:15
S123	3	375/267.ccls. and (non adj interleav$8)	US-PGPUB; USPAT	OR	ON	2006/08/11 11:17
S124	11	375/260.ccls. and (non adj interleav$8)	US-PGPUB; USPAT	OR	ON	2006/08/11 11:22
S125	0	"375"/$.ccls. and ((inner adj cod$5) same (outer adj cod$6) same(non adj interleav $8))	US-PGPUB; USPAT	OR	ON	2006/08/11 11:24
S126	2	"375"/$.ccls. and ((inner adj cod$5) same (outer adj cod $6)) and(non adj interleav$8)	US-PGPUB; USPAT	OR	ON	2006/08/11 11:24
S127	0	"375"/$.ccls. and ((outer adj cod$6) same (non adj interleav$8))	US-PGPUB; USPAT	OR	ON	2006/08/11 11:25
S128	3	"375"/267.ccls. and ((cod$6) same(non adj interleav$8))	US-PGPUB; USPAT	OR	ON	2006/08/11 11:25
S129	2	"375"/267.ccls. and ((transmit$5) with(non adj interleav$8))	US-PGPUB; USPAT	OR	ON	2006/08/11 11:27
S130	4	"375"/267.ccls. and ((transmit$5) with (without adj interleav $8))	US-PGPUB; USPAT	OR	ON	2006/08/11 11:27
S131	180	"375"/267.ccls. and (space adj time adj cod $6)	US-PGPUB; USPAT	OR	ON	2006/08/11 11:28
S132	1	"6115427".pn.	US-PGPUB; USPAT	OR	ON	2006/08/16 08:06
S133	1	"6693982".pn.	US-PGPUB; USPAT	OR	ON	2006/08/16 08:06
S134	3	09/393235	US-PGPUB; USPAT	OR	ON	2006/08/16 13:47
S135	353	combin$3 with serializ $3	US-PGPUB; USPAT	OR	ON	2006/08/16 13:48
S136	3383513	number of transmitter antennas	US-PGPUB; USPAT	OR	ON	2007/03/20 07:30
S137	1	10/184054	US-PGPUB; USPAT	OR	ON	2007/03/20 09:21
S138	1	10/619691	US-PGPUB; USPAT	OR	ON	2007/03/20 09:37

S139	1	"6636603".pn.	US-PGPUB; USPAT	OR	ON	2007/03/20 09:41
S140	1	"20040202237"	US-PGPUB; USPAT	OR	ON	2007/03/20 15:17
S141	1	09/798727	US-PGPUB; USPAT	OR	ON	2007/03/20 15:17
S142	1	"6745050".pn.	US-PGPUB; USPAT	OR	ON	2007/03/23 08:55
S143	6	("20020097779" | "4794556" | "4941178" | "5668830" | "6480557" | "RE31943").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:55
S144	695	CDMA same (multi adj user)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:55
S145	374	"375"/$.ccls. and (CDMA same (multi adj user))	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:56
S146	287	"375"/$.ccls. and (CDMA with (multi adj user))	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:56
S147	0	"375"/$.ccls. and (CDMA with (multi adj user)) and (interference adj cancel$&)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:57
S148	89	"375"/$.ccls. and (CDMA with (multi adj user)) and (interference adj cancel$5)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:57
S149	8	("4134071" | "4744093" | "5136612" | "5164959" | "5361219" | "5363403" | "5481533" | "5790590").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:58
S150	14	("5956333").URPN.	USPAT	OR	OFF	2007/03/23 09:01
S151	1	09/326222.app.	US-PGPUB; USPAT; DERWENT; IBM_TDB	OR	OFF	2007/03/23 09:01
S152	11	("4124818" | "4992798" | "5418814" | "5467368" | "5566165" | "5596600" | "5724378" | "5956333" | "6032026" | "6088383" | "6229857").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:03

S153	11	"375"/$.ccls. and (multi adj user adj demodul $8)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 11:53
S154	0	"375"/$.ccls. and (multi adj user) and remodult $6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:09
S155	23	"375"/$.ccls. and (multi adj user) and remodulat$6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:05
S156	0	"370"/$.ccls. and (multi adj user) and remodult $6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:09
S157	0	"455"/$.ccls. and (multi adj user) and remodult $6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:10
S158	0	"455"/$.ccls. and (user) and remodult$6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:10
S159	237	"455"/$.ccls. and (user) and remodulat $6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:10
S160	10	"455"/$.ccls. and (multiuser) and remodulat$6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:11
S161	30	(multiuser) and remodulat$6 and CDMA	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:14
S162	873	(multiuser) and CDMA	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:14
S163	523	"375"/$.ccls. and (multiuser) and CDMA	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:14
S164	299	"375"/$.ccls. and ((multiuser) same CDMA)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:14
S165	1	"5956333".pn.	US-PGPUB; USPAT	OR	ON	2007/03/26 09:23
S166	1	"5644592".pn.	US-PGPUB; USPAT	OR	ON	2007/03/26 09:30
S167	1	10/184054	US-PGPUB; USPAT	OR	ON	2007/03/26 10:06
S168	1	"6115427".pn.	US-PGPUB; USPAT	OR	ON	2007/03/26 10:28
S169	49	375/267.ccls. and (multiuser)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:32
S170	6	375/260.ccls. and (multiuser same diversity)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:33
S171	2	375/295.ccls. and (multiuser same diversity)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:34

S172	8	375/130.ccls. and (multiuser same diversity)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:38
S173	1	375/299.ccls. and (multiuser same diversity)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:35
S174	16	375/299.ccls. and (multiuser)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:35
S175	41	375/130.ccls. and (multiuser)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:38
S176	13	375/130.ccls. and (multiuser and PN)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:40
S177	355	375/299.ccls.	US-PGPUB; USPAT	OR	ON	2007/03/26 10:40
S178	167	375/299.ccls. and user	US-PGPUB; USPAT	OR	ON	2007/03/26 10:40
S179	10	375/299.ccls. and (user same PN)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:53
S180	708	"375"/$.ccls. and (multi adj user) and CDMA	US-PGPUB; USPAT	OR	ON	2007/03/26 10:54
S181	294	"375"/$.ccls. and (multi adj user) and CDMA and diversity	US-PGPUB; USPAT	OR	ON	2007/03/26 10:54
S182	19	"375"/$.ccls. and ((multi adj user) same CDMA same diversity)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:59
S183	14	"455"/$.ccls. and ((multi adj user) same CDMA same diversity)	US-PGPUB; USPAT	OR	ON	2007/03/26 11:03
S184	134	"375"/267.ccls. and ((user) same CDMA)	US-PGPUB; USPAT	OR	ON	2007/03/26 11:18
S185	0	"375"/267.ccls. and (variable near3 rate) same (number adj antenna)	US-PGPUB; USPAT	OR	ON	2007/03/26 11:19
S186	9	"375"/267.ccls. and (variable near3 rate) and (number adj antenna)	US-PGPUB; USPAT	OR	ON	2007/03/26 11:19
S187	7	"375"/$.ccls. and (variable near3 rate) and (number adj antenna) and (variable adj coding adj rate)	US-PGPUB; USPAT	OR	ON	2007/03/26 11:34
S188	1	"6349216".pn.	US-PGPUB; USPAT	OR	ON	2007/03/26 11:35

S189	53	("4041395" | "4147985" | "4165493" | "4348644" | "4356458" | "4370622" | "4442407" | "4546313" | "4647871" | "4827219" | "4890062" | "4924191" | "4985686" | "4990866" | "4994757" | "5060294" | "5101172" | "5113414" | "5119040" | "5170496" | "5195045" | "5220276" | "5251330" | "5251331" | "5276912" | "5278997" | "5300894" | "5302914" | "5329244" | "5339041" | "5351016" | "5361403" | "5408691" | "5420536" | "5428828" | "5483680" | "5553318" | "5564086" | "5589796" | "5598127" | "5640691" | "5673001" | "5694433" | "5742201" | "5880633" | "5901346" | "5905407" | "5907797" | "6020787" | "6069525" | "6141541" | "6160449" | "6166598").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 13:31
S190	1	"6947491".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 14:03
S191	188	(code adj rate) and (increas$5 with antenna)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 14:04
S192	6	(code adj rate) same (increas$5 with antenna)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:23
S193	243	375/267.ccls. and (close loop adj power adj control)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:23
S194	1986913	375/267.ccls. and multiuser (close loop adj power adj control)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:24
S195	7	375/267.ccls. and multiuser and (close loop adj power adj control)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:24

S196	0	375/267.ccls. and multiuser and (close$2 adj loop adj power adj control)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:25
S197	1	"6115406".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:25
S198	6	("4901307" | "5652764" | "5886987" | "5952968" | "5982327" | "5991332").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:31
S199	13	("4835790" | "5267262" | "5347535" | "5412686" | "5485486" | "5548835" | "5559789" | "5574983" | "5581547" | "5590409" | "5598404" | "5604766" | "5646937").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:45
S200	26	("5886987").URPN.	USPAT	OR	OFF	2007/03/26 15:47
S201	13	("4835790" | "5267262" | "5347535" | "5412686" | "5485486" | "5548835" | "5559789" | "5574983" | "5581547" | "5590409" | "5598404" | "5604766" | "5646937").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:57
S202	5	"375"/267.CCLS. and (MIMO and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:06
S203	7	"375"/260.CCLS. and (MIMO and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:07
S204	30	"375"/$.CCLS. and (MIMO and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:08
S205	18	"370"/$.CCLS. and (MIMO and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:09
S206	7	"455"/$.CCLS. and (MIMO and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:09
S207	10	"455"/$.CCLS. and (OFDM and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:12
S208	39	"370"/$.CCLS. and (OFDM and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:10
S209	39	"375"/$.CCLS. and (OFDM and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 08:04
S210	1	"6115427".pn.	US-PGPUB; USPAT	OR	ON	2007/03/27 08:05
S211	81	(code adj rate) same (number near antenna)	US-PGPUB; USPAT	OR	ON	2007/03/27 08:20

S212	1	"6560295".pn.	US-PGPUB; USPAT	OR	ON	2007/03/27 08:52
S213	387	(space adj time) same CDMA	US-PGPUB; USPAT	OR	ON	2007/03/27 08:53
S214	68	375/267.ccls. and ((space adj time) same CDMA)	US-PGPUB; USPAT	OR	ON	2007/03/27 09:15
S215	2	375/267.ccls. and (compar$8 with uplink with downlink)	US-PGPUB; USPAT	OR	ON	2007/03/27 09:16
S216	1	375/222.ccls. and (compar$8 with uplink with downlink)	US-PGPUB; USPAT	OR	ON	2007/03/27 09:21
S217	0	375/222.ccls. and ((compar$8 with uplink with downlink) same interference)	US-PGPUB; USPAT	OR	ON	2007/03/27 09:21
S218	9	"375"/$.ccls. and ((compar$8 with uplink with downlink) same interference)	US-PGPUB; USPAT	OR	ON	2007/03/27 09:22
S219	0	"375"/222.ccls. and (diagnostic adj bit)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 11:54
S220	0	"375"/222.ccls. and (diagnostic adj tone)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 11:54
S221	0	"370"/$.ccls. and (diagnostic adj tone)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 13:14
S222	19	"370"/$.ccls. and (diagnostic with tone)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 13:17
S223	0	375/222.ccls. and (diagnostic adj tone)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:19
S224	0	375/222.ccls. and (diagnostic with tone)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:19
S225	22	375/222.ccls. and (diagnostic with bit)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:26
S226	8	("5889856" | "6137839" | "6263016" | "6374288" | "6400759" | "6442195" | "6477595" | "6594306").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 13:22
S227	0	375/222.ccls. and (diagnostic with DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:43
S228	0	"375"/$.ccls. and (diagnostic with DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:26
S229	0	"370"/$.ccls. and (diagnostic with DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:26
S230	0	"370"/$.ccls. and (diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:27

S231	1	"375"/$.ccls. and (diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:39
S232	113	"375"/$.ccls. and (diagnostic same message)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:39
S233	4	"375"/$.ccls. and (diagnostic same message) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:41
S234	6	"370"/$.ccls. and (diagnostic same message) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:42
S235	0	"370"/$.ccls. and (diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:42
S236	1	"375"/$.ccls. and (diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:45
S237	15	(diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:43
S238	1	375/222.ccls. and (diagnostic adj message)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:43
S239	0	375/260.ccls. and (diagnostic adj message) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:44
S240	0	375/260.ccls. and (diagnostic adj message)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:44
S241	21	375/260.ccls. and (diagnostic)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:44
S242	5	375/260.ccls. and (diagnostic) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:45
S243	5	375/260.ccls. and (diagnostic) and OFDM	US-PGPUB; USPAT	OR	ON	2007/03/27 13:45
S244	1	"379"/$.ccls. and (diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:45
S245	5	"379"/$.ccls. and (diagnostic same bins)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:46
S246	3	"375"/$.ccls. and (diagnostic same bins)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:46
S247	12	"370"/$.ccls. and (diagnostic same bins)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:47
S248	3	"370"/$.ccls. and (bit with diagnostic) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:48
S249	7	"375"/$.ccls. and (bit with diagnostic) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:50
S250	0	"702"/$.ccls. and (bit with diagnostic) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:50

S251	0	"370"/249.ccls. and (bit with diagnostic) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:52
S252	0	"370"/249.ccls. and (diagnostic) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:52
S253	65	"370"/249.ccls. and (diagnostic)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:52
S254	1	"370"/249.ccls. and (diagnostic adj message)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:52
S255	1	"370"/249.ccls. and (initiat$5 near2 diagnostic)	US-PGPUB; USPAT	OR	ON	2007/03/27 14:37
S256	0	dianostic same (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/27 14:37
S257	0	diagnostic same (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/27 14:37
S258	0	"375"/$.ccls. and (diagnostic same (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2007/03/27 14:37
S259	9	"375"/$.ccls. and (diagnostic and (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2007/03/27 14:57
S260	1	"375"/$.ccls. and (diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 14:58
S261	19	"375"/$.ccls. and (bit near2 diagnostic)	US-PGPUB; USPAT	OR	ON	2007/03/27 15:00
S262	1	"375"/$.ccls. and (map $5 with (bit near2 diagnostic))	US-PGPUB; USPAT	OR	ON	2007/03/27 15:00
S263	12	("4566100" | "5128619" | "5608643" | "5864602" | "5964891" | "6075821" | "6188717" | "6219378" | "6404774" | "6411678" | "6449307" | "6512789").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 15:07
S264	0	map$7 with diagnostic with DMT	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 15:08
S265	0	map$7 with diagnostic with DMT	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:09
S266	0	map$7 with (diagnostic adj bit) with DMT	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:09
S267	1	375/260.ccls. and DMT and diagnostic	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:13

S268	13	375/222.ccls. and DMT and diagnostic	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:10
S269	0	375/260.ccls. and (diagnostic adj bit)	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:13
S270	1	"375"/$.ccls. and (diagnostic adj bit)	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:13
S271	1	"379"/$.ccls. and (diagnostic adj bit)	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:14
S272	69	(diagnostic adj bit)	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:15
S273	0	(diagnostic adj bit) and DMT	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:14
S274	0	(diagnostic adj bit) and multicarrier	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:14
S275	0	(diagnostic adj meassage) and (DMT adj symbol)	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:16
S276	1	(diagnostic adj message) and (DMT adj symbol)	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 16:15
S277	4	10/127164	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 16:15
S278	44	("20020006169" | "20020191709" | "20030067995" | "3898566" | "4878232" | "5163181" | "5228055" | "5249201" | "5490172" | "5493587" | "5579342" | "5608760" | "5621762" | "5636247" | "5638404" | "5651028" | "5727026" | "5751705" | "5805640" | "5822360" | "5930678" | "5991262" | "6009090" | "6032029" | "6041081" | "6125103" | "6128351" | "6130918" | "6175551" | "6222873" | "6229995" | "6236864" | "6240141" |	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 16:19

		"6246725" | "6294956" | "6356606" | "6449302" | "6504862" | "6687511" | "6701163" | "6931053" | "6931079" | "6931239" | "6931240").PN.				
S279	1	"5930678".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 16:19
S280	0	(diagnostic adj DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:37
S281	29	(diagnostic adj tone)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:37
S282	0	"375"/$.ccls. and (diagnostic adj tone)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:37
S283	0	"375"/$.ccls. and (diagnostic near tone)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:37
S284	7	"375"/$.ccls. and (diagnostic near bits)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:38
S285	0	"375"/$.ccls. and (diagnos$6 near DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:38
S286	0	"375"/$.ccls. and (diagnos$6 with DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:38
S287	479	"375"/$.ccls. and (bit with DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:39
S288	207	"375"/$.ccls. and (bit near3 DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:39
S289	13	"375"/$.ccls. and (bit near3 DMT) and diagnost$5	US-PGPUB; USPAT	OR	ON	2007/03/28 07:47
S290	1	"375"/$.ccls. and (DMT same diagnost$5)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:47
S291	40	"375"/$.ccls. and (DMT and diagnost$5)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:49
S292	43	"375"/222.ccls. and (diagnos$5 near3 modem)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:50
S293	10	"375"/222.ccls. and (diagnos$5 near3 modem) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/28 07:56
S294	0	"370"/484.ccls. and (diagnos$5 near3 modem) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/28 07:52
S295	0	"370"/484.ccls. and (diagnos$5) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/28 07:52
S296	1	"370"/484.ccls. and (diagnos$5)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:52

S297	16	"370"/480.ccls. and (diagnos$5)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:52
S298	11	"375"/222.ccls. and (diagnos$5 adj mode)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:08
S299	1	"6658052".pn.	US-PGPUB; USPAT	OR	ON	2007/03/28 08:26
S300	96171	(one adj bit)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:27
S301	5	(one adj bit) with (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:28
S302	197	(bit) with (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:28
S303	27	(bit) with (DMT adj symbol) and (diagnos $7)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:30
S304	0	(bit near test$5) with (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:31
S305	0	(diagnost near tone) and (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:31
S306	0	(diagnos$5 near tone) and (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:31
S307	0	(diagnos$5 near tone) and (DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:31
S308	0	(diagnos$5 near carrier) and (DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:36
S309	5	diagnos$5 with (DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 09:12
S310	106	(Pulse adj width adj modulat$6) same (FSK)	US-PGPUB; USPAT	OR	ON	2007/03/28 10:04
S311	1	"6633545".pn.	US-PGPUB; USPAT	OR	ON	2007/03/28 10:48
S312	1	10/619691	US-PGPUB; USPAT	OR	ON	2007/03/28 10:48
S313	1	"6633545".pn.	US-PGPUB; USPAT	OR	ON	2007/03/29 09:09
S314	1	"6673179".pn.	US-PGPUB; USPAT	OR	ON	2007/03/29 09:09
S315	1	"6073179".pn.	US-PGPUB; USPAT	OR	ON	2007/03/29 09:10
S316	0	"375"/$.ccls. and (diagnos$6 same ((frequency adj domain) with (idle adj channel adj noise)))	US-PGPUB; USPAT	OR	ON	2008/05/27 09:52
S317	0	(diagnos$6 same ((frequency adj domain) with (idle adj channel adj noise)))	US-PGPUB; USPAT	OR	ON	2008/05/27 09:52

S318	0	(diagnos$6 and ((frequency adj domain) with (idle adj channel adj noise)))	US-PGPUB; USPAT	OR	ON	2008/05/27 09:52
S319	0	"10619691".pn.	US-PGPUB; USPAT	OR	ON	2008/05/27 10:03
S320	1	"10/619691"	US-PGPUB; USPAT	OR	ON	2008/05/27 10:03
S321	1	"10619691"	US-PGPUB; USPAT	OR	ON	2008/06/08 23:12
S322	0	"375"/$.ccls. and ((diagnostic adj information) same (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/08 23:32
S323	0	"375"/$.ccls. and ((diagnostic) with (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/08 23:32
S324	0	"379"/$.ccls. and ((diagnostic) with (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/08 23:33
S325	0	"375"/$.ccls. and ((diagnostic) with (DMT))	US-PGPUB; USPAT	OR	ON	2008/06/08 23:33
S326	0	"375"/$.ccls. and ((diagnostic) with (DMT))	US-PGPUB; USPAT; DERWENT; IBM_TDB	OR	ON	2008/06/08 23:33
S327	1	"375"/$.ccls. and ((diagnostic) same (DMT))	US-PGPUB; USPAT; DERWENT; IBM_TDB	OR	ON	2008/06/08 23:33
S328	4	"375"/$.ccls. and ((diagnostic) same (multicarrier))	US-PGPUB; USPAT; DERWENT; IBM_TDB	OR	ON	2008/06/08 23:34
S329	3	"375"/$.ccls. and ((diagnostic adj information) same (multicarrier))	US-PGPUB; USPAT; DERWENT; IBM_TDB	OR	ON	2008/06/08 23:34
S330	26	"375"/222.ccls. and ((diagnostic adj information))	US-PGPUB; USPAT; DERWENT; IBM_TDB	OR	ON	2008/06/08 23:35
S331	2	09/925509	US-PGPUB; USPAT	OR	ON	2008/06/09 07:54
S332	12	09/755173	US-PGPUB; USPAT	OR	ON	2008/06/09 07:55
S333	142	idle adj channel adj noise	US-PGPUB; USPAT	OR	ON	2008/06/09 08:08

S334	3	S333 and DMT	US-PGPUB; USPAT	OR	ON	2008/06/09 08:09
S335	2	S333 same (diagnostic)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:11
S336	256150	S333 ande (diagnostic)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:14
S337	20	S333 and (diagnostic)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:14
S338	32	(diagnostic adj symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:21
S339	0	"375"/$.ccls and (diagnostic adj symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:22
S340	0	"370"/$.ccls and (diagnostic adj symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:22
S341	0	"370"/$.ccls with (diagnostic adj symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:22
S342	0	"375"/$.ccls with (diagnostic adj symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:22
S343	0	"375"/$.ccls with (diagnostic same symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:22
S344	0	"370"/$.ccls with (test adj symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:23
S345	0	"370"/$.ccls with (test with symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:23
S346	0	"375"/$.ccls with (test with symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:23
S347	0	"370"/$.ccls with (testing with symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:24
S348	5	(test$6 with (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/09 08:24
S349	0	(diagnos$6 with (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/09 08:25
S350	0	(diagnos$6 same (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/09 08:26
S351	646	(map$7same (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/09 08:26
S352	0	((diagnostic) with (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/09 08:27
S353	0	((diagnostic) same (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/09 08:27
S354	9421	transmit$7 with diagnostic	US-PGPUB; USPAT	OR	ON	2008/06/09 09:42
S355	185	"375"/$.ccls. and (transmit$7 with diagnostic)	US-PGPUB; USPAT	OR	ON	2008/06/09 09:42

S356	79	"375"/$.ccls. and (transmit$7 near3 diagnostic)	US-PGPUB; USPAT	OR	ON	2008/06/09 09:42
S357	11	"375"/222.ccls. and (diagnostic adj mode)	US-PGPUB; USPAT	OR	ON	2008/10/06 09:00
S358	4	"375"/222.ccls. and (idle adj channel adj noise)	US-PGPUB; USPAT	OR	ON	2008/10/06 09:15
S359	1	"6658052".pn.	US-PGPUB; USPAT	OR	ON	2008/10/06 09:17
S360	13	"375"/$.ccls. and modem and (idle adj channel adj noise)	US-PGPUB; USPAT	OR	ON	2008/10/06 09:20
S361	749	(diagnostic with tone)	US-PGPUB; USPAT	OR	ON	2008/10/10 11:04
S362	0	375/222.ccls. and (diagnostic with tone)	US-PGPUB; USPAT	OR	ON	2008/10/10 11:04
S363	0	375/222.ccls. and (diagnostic adj bits)	US-PGPUB; USPAT	OR	ON	2008/10/10 11:04
S364	26	375/222.ccls. and (diagnostic with bits)	US-PGPUB; USPAT	OR	ON	2008/10/10 11:04
S365	0	375/222.ccls. and (diagnostic with DMT)	US-PGPUB; USPAT	OR	ON	2008/10/10 11:07
S366	0	375/222.ccls. and (diagnostic with tone)	US-PGPUB; USPAT	OR	ON	2008/10/10 11:07
S367	10	"375"/$.ccls. and (diagnostic with tone)	US-PGPUB; USPAT	OR	ON	2008/10/10 11:07
S368	6	(diagnostic with DMT)	US-PGPUB; USPAT	OR	ON	2008/10/10 11:08
S369	6	375/222.ccls. and (diagnostic adj information) and DMT	US-PGPUB; USPAT	OR	ON	2008/10/10 11:09
S370	2	"20020031167"	US-PGPUB; USPAT	OR	ON	2008/10/10 14:18
S371	2	"20010047424"	US-PGPUB; USPAT	OR	ON	2008/10/10 14:21
S372	1	"6697969".pn.	US-PGPUB; USPAT	OR	ON	2008/10/10 14:50
S373	1	"6510162".pn.	US-PGPUB; USPAT	OR	ON	2008/10/10 15:10
S374	1	(upgrad$7 adj firmware) with (cable adj modem)	US-PGPUB; USPAT	OR	ON	2008/10/10 15:26
S375	1	(upgrad$7 adj firmware) same (cable adj modem)	US-PGPUB; USPAT	OR	ON	2008/10/10 15:27
S376	0	(upgrad$7 adj firmware) same (CMTS and TFTP)	US-PGPUB; USPAT	OR	ON	2008/10/10 15:27

S377	1	(upgrad$7 adj firmware) and (CMTS and TFTP)	US-PGPUB; USPAT	OR	ON	2008/10/10 15:27
S378	932	(upgrad$7 adj firmware)	US-PGPUB; USPAT	OR	ON	2008/10/10 15:27
S379	29	(upgrad$7 adj firmware) same modem	US-PGPUB; USPAT	OR	ON	2008/10/10 15:28
S380	1	CMTS and ((upgrad$7 adj firmware) same modem)	US-PGPUB; USPAT	OR	ON	2008/10/10 15:29
S381	1	CMTS same (upgrad$7 adj firmware)	US-PGPUB; USPAT	OR	ON	2008/10/10 15:43
S382	282	CMTS same (digital adj subscriber adj line)	US-PGPUB; USPAT	OR	ON	2008/10/10 15:49
S383	186	CMTS with (digital adj subscriber adj line)	US-PGPUB; USPAT	OR	ON	2008/10/10 15:49

10/13/2008 10:30:46 AM
C:\Documents and Settings\ktran5\My Documents\EAST\workspaces\10619691.wsp

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	10619691	KRINSKY ET AL.
	Examiner	Art Unit
	KHANH C TRAN	2611

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	06/09/2008	10/13/2008							
	1	-	-							
	2	-	-							
	3	-	-							
	4	-	-							
	5	-	-							
	6	-	-							
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	34	-	-							
	35	-	-							
	36	-	-							

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	10619691	KRINSKY ET AL.
	Examiner	Art Unit
	KHANH C TRAN	2611

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	06/09/2008	10/13/2008							
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Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	10619691	KRINSKY ET AL.
	Examiner	Art Unit
	KHANH C TRAN	2611

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	06/09/2008	10/13/2008							
	73	=	✓							
	74	=	✓							
	75	=	✓							
	76	=	✓							
	77	=	✓							
	78	=	✓							
	79	=	✓							
	80	=	✓							
	81	=	✓							
	82	=	✓							
	83	=	✓							
	84	✓	-							
	85	=	✓							

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	10619691	KRINSKY ET AL.
	Examiner	Art Unit
	KHANH C TRAN	2611

SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES		
Search Notes	Date	Examiner
Update EAST & NPL Searches	6/8/2008	KCT
Update EAST Searches	10/13/2008	KCT
Double Patenting Searches		

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

	/KHANH C TRAN/ Primary Examiner.Art Unit 2611

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No.:	10/619,691	Confirmation No.:	7134
Applicant:	KRINSKY et al.	TC/A.U.	2611
Filed:	7-16-2003	Examiner:	TRAN
Docket No.:	5550-2-CON2		
For:	SYSTEMS AND METHODS FOR ESTABLISHING A DIAGNOSTIC TRANSMISSION MODE AND COMMUNICATING OVER THE SAME		

AMENDMENT AND RESPONSE

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicants submit this Amendment and Response to address the Office Action having a mailing date of June 13, 2008. Please credit any overpayment or charge any underpayment to Deposit Account No. 19-1970.

Please amend the above-identified patent application as follows:

Amendments to the Claims are shown in the listing of claims which begins on page 2 of this paper.

Remarks begin on page 11 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. – 43. (Cancelled)

44. (Previously Presented) In a multicarrier modulation transceiver, a method of communicating diagnostic information over a communication channel using multicarrier modulation comprising:

transmitting or receiving an initiate diagnostic mode message; and

transmitting a diagnostic message using multicarrier modulation, wherein the diagnostic message comprises the diagnostic information about the communication channel and each bit in the diagnostic message is mapped to at least one DMT symbol, and wherein the diagnostic information about the communication channel is frequency domain received idle channel noise information.

45. (Previously Presented) A diagnostic system capable of communicating diagnostic information over a communication channel using multicarrier modulation comprising:

a transceiver capable of transmitting or receiving an initiate diagnostic mode message; and

a message determination module capable of determining and, in cooperation with the transceiver, transmitting a diagnostic message, wherein the diagnostic message comprises the diagnostic information about the communication channel and each bit in the diagnostic message is mapped to at least one DMT signal, and wherein the diagnostic information about the communication channel is frequency domain received idle channel noise information.

46. (Previously Presented) A multicarrier communication transceiver capable of communicating diagnostic information over a communication channel using multicarrier modulation comprising:

means for transmitting or receiving an initiate diagnostic mode message; and

means for transmitting a diagnostic message using multicarrier modulation, wherein the diagnostic message comprises the diagnostic information about the communication channel and each bit in the diagnostic message is mapped to at least one DMT symbol, and wherein the diagnostic information about the communication channel is frequency domain received idle channel noise information.

47. (Previously Presented) In a multicarrier communication transceiver, a protocol for communicating diagnostic information over a communication channel using multicarrier modulation comprising:

transmitting or receiving an initiate diagnostic mode message; and

transmitting a diagnostic message using multicarrier modulation, wherein the diagnostic message comprises the diagnostic information about the communication channel and each bit in the diagnostic message is mapped to at least one DMT symbol, and wherein the diagnostic information about the communication channel is frequency domain received idle channel noise information.

48. (Previously Presented) An information storage media comprising instructions that when executed communicate diagnostic information over a communication channel using multicarrier modulation comprising:

instructions that when executed direct a transceiver to receive or transmit an initiate diagnostic mode message; and

instructions that when executed transmit a diagnostic message using multicarrier modulation, wherein the diagnostic message comprises the diagnostic information about the communication channel and each bit in the diagnostic message is mapped to at least one DMT symbol, and wherein the diagnostic information about the communication channel is frequency domain received idle channel noise information.

49. (Previously Presented) In a multicarrier modulation transceiver, a method of communicating diagnostic information over a communication channel using multicarrier modulation comprising:

transmitting or receiving an initiate diagnostic mode message; and

transmitting a diagnostic message using multicarrier modulation with DMT symbols that are mapped to one bit of the diagnostic message, wherein the diagnostic message comprises the diagnostic information about the communication

channel, and wherein the diagnostic information about the communication channel is frequency domain received idle channel noise information.

50. (Previously Presented) A diagnostic system capable of communicating diagnostic information over a communication channel using multicarrier modulation comprising:

a transceiver capable of transmitting or receiving an initiate diagnostic mode message; and

a message determination module capable of determining and, in cooperation with the transceiver, transmitting a diagnostic message using multicarrier modulation with DMT symbols that are mapped to one bit of the diagnostic message, wherein the diagnostic message comprises the diagnostic information about the communication channel, and wherein the diagnostic information about the communication channel is frequency domain received idle channel noise information.

51. (Previously Presented) A multicarrier communication transceiver capable of communicating diagnostic information over a communication channel using multicarrier modulation comprising:

means for transmitting or receiving an initiate diagnostic mode message; and

means for transmitting a diagnostic message using multicarrier modulation with DMT symbols that are mapped to one bit of the diagnostic message, wherein the diagnostic message comprises the diagnostic information about the communication channel, and wherein the diagnostic information about the communication channel is frequency domain received idle channel noise information.

52. (Previously Presented) In a multicarrier communication transceiver, a protocol for communicating diagnostic information over a communication channel using multicarrier modulation comprising:

transmitting or receiving an initiate diagnostic mode message; and

transmitting a diagnostic message using multicarrier modulation with DMT symbols that are mapped to one bit of the diagnostic message, wherein the diagnostic message comprises the diagnostic information about the communication

channel, and wherein the diagnostic information about the communication channel is frequency domain received idle channel noise information.

53. (Previously Presented) An information storage media comprising instructions that when executed communicate diagnostic information over a communication channel using multicarrier modulation comprising:

instructions that when executed direct a transceiver to receive or transmit an initiate diagnostic mode message; and

instructions that when executed transmit a diagnostic message using multicarrier modulation with DMT symbols that are mapped to one bit of the diagnostic message, wherein the diagnostic message comprises the diagnostic information about the communication channel, and wherein the diagnostic information about the communication channel is frequency domain received idle channel noise information.

54. (Previously Presented) The method of claim 44, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

55. (Previously Presented) The system of claim 45, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

56. (Previously Presented) The transceiver of claim 46, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

57. (Previously Presented) The protocol of claim 47, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady

state transmission mode, a forward error correction error, a user request and a CO technician request.

58. (Previously Presented) The media of claim 48, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

59. (Previously Presented) The method of claim 49, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

60. (Previously Presented) The system of claim 50, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

61. (Previously Presented) The transceiver of claim 51, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

62. (Previously Presented) The protocol of claim 52, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

63. (Previously Presented) The media of claim 53, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady

state transmission mode, a forward error correction error, a user request and a CO technician request.

64. (Previously Presented) The method of claim 44, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

65. (Previously Presented) The system of claim 45, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

66. (Previously Presented) The transceiver of claim 46, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

67. (Previously Presented) The protocol of claim 47, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

68. (Previously Presented) The media of claim 48, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral

density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

69. (Previously Presented) The method of claim 49, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

70. (Previously Presented) The system of claim 50, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

71. (Previously Presented) The transceiver of claim 51, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

72. (Previously Presented) The protocol of claim 52, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

73. (Previously Presented) The media of claim 53, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral

density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

74. (Previously Presented) The method of claim 44, wherein the transceiver is a central office modem or a remote terminal modem.

75. (Previously Presented) The system of claim 45, wherein the transceiver is a central office modem or a remote terminal modem.

76. (Previously Presented) The transceiver of claim 46, wherein the transceiver is a central office modem or a remote terminal modem.

77. (Previously Presented) The protocol of claim 47, wherein the transceiver is a central office modem or a remote terminal modem.

78. (Previously Presented) The method of claim 49, wherein the transceiver is a central office modem or a remote terminal modem.

79. (Previously Presented) The system of claim 50, wherein the transceiver is a central office modem or a remote terminal modem.

80. (Previously Presented) The transceiver of claim 51, wherein the transceiver is a central office modem or a remote terminal modem.

81. (Previously Presented) The protocol of claim 52, wherein the transceiver is a central office modem or a remote terminal modem.

82. (Previously Presented) In a multicarrier modulation transceiver, a method of communicating diagnostic information over a communication channel using multicarrier modulation comprising:

associating, in a diagnostic message and based on an initiate diagnostic mode message, each bit in the diagnostic message with at least one DMT symbol, wherein the diagnostic information about the communication channel is frequency domain received idle channel noise information.

83. (Previously Presented) In a multicarrier modulation transceiver, a method of communicating diagnostic information over a communication channel using multicarrier modulation comprising:

transmitting, during a diagnostic mode, a diagnostic message using multicarrier modulation, wherein the diagnostic message comprises the diagnostic information about the communication channel and at least one bit in the diagnostic

message is mapped to at least one DMT symbol, wherein the diagnostic information about the communication channel is frequency domain received idle channel noise information.

84. (Canceled)

85. (Previously Presented) Communicating diagnostic information over a communication channel using multicarrier modulation comprising:

communicating a diagnostic message, wherein each bit in the diagnostic message is mapped to at least one DMT symbol, wherein the diagnostic information about the communication channel is frequency domain received idle channel noise information.

REMARKS

Applicants would like to thank Examiner Tran for the indication of allowed subject matter. By this Amendment, and without concession as to the propriety of the outstanding rejection, Claim 84 has been canceled to place the application in condition for allowance.

With all outstanding issues having been addressed, Applicants respectfully submit the application is in condition for allowance. A Notice of Allowance is respectfully requested.

Should the Examiner believe anything further is desirable in order to place the application in even better condition for allowance, the Examiner is encourage to contact Applicants undersigned representative at the telephone number listed below.

Respectfully submitted,

SHERIDAN ROSS P.C.

Date: 1 Sep '08

By: _____

Jason H. Vick
Reg. No. 45,285
1560 Broadway, Suite 1200
Denver, Colorado 80202
Telephone: 303-863-9700

Electronic Acknowledgement Receipt

EFS ID:	3554290
Application Number:	10619691
International Application Number:	
Confirmation Number:	7134
Title of Invention:	Systems and methods for establishing a diagnostic transmission mode and communicating over the same
First Named Inventor/Applicant Name:	David M. Krinsky
Customer Number:	62574
Filer:	Jason Vick/Christine Jacquet
Filer Authorized By:	Jason Vick
Attorney Docket Number:	5550-2-CON2
Receipt Date:	02-JUL-2008
Filing Date:	16-JUL-2003
Time Stamp:	10:02:57
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes) /Message Digest	Multi Part /.zip	Pages (if appl.)
1		AMEND_02_AFTER_RCE.pdf	1005414 e082787f394f33450557141 8c89f7865047de532	yes	11

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment - After Non-Final Rejection	1	1
	Claims	2	10
	Applicant Arguments/Remarks Made in an Amendment	11	11
Warnings:			
Information:			
	Total Files Size (in bytes):	1005414	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number	Filing Date	☐ To be Mailed
10/619,691	07/16/2003	

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY ☐ RATE ($)	SMALL ENTITY ☐ FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT	07/02/2008	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 41	Minus	** 43	= 0	X $ =		OR	X $50=	0
	Independent (37 CFR 1.16(h))	* 13	Minus	***14	= 0	X $ =		OR	X $210=	0
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	0

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =		OR	X $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =		OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:
/BRENDA MURPHY/

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,691	07/16/2003	David M. Krinsky	5550-2-CON2	7134

62574 7590 06/13/2008

Jason H. Vick
Sheridan Ross, PC
Suite # 1200
1560 Broadway
Denver, CO 80202

EXAMINER	
TRAN, KHANH C	
ART UNIT	PAPER NUMBER
2611	

NOTIFICATION DATE	DELIVERY MODE
06/13/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jvick@sheridanross.com

Office Action Summary	Application No.	Applicant(s)	
	10/619,691	KRINSKY ET AL.	
	Examiner	Art Unit	
	KHANH C. TRAN	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 April 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *4485* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *44-83 and 85* is/are allowed.

6)☒ Claim(s) *84* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The RCE filed on 4/29/2008 has been entered. Claims 44-85 are pending in this Office action.

Response to Arguments

2. Applicant's arguments with respect to claims 44-85 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 84 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for "*communicating diagnostic information over a communication channel using multi-carrier modulation*", does not reasonably provide enablement for means for "*means for performing communicating diagnostic information over a communication channel using multi-carrier modulation*". The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

Claimed subject matter "***means for***" is directed to single means claim. The "means for" does not recite any structure or elements for communication diagnostic information claimed.

A single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph. In re Hyatt, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983) (A single means claim which covered every conceivable means for achieving the stated purpose was held nonenabling for the scope of the claim because the specification disclosed at most only those means known to the inventor.). When claims depend on a recited property, a fact situation comparable to Hyatt is possible, where the claim covers every conceivable structure (means) for achieving the stated property (result) while the specification discloses at most only those known to the inventor. See MPEP Section 2164.08(a) Single Means Claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 84 is rejected under 35 U.S.C. 102(b) as being anticipating by Rosbury et al. U.S. Patent 4,385,384.

Regarding claim 84, in column 27 line 59 via column 28 line 10, Rosbury et al. teaches a diagnostic apparatus for data communication system including a plurality of data modems, the diagnostic apparatus further includes means for transmitting diagnostic message. Since the pending claim does not recite any element structurally different, the pending claim rendered anticipated by Rosbury et al. teachings.

Allowable Subject Matter

5. Claims 44-83 and 85 allowed.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHANH C. TRAN whose telephone number is (571)272-3007. The examiner can normally be reached on Monday - Friday from 08:00 AM - 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on 571-272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KCT

/KHANH C. TRAN/
Primary Examiner, Art Unit 2611

Notice of References Cited	Application/Control No. 10/619,691	Applicant(s)/Patent Under Reexamination KRINSKY ET AL.	
	Examiner KHANH C. TRAN	Art Unit 2611	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-4,385,384	05-1983	Rosbury et al.	714/717
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	10619691	KRINSKY ET AL.
	Examiner	Art Unit
	KHANH C TRAN	2611

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	06/09/2008								
	1	-								
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	36	-								

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	10619691	KRINSKY ET AL.
	Examiner	Art Unit
	KHANH C TRAN	2611

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	06/09/2008								
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	38	-								
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	43	-								
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Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	10619691	KRINSKY ET AL.
	Examiner	Art Unit
	KHANH C TRAN	2611

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
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	74	=								
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	76	=								
	77	=								
	78	=								
	79	=								
	80	=								
	81	=								
	82	=								
	83	=								
	84	✓								
	85	=								

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	10619691	KRINSKY ET AL.
	Examiner	Art Unit
	KHANH C TRAN	2611

SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES		
Search Notes	Date	Examiner
Update EAST & NPL Searches	6/8/2008	KCT

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

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BIB DATA SHEET

CONFIRMATION NO. 7134

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
10/619,691	07/16/2003	375	2611	5550-2-CON2

APPLICANTS

David M. Krinsky, Acton, MA;
Robert Edmund Pizzano JR., Stoneham, MA;

**** CONTINUING DATA **************************

This application is a DIV of 09/755,173 01/08/2001 PAT 6,658,052 YES
which claims benefit of 60/224,308 08/10/2000 YES
and claims benefit of 60/174,865 01/07/2000 YES
KCT

**** FOREIGN APPLICATIONS ************************** NO
KCT

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ****

07/07/2004

Foreign Priority claimed ☐ Yes ☑ No 35 USC 119(a-d) conditions met ☐ Yes ☐ No Verified and Acknowledged /KHANH C TRAN/ Examiner's Signature	☐ Met after Allowance KCT Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
		MA	2	43	9

ADDRESS

Jason H. Vick
Sheridan Ross, PC
Suite # 1200
1560 Broadway
Denver, CO 80202
UNITED STATES

TITLE

Systems and methods for establishing a diagnostic transmission mode and communicating over the same

FILING FEE RECEIVED		
2668	FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

BIB (Rev. 05/07).

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	9421	transmit$7 with diagnostic	US-PGPUB; USPAT	OR	ON	2008/06/09 09:42
L2	185	"375"/$.ccls. and (transmit$7 with diagnostic)	US-PGPUB; USPAT	OR	ON	2008/06/09 09:42
L3	79	"375"/$.ccls. and (transmit$7 near3 diagnostic)	US-PGPUB; USPAT	OR	ON	2008/06/09 09:42
S1	674	"375"/$.CCLS. and (channel adj cod$5) and diversity	US-PGPUB; USPAT	OR	ON	2005/09/09 09:15
S2	230	"375"/$.CCLS. and ((channel adj cod$5) same diversity)	US-PGPUB; USPAT	OR	ON	2007/03/27 07:06
S3	1	"6247158".pn.	US-PGPUB; USPAT	OR	ON	2005/09/08 16:58
S4	7	("4577317" | "5283780" | "5907582" | "5909439" | "5970085" | "6023492" | "6049566").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/08 17:00
S5	1	"6178196".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/08 17:00
S6	1	"6389063".PN.	US-PGPUB; USPAT	OR	ON	2005/09/09 09:16
S7	1	"6603807".PN.	US-PGPUB; USPAT	OR	ON	2005/09/09 09:16
S8	1	"6359926".PN.	US-PGPUB; USPAT	OR	ON	2005/09/09 09:16
S9	15	"375"/260.CCLS. and ((channel adj cod$5) same diversity)	US-PGPUB; USPAT	OR	ON	2005/09/15 15:55
S10	1	"6178196".pn.	US-PGPUB; USPAT	OR	ON	2005/09/15 16:00
S11	1	"6693982".pn.	US-PGPUB; USPAT	OR	ON	2005/09/15 16:41
S12	0	cross adj correlated adj base adj band	US-PGPUB; USPAT	OR	ON	2006/02/24 11:01
S13	762	(cross adj correlated) near2 signal	US-PGPUB; USPAT	OR	ON	2005/09/15 16:42
S14	589	(cross adj correlated) near signal	US-PGPUB; USPAT	OR	ON	2005/09/15 16:42
S15	43	S14 with transmit$5	US-PGPUB; USPAT	OR	ON	2005/09/15 16:50

S16	362	transmitter same diversity same delay	US-PGPUB; USPAT	OR	ON	2005/09/15 16:51
S17	3	transmitter same diversity same (delay adj path)	US-PGPUB; USPAT	OR	ON	2005/09/15 16:51
S18	1196	diversity with delay	US-PGPUB; USPAT	OR	ON	2005/09/15 17:03
S19	139	diversity same (multi adj user)	US-PGPUB; USPAT	OR	ON	2005/09/15 17:04
S20	15	diversity same (plurality adj user) same transmitter	US-PGPUB; USPAT	OR	ON	2005/09/15 17:12
S21	24	diversity same (plurality adj user) same transmission	US-PGPUB; USPAT	OR	ON	2005/09/15 17:06
S22	0	diversity same (plurality adj user) same (different adj PN)	US-PGPUB; USPAT	OR	ON	2005/09/15 17:11
S23	18	diversity same (plurality adj user) same (PN adi code)	US-PGPUB; USPAT	OR	ON	2005/09/15 17:12
S24	0	diversity same (plurality adj user) same (PN adj code)	US-PGPUB; USPAT	OR	ON	2005/09/15 17:12
S25	34	(plurality adj antenna) same (plurality adj user)	US-PGPUB; USPAT	OR	ON	2005/09/15 17:16
S26	17	(plurality adj antenna) same (plurality adj user) same transmi$5	US-PGPUB; USPAT	OR	ON	2005/09/15 17:17
S27	0	(plurality adj antenna) same (distinct adj signal)	US-PGPUB; USPAT	OR	ON	2005/09/15 17:18
S28	3	(plurality adj antenna) same (different adj spread adj code)	US-PGPUB; USPAT	OR	ON	2005/09/15 17:18
S29	12	(diversity) same (different adj spread adj code)	US-PGPUB; USPAT	OR	ON	2005/09/15 17:19
S30	0	multiusers same (channel adj coder) same (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 14:54
S31	3	data same (channel adj coder) same (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 14:54
S32	1	MIMO same (channel adj coder) same (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:03

S33	3	(MIMO same (channel adj coder)) and (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 14:56
S34	86	multi adj user adj data	US-PGPUB; USPAT	OR	ON	2005/09/16 14:58
S35	2	S34 and mimo	US-PGPUB; USPAT	OR	ON	2005/09/16 14:56
S36	10	S34 and diversity	US-PGPUB; USPAT	OR	ON	2005/09/16 14:57
S37	0	S34 and (seial adj parallel)	US-PGPUB; USPAT	OR	ON	2005/09/16 14:58
S38	0	S34 and (serial adj parallel)	US-PGPUB; USPAT	OR	ON	2005/09/16 14:58
S39	194399	data same channel coder same (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 14:59
S40	3	data same (channel adj coder) same (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 14:59
S41	8	data same (coder) same (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:00
S42	31	data and (channel adj coder) and (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:01
S43	3	(channel adj coder) same MIMO	US-PGPUB; USPAT	OR	ON	2005/09/16 15:02
S44	5	(channel adj coder) same (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:03
S45	66	(encoder) same (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:16
S46	5	"6285720"	US-PGPUB; USPAT	OR	ON	2005/09/16 15:06
S47	13	"375"/$.ccls. and (multi adj user adj data)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:19
S48	48	"375"/$.ccls. and ((multi adj user) same TDMA)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:20
S49	9	"375"/$.ccls. and ((multi adj user) same FDD)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:21
S50	10	"370"/$.ccls. and ((multi adj user) same FDD)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:22
S51	1	"370"/$.ccls. and ((channel adj encoder) same FDD)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:24

S52	0	"370"/$.ccls. and ((channel adj coder) same FDD)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:24
S53	1	((channel adj coder) same FDD)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:24
S54	0	((channel adj coder) same (multi adj user))	US-PGPUB; USPAT	OR	ON	2005/09/16 15:24
S55	1	((channel adj encoder) same (multi adj user))	US-PGPUB; USPAT	OR	ON	2005/09/16 15:26
S56	16	((spatial adj diversity) same (multi adj user))	US-PGPUB; USPAT	OR	ON	2005/09/16 15:27
S57	99	((spatial adj diversity) and (multi adj user))	US-PGPUB; USPAT	OR	ON	2005/09/16 15:36
S58	3	"6359864"	US-PGPUB; USPAT	OR	ON	2005/09/16 15:31
S59	106	((FDD and CDMA) and (multi adj user))	US-PGPUB; USPAT	OR	ON	2005/09/16 15:31
S60	11	((spatial adj diversity) and (channel adj coder))	US-PGPUB; USPAT	OR	ON	2005/09/16 15:36
S61	5	("5321725" | "5784417" | "6031474" | "6088408" | "6473878").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:48
S62	38154	data adj source	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:48
S63	19	S62 with (multi adj user)	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:53
S64	3	(frequency adj division adj duplex) same (multi adj user) same CDMA	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:51
S65	5	("5559723" | "5905946" | "5933457" | "6161209" | "6615024").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:52
S66	0	(multi adj user adj source)	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:53
S67	25	((multi adj user) near2 source)	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:53
S68	23266	((multi adj user) near2 source) amd MIMO	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:53
S69	0	((multi adj user) near2 source) and MIMO	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:55
S70	1	"6693982".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 16:11
S71	1	"5886967".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 16:11
S72	1	"5886987".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 16:13

S73	6	(information adj source) near2 (different adj source)	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 16:13
S74	323	"375"/$.ccls. and (multiple adj access adj interference)	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 16:14
S75	32	"375"/$.ccls. and (multiple adj access adj interference) and (demultiplex$5)	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 16:16
S76	7	"375"/$.ccls. and (multiple adj access adj interference) and (demultiplex$5) and coder	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 16:14
S77	28	"375"/$.ccls. and (multiple adj channel) and (channel adj coder)	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 16:16
S78	1	"6741658".pn.	US-PGPUB; USPAT	OR	ON	2005/09/18 08:43
S79	1	"6898248".pn.	US-PGPUB; USPAT	OR	ON	2005/09/18 08:44
S80	1	"6359864".pn.	US-PGPUB; USPAT	OR	ON	2006/02/21 10:50
S81	1	"6310923".pn.	US-PGPUB; USPAT	OR	ON	2006/02/21 10:50
S82	3	375/267.ccls. and (transmit near (different adj information))	US-PGPUB; USPAT	OR	ON	2006/02/24 13:52
S83	1	"6693982".pn.	US-PGPUB; USPAT	OR	ON	2006/02/24 15:16
S84	561	mapper with identif$8	US-PGPUB; USPAT	OR	ON	2006/02/24 15:16
S85	71	"375"/$.ccls. and (mapper with identif$8)	US-PGPUB; USPAT	OR	ON	2006/02/24 15:16
S86	1	"6693982".pn.	US-PGPUB; USPAT	OR	ON	2006/02/27 09:36
S87	171	space adj time adj block adj code	US-PGPUB; USPAT	OR	ON	2006/02/27 13:37
S88	25	S87 and (spread adj spectrum)	US-PGPUB; USPAT	OR	ON	2006/02/27 10:11
S89	2	S87 and (spread adj code)	US-PGPUB; USPAT	OR	ON	2006/02/27 09:36
S90	126	(angle adj diversity)	US-PGPUB; USPAT	OR	ON	2006/02/27 10:12
S91	0	S87 and S90	US-PGPUB; USPAT	OR	ON	2006/02/27 10:11

S92	155	space adj time adj diversity	US-PGPUB; USPAT	OR	ON	2006/02/27 10:12
S93	3	S90 and S92	US-PGPUB; USPAT	OR	ON	2006/02/27 10:12
S94	3	(angle adj diversity) same (fading adj channel)	US-PGPUB; USPAT	OR	ON	2006/02/27 10:17
S95	1	(angle adj diversity) same (directed adj antenna adj beam)	US-PGPUB; USPAT	OR	ON	2006/02/27 10:17
S96	1	((plurality adj antenna) same (code adj rate) same adapt$8)	US-PGPUB; USPAT	OR	ON	2006/02/27 10:54
S97	4	((plurality adj antenna) same (code adj rate)) and adapt$8	US-PGPUB; USPAT	OR	ON	2006/02/27 10:55
S98	0	((plurality adj antenna) same (adapt$8 adj code adj rate))	US-PGPUB; USPAT	OR	ON	2006/02/27 10:55
S99	0	((adaptive adj antenna) same (adapt$8 adj code adj rate))	US-PGPUB; USPAT	OR	ON	2006/02/27 10:55
S100	0	((adaptive adj antenna) and (adapt$8 adj code adj rate))	US-PGPUB; USPAT	OR	ON	2006/02/27 15:02
S101	94	((adaptive adj modulation) and (adaptive adj cod$5))	US-PGPUB; USPAT	OR	ON	2006/02/27 13:11
S102	1	"5383219".pn.	US-PGPUB; USPAT	OR	ON	2006/02/27 13:36
S103	50	S87 and (transmit adj power)	US-PGPUB; USPAT	OR	ON	2006/02/27 13:43
S104	1	"6693982".pn.	US-PGPUB; USPAT	OR	ON	2006/02/27 14:05
S105	5828	channel adj estimat$5	US-PGPUB; USPAT	OR	ON	2006/02/27 14:05
S106	1751	channel adj estimator	US-PGPUB; USPAT	OR	ON	2006/02/27 14:06
S107	48	S106 same (channel adj equalizer)	US-PGPUB; USPAT	OR	ON	2006/02/27 14:08
S108	3	S107 and (space adj time)	US-PGPUB; USPAT	OR	ON	2006/02/27 14:08
S109	7	375/267.ccls. and recod $5	US-PGPUB; USPAT	OR	ON	2006/02/27 15:07
S110	3	("5781845" | "6067324" | "6122260").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/02/27 15:06
S111	3	"375"/$.ccls. and recod $5 and (MAI)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:08

S112	1	"375"/$.ccls. and reencod$5 and (MAI)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:10
S113	7	reencod$5 and (MAI)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:08
S114	0	"375"/148.ccls. and reencod$5 and (MAI)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:14
S115	0	"375"/148.ccls. and reencod$5 and (space adj time adj diversity)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:14
S116	0	"375"/$.ccls. and reencod$5 and (space adj time adj diversity)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:14
S117	0	"375"/$.ccls. and reencod$5 and ((space adj time) near2 code)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:15
S118	0	"375"/$.ccls. and reencod$5 and ((space adj time) with code)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:15
S119	7	"375"/$.ccls. and (re adj encod$5) and ((space adj time) with code)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:15
S120	56	375/260.ccls. and Channeliz$6	US-PGPUB; USPAT	OR	ON	2006/08/10 16:58
S121	180	375/267.ccls. and (space adj time adj cod $8)	US-PGPUB; USPAT	OR	ON	2006/08/11 11:15
S122	1	"6366888".pn.	US-PGPUB; USPAT	OR	ON	2006/08/11 11:15
S123	3	375/267.ccls. and (non adj interleav$8)	US-PGPUB; USPAT	OR	ON	2006/08/11 11:17
S124	11	375/260.ccls. and (non adj interleav$8)	US-PGPUB; USPAT	OR	ON	2006/08/11 11:22
S125	0	"375"/$.ccls. and ((inner adj cod$5) same (outer adj cod$6) same(non adj interleav $8))	US-PGPUB; USPAT	OR	ON	2006/08/11 11:24
S126	2	"375"/$.ccls. and ((inner adj cod$5) same (outer adj cod $6)) and(non adj interleav$8)	US-PGPUB; USPAT	OR	ON	2006/08/11 11:24
S127	0	"375"/$.ccls. and ((outer adj cod$6) same (non adj interleav$8))	US-PGPUB; USPAT	OR	ON	2006/08/11 11:25
S128	3	"375"/267.ccls. and ((cod$6) same(non adj interleav$8))	US-PGPUB; USPAT	OR	ON	2006/08/11 11:25

S129	2	"375"/267.ccls. and ((transmit$5) with(non adj interleav$8))	US-PGPUB; USPAT	OR	ON	2006/08/11 11:27
S130	4	"375"/267.ccls. and ((transmit$5) with (without adj interleav $8))	US-PGPUB; USPAT	OR	ON	2006/08/11 11:27
S131	180	"375"/267.ccls. and (space adj time adj cod $6)	US-PGPUB; USPAT	OR	ON	2006/08/11 11:28
S132	1	"6115427".pn.	US-PGPUB; USPAT	OR	ON	2006/08/16 08:06
S133	1	"6693982".pn.	US-PGPUB; USPAT	OR	ON	2006/08/16 08:06
S134	3	09/393235	US-PGPUB; USPAT	OR	ON	2006/08/16 13:47
S135	353	combin$3 with serializ $3	US-PGPUB; USPAT	OR	ON	2006/08/16 13:48
S136	3383513	number of transmitter antennas	US-PGPUB; USPAT	OR	ON	2007/03/20 07:30
S137	1	10/184054	US-PGPUB; USPAT	OR	ON	2007/03/20 09:21
S138	1	10/619691	US-PGPUB; USPAT	OR	ON	2007/03/20 09:37
S139	1	"6636603".pn.	US-PGPUB; USPAT	OR	ON	2007/03/20 09:41
S140	1	"20040202237"	US-PGPUB; USPAT	OR	ON	2007/03/20 15:17
S141	1	09/798727	US-PGPUB; USPAT	OR	ON	2007/03/20 15:17
S142	1	"6745050".pn.	US-PGPUB; USPAT	OR	ON	2007/03/23 08:55
S143	6	("20020097779" | "4794556" | "4941178" | "5668830" | "6480557" | "RE31943").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:55
S144	695	CDMA same (multi adj user)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:55
S145	374	"375"/$.ccls. and (CDMA same (multi adj user))	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:56
S146	287	"375"/$.ccls. and (CDMA with (multi adj user))	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:56
S147	0	"375"/$.ccls. and (CDMA with (multi adj user)) and (interference adj cancel$&)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:57

S148	89	"375"/$.ccls. and (CDMA with (multi adj user)) and (interference adj cancel$5)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:57
S149	8	("4134071" | "4744093" | "5136612" | "5164959" | "5361219" | "5363403" | "5481533" | "5790590").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:58
S150	14	("5956333").URPN.	USPAT	OR	OFF	2007/03/23 09:01
S151	1	09/326222.app.	US-PGPUB; USPAT; DERWENT; IBM_TDB	OR	OFF	2007/03/23 09:01
S152	11	("4124818" | "4992798" | "5418814" | "5467368" | "5566165" | "5596600" | "5724378" | "5956333" | "6032026" | "6088383" | "6229857").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:03
S153	11	"375"/$.ccls. and (multi adj user adj demodul $8)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 11:53
S154	0	"375"/$.ccls. and (multi adj user) and remodult $6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:09
S155	23	"375"/$.ccls. and (multi adj user) and remodulat$6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:05
S156	0	"370"/$.ccls. and (multi adj user) and remodult $6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:09
S157	0	"455"/$.ccls. and (multi adj user) and remodult $6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:10
S158	0	"455"/$.ccls. and (user) and remodult$6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:10
S159	237	"455"/$.ccls. and (user) and remodulat $6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:10
S160	10	"455"/$.ccls. and (multiuser) and remodulat$6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:11
S161	30	(multiuser) and remodulat$6 and CDMA	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:14
S162	873	(multiuser) and CDMA	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:14

S163	523	"375"/$.ccls. and (multiuser) and CDMA	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:14
S164	299	"375"/$.ccls. and ((multiuser) same CDMA)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:14
S165	1	"5956333".pn.	US-PGPUB; USPAT	OR	ON	2007/03/26 09:23
S166	1	"5644592".pn.	US-PGPUB; USPAT	OR	ON	2007/03/26 09:30
S167	1	10/184054	US-PGPUB; USPAT	OR	ON	2007/03/26 10:06
S168	1	"6115427".pn.	US-PGPUB; USPAT	OR	ON	2007/03/26 10:28
S169	49	375/267.ccls. and (multiuser)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:32
S170	6	375/260.ccls. and (multiuser same diversity)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:33
S171	2	375/295.ccls. and (multiuser same diversity)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:34
S172	8	375/130.ccls. and (multiuser same diversity)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:38
S173	1	375/299.ccls. and (multiuser same diversity)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:35
S174	16	375/299.ccls. and (multiuser)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:35
S175	41	375/130.ccls. and (multiuser)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:38
S176	13	375/130.ccls. and (multiuser and PN)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:40
S177	355	375/299.ccls.	US-PGPUB; USPAT	OR	ON	2007/03/26 10:40
S178	167	375/299.ccls. and user	US-PGPUB; USPAT	OR	ON	2007/03/26 10:40
S179	10	375/299.ccls. and (user same PN)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:53
S180	708	"375"/$.ccls. and (multi adj user) and CDMA	US-PGPUB; USPAT	OR	ON	2007/03/26 10:54
S181	294	"375"/$.ccls. and (multi adj user) and CDMA and diversity	US-PGPUB; USPAT	OR	ON	2007/03/26 10:54
S182	19	"375"/$.ccls. and ((multi adj user) same CDMA same diversity)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:59

S183	14	"455"/$.ccls. and ((multi adj user) same CDMA same diversity)	US-PGPUB; USPAT	OR	ON	2007/03/26 11:03
S184	134	"375"/267.ccls. and ((user) same CDMA)	US-PGPUB; USPAT	OR	ON	2007/03/26 11:18
S185	0	"375"/267.ccls. and (variable near3 rate) same (number adj antenna)	US-PGPUB; USPAT	OR	ON	2007/03/26 11:19
S186	9	"375"/267.ccls. and (variable near3 rate) and (number adj antenna)	US-PGPUB; USPAT	OR	ON	2007/03/26 11:19
S187	7	"375"/$.ccls. and (variable near3 rate) and (number adj antenna) and (variable adj coding adj rate)	US-PGPUB; USPAT	OR	ON	2007/03/26 11:34
S188	1	"6349216".pn.	US-PGPUB; USPAT	OR	ON	2007/03/26 11:35
S189	53	("4041395" | "4147985" | "4165493" | "4348644" | "4356458" | "4370622" | "4442407" | "4546313" | "4647871" | "4827219" | "4890062" | "4924191" | "4985686" | "4990866" | "4994757" | "5060294" | "5101172" | "5113414" | "5119040" | "5170496" | "5195045" | "5220276" | "5251330" | "5251331" | "5276912" | "5278997" | "5300894" | "5302914" | "5329244" | "5339041" | "5351016" | "5361403" | "5408691" | "5420536" | "5428828" | "5483680" | "5553318" | "5564086" | "5589796" | "5598127" | "5640691" | "5673001" | "5694433" | "5742201" | "5880633" | "5901346" | "5905407" | "5907797" | "6020787" | "6069525" | "6141541" | "6160449" |	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 13:31

		"6166598").PN.				
S190	1	"6947491".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 14:03
S191	188	(code adj rate) and (increas$5 with antenna)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 14:04
S192	6	(code adj rate) same (increas$5 with antenna)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:23
S193	243	375/267.ccls. and (close loop adj power adj control)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:23
S194	1986913	375/267.ccls. and multiuser (close loop adj power adj control)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:24
S195	7	375/267.ccls. and multiuser and (close loop adj power adj control)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:24
S196	0	375/267.ccls. and multiuser and (close$2 adj loop adj power adj control)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:25
S197	1	"6115406".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:25
S198	6	("4901307" | "5652764" | "5886987" | "5952968" | "5982327" | "5991332").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:31
S199	13	("4835790" | "5267262" | "5347535" | "5412686" | "5485486" | "5548835" | "5559789" | "5574983" | "5581547" | "5590409" | "5598404" | "5604766" | "5646937").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:45
S200	26	("5886987").URPN.	USPAT	OR	OFF	2007/03/26 15:47
S201	13	("4835790" | "5267262" | "5347535" | "5412686" | "5485486" | "5548835" | "5559789" | "5574983" | "5581547" | "5590409" | "5598404" | "5604766" | "5646937").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:57
S202	5	"375"/267.CCLS. and (MIMO and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:06

S203	7	"375"/260.CCLS. and (MIMO and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:07
S204	30	"375"/$.CCLS. and (MIMO and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:08
S205	18	"370"/$.CCLS. and (MIMO and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:09
S206	7	"455"/$.CCLS. and (MIMO and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:09
S207	10	"455"/$.CCLS. and (OFDM and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:12
S208	39	"370"/$.CCLS. and (OFDM and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:10
S209	39	"375"/$.CCLS. and (OFDM and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 08:04
S210	1	"6115427".pn.	US-PGPUB; USPAT	OR	ON	2007/03/27 08:05
S211	81	(code adj rate) same (number near antenna)	US-PGPUB; USPAT	OR	ON	2007/03/27 08:20
S212	1	"6560295".pn.	US-PGPUB; USPAT	OR	ON	2007/03/27 08:52
S213	387	(space adj time) same CDMA	US-PGPUB; USPAT	OR	ON	2007/03/27 08:53
S214	68	375/267.ccls. and ((space adj time) same CDMA)	US-PGPUB; USPAT	OR	ON	2007/03/27 09:15
S215	2	375/267.ccls. and (compar$8 with uplink with downlink)	US-PGPUB; USPAT	OR	ON	2007/03/27 09:16
S216	1	375/222.ccls. and (compar$8 with uplink with downlink)	US-PGPUB; USPAT	OR	ON	2007/03/27 09:21
S217	0	375/222.ccls. and ((compar$8 with uplink with downlink) same interference)	US-PGPUB; USPAT	OR	ON	2007/03/27 09:21
S218	9	"375"/$.ccls. and ((compar$8 with uplink with downlink) same interference)	US-PGPUB; USPAT	OR	ON	2007/03/27 09:22
S219	0	"375"/222.ccls. and (diagnostic adj bit)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 11:54
S220	0	"375"/222.ccls. and (diagnostic adj tone)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 11:54
S221	0	"370"/$.ccls. and (diagnostic adj tone)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 13:14
S222	19	"370"/$.ccls. and (diagnostic with tone)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 13:17
S223	0	375/222.ccls. and (diagnostic adj tone)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:19

S224	0	375/222.ccls. and (diagnostic with tone)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:19
S225	22	375/222.ccls. and (diagnostic with bit)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:26
S226	8	("5889856" | "6137839" | "6263016" | "6374288" | "6400759" | "6442195" | "6477595" | "6594306").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 13:22
S227	0	375/222.ccls. and (diagnostic with DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:43
S228	0	"375"/$.ccls. and (diagnostic with DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:26
S229	0	"370"/$.ccls. and (diagnostic with DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:26
S230	0	"370"/$.ccls. and (diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:27
S231	1	"375"/$.ccls. and (diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:39
S232	113	"375"/$.ccls. and (diagnostic same message)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:39
S233	4	"375"/$.ccls. and (diagnostic same message) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:41
S234	6	"370"/$.ccls. and (diagnostic same message) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:42
S235	0	"370"/$.ccls. and (diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:42
S236	1	"375"/$.ccls. and (diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:45
S237	15	(diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:43
S238	1	375/222.ccls. and (diagnostic adj message)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:43
S239	0	375/260.ccls. and (diagnostic adj message) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:44
S240	0	375/260.ccls. and (diagnostic adj message)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:44
S241	21	375/260.ccls. and (diagnostic)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:44
S242	5	375/260.ccls. and (diagnostic) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:45

S243	5	375/260.ccls. and (diagnostic) and OFDM	US-PGPUB; USPAT	OR	ON	2007/03/27 13:45
S244	1	"379"/$.ccls. and (diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:45
S245	5	"379"/$.ccls. and (diagnostic same bins)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:46
S246	3	"375"/$.ccls. and (diagnostic same bins)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:46
S247	12	"370"/$.ccls. and (diagnostic same bins)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:47
S248	3	"370"/$.ccls. and (bit with diagnostic) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:48
S249	7	"375"/$.ccls. and (bit with diagnostic) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:50
S250	0	"702"/$.ccls. and (bit with diagnostic) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:50
S251	0	"370"/249.ccls. and (bit with diagnostic) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:52
S252	0	"370"/249.ccls. and (diagnostic) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:52
S253	65	"370"/249.ccls. and (diagnostic)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:52
S254	1	"370"/249.ccls. and (diagnostic adj message)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:52
S255	1	"370"/249.ccls. and (initiat$5 near2 diagnostic)	US-PGPUB; USPAT	OR	ON	2007/03/27 14:37
S256	0	dianostic same (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/27 14:37
S257	0	diagnostic same (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/27 14:37
S258	0	"375"/$.ccls. and (diagnostic same (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2007/03/27 14:37
S259	9	"375"/$.ccls. and (diagnostic and (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2007/03/27 14:57
S260	1	"375"/$.ccls. and (diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 14:58
S261	19	"375"/$.ccls. and (bit near2 diagnostic)	US-PGPUB; USPAT	OR	ON	2007/03/27 15:00
S262	1	"375"/$.ccls. and (map $5 with (bit near2 diagnostic))	US-PGPUB; USPAT	OR	ON	2007/03/27 15:00

S263	12	("4566100" | "5128619" | "5608643" | "5864602" | "5964891" | "6075821" | "6188717" | "6219378" | "6404774" | "6411678" | "6449307" | "6512789").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 15:07
S264	0	map$7 with diagnostic with DMT	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 15:08
S265	0	map$7 with diagnostic with DMT	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:09
S266	0	map$7 with (diagnostic adj bit) with DMT	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:09
S267	1	375/260.ccls. and DMT and diagnostic	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:13
S268	13	375/222.ccls. and DMT and diagnostic	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:10
S269	0	375/260.ccls. and (diagnostic adj bit)	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:13
S270	1	"375"/$.ccls. and (diagnostic adj bit)	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:13
S271	1	"379"/$.ccls. and (diagnostic adj bit)	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:14
S272	69	(diagnostic adj bit)	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:15
S273	0	(diagnostic adj bit) and DMT	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:14
S274	0	(diagnostic adj bit) and multicarrier	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:14
S275	0	(diagnostic adj meassage) and (DMT adj symbol)	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:16
S276	1	(diagnostic adj message) and (DMT adj symbol)	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 16:15
S277	4	10/127164	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 16:15

S278	44	("20020006169" | "20020191709" | "20030067995" | "3898566" | "4878232" | "5163181" | "5228055" | "5249201" | "5490172" | "5493587" | "5579342" | "5608760" | "5621762" | "5636247" | "5638404" | "5651028" | "5727026" | "5751705" | "5805640" | "5822360" | "5930678" | "5991262" | "6009090" | "6032029" | "6041081" | "6125103" | "6128351" | "6130918" | "6175551" | "6222873" | "6229995" | "6236864" | "6240141" | "6246725" | "6294956" | "6356606" | "6449302" | "6504862" | "6687511" | "6701163" | "6931053" | "6931079" | "6931239" | "6931240").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 16:19
S279	1	"5930678".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 16:19
S280	0	(diagnostic adj DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:37
S281	29	(diagnostic adj tone)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:37
S282	0	"375"/$.ccls. and (diagnostic adj tone)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:37
S283	0	"375"/$.ccls. and (diagnostic near tone)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:37
S284	7	"375"/$.ccls. and (diagnostic near bits)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:38
S285	0	"375"/$.ccls. and (diagnos$6 near DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:38
S286	0	"375"/$.ccls. and (diagnos$6 with DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:38
S287	479	"375"/$.ccls. and (bit with DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:39
S288	207	"375"/$.ccls. and (bit near3 DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:39

S289	13	"375"/$.ccls. and (bit near3 DMT) and diagnost$5	US-PGPUB; USPAT	OR	ON	2007/03/28 07:47
S290	1	"375"/$.ccls. and (DMT same diagnost$5)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:47
S291	40	"375"/$.ccls. and (DMT and diagnost$5)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:49
S292	43	"375"/222.ccls. and (diagnos$5 near3 modem)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:50
S293	10	"375"/222.ccls. and (diagnos$5 near3 modem) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/28 07:56
S294	0	"370"/484.ccls. and (diagnos$5 near3 modem) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/28 07:52
S295	0	"370"/484.ccls. and (diagnos$5) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/28 07:52
S296	1	"370"/484.ccls. and (diagnos$5)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:52
S297	16	"370"/480.ccls. and (diagnos$5)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:52
S298	11	"375"/222.ccls. and (diagnos$5 adj mode)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:08
S299	1	"6658052".pn.	US-PGPUB; USPAT	OR	ON	2007/03/28 08:26
S300	96171	(one adj bit)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:27
S301	5	(one adj bit) with (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:28
S302	197	(bit) with (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:28
S303	27	(bit) with (DMT adj symbol) and (diagnos $7)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:30
S304	0	(bit near test$5) with (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:31
S305	0	(diagnost near tone) and (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:31
S306	0	(diagnos$5 near tone) and (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:31
S307	0	(diagnos$5 near tone) and (DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:31
S308	0	(diagnos$5 near carrier) and (DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:36
S309	5	diagnos$5 with (DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 09:12

S310	106	(Pulse adj width adj modulat$6) same (FSK)	US-PGPUB; USPAT	OR	ON	2007/03/28 10:04
S311	1	"6633545".pn.	US-PGPUB; USPAT	OR	ON	2007/03/28 10:48
S312	1	10/619691	US-PGPUB; USPAT	OR	ON	2007/03/28 10:48
S313	1	"6633545".pn.	US-PGPUB; USPAT	OR	ON	2007/03/29 09:09
S314	1	"6673179".pn.	US-PGPUB; USPAT	OR	ON	2007/03/29 09:09
S315	1	"6073179".pn.	US-PGPUB; USPAT	OR	ON	2007/03/29 09:10
S316	0	"375"/$.ccls. and (diagnos$6 same ((frequency adj domain) with (idle adj channel adj noise)))	US-PGPUB; USPAT	OR	ON	2008/05/27 09:52
S317	0	(diagnos$6 same ((frequency adj domain) with (idle adj channel adj noise)))	US-PGPUB; USPAT	OR	ON	2008/05/27 09:52
S318	0	(diagnos$6 and ((frequency adj domain) with (idle adj channel adj noise)))	US-PGPUB; USPAT	OR	ON	2008/05/27 09:52
S319	0	"10619691".pn.	US-PGPUB; USPAT	OR	ON	2008/05/27 10:03
S320	1	"10/619691"	US-PGPUB; USPAT	OR	ON	2008/05/27 10:03
S321	1	"10619691"	US-PGPUB; USPAT	OR	ON	2008/06/08 23:12
S322	0	"375"/$.ccls. and ((diagnostic adj information) same (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/08 23:32
S323	0	"375"/$.ccls. and ((diagnostic) with (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/08 23:32
S324	0	"379"/$.ccls. and ((diagnostic) with (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/08 23:33
S325	0	"375"/$.ccls. and ((diagnostic) with (DMT))	US-PGPUB; USPAT	OR	ON	2008/06/08 23:33
S326	0	"375"/$.ccls. and ((diagnostic) with (DMT))	US-PGPUB; USPAT; DERWENT; IBM_TDB	OR	ON	2008/06/08 23:33

S327	1	"375"/$.ccls. and ((diagnostic) same (DMT))	US-PGPUB; USPAT; DERWENT; IBM_TDB	OR	ON	2008/06/08 23:33
S328	4	"375"/$.ccls. and ((diagnostic) same (multicarrier))	US-PGPUB; USPAT; DERWENT; IBM_TDB	OR	ON	2008/06/08 23:34
S329	3	"375"/$.ccls. and ((diagnostic adj information) same (multicarrier))	US-PGPUB; USPAT; DERWENT; IBM_TDB	OR	ON	2008/06/08 23:34
S330	26	"375"/222.ccls. and ((diagnostic adj information))	US-PGPUB; USPAT; DERWENT; IBM_TDB	OR	ON	2008/06/08 23:35
S331	2	09/925509	US-PGPUB; USPAT	OR	ON	2008/06/09 07:54
S332	12	09/755173	US-PGPUB; USPAT	OR	ON	2008/06/09 07:55
S333	142	idle adj channel adj noise	US-PGPUB; USPAT	OR	ON	2008/06/09 08:08
S334	3	S333 and DMT	US-PGPUB; USPAT	OR	ON	2008/06/09 08:09
S335	2	S333 same (diagnostic)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:11
S336	256150	S333 ande (diagnostic)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:14
S337	20	S333 and (diagnostic)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:14
S338	32	(diagnostic adj symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:21
S339	0	"375"/$.ccls and (diagnostic adj symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:22
S340	0	"370"/$.ccls and (diagnostic adj symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:22
S341	0	"370"/$.ccls with (diagnostic adj symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:22
S342	0	"375"/$.ccls with (diagnostic adj symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:22
S343	0	"375"/$.ccls with (diagnostic same symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:22
S344	0	"370"/$.ccls with (test adj symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:23
S345	0	"370"/$.ccls with (test with symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:23
S346	0	"375"/$.ccls with (test with symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:23

S347	0	"370"/$.ccls with (testing with symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:24
S348	5	(test$6 with (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/09 08:24
S349	0	(diagnos$6 with (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/09 08:25
S350	0	(diagnos$6 same (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/09 08:26
S351	646	(map$7same (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/09 08:26
S352	0	((diagnostic) with (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/09 08:27
S353	0	((diagnostic) same (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/09 08:27

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PTO/SB/08a (05-07)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99)**		
	Application Number	10619691
	Filing Date	2003-07-16
	First Named Inventor	Krinsky
	Art Unit	2611
	Examiner Name	TRAN, KHANH C
	Attorney Docket Number	5550-2-CON2

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /KCT/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	10619691
	Filing Date	2003-07-16
	First Named Inventor	Krinsky
	Art Unit	2611
	Examiner Name	TRAN, KHANH C
	Attorney Docket Number	5550-2-CON2

/KCT/	1	PCT International Search Report dated Oct. 9, 2002 for PCT/US01/41653, 3 pages (Attorney's Ref. No. 5550-2-PCT-3)	☐
/KCT/	2	International Search Report for PCT/US01/00418 dated Jul. 16, 2001; 4 pages (Attorney's Ref. No. 5550-2-PCT)	☐
/KCT/	3	Written Opinion for International (PCT) Patent Application No. PCT/US01/00418, completed March 9, 2002, 2 pages (Attorney's Ref. No. 5550-2-PCT)	☐
/KCT/	4	International Preliminary Examination Report for International (PCT) Patent Application No. PCT/US01/00418, completed March 9, 2002, 2 pages (Attorney's Ref. No. 5550-2-PCT)	☐
/KCT/	5	European Search Report for European Patent Application No. EP 06022008 completed January 8, 2007, 8 pages (Attorney's Ref. No. 5550-2-PEP5)	☐
/KCT/	6	Examiner's First Report for Australian Patent Application No. 2004203321, mailed November 16, 2006, 2 pages (Attorney's Ref. No. 5550-2-PAU4)	☐

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EXAMINER SIGNATURE

Examiner Signature	/Khanh Tran/ (06/09/2008)	Date Considered	06/09/2008

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /KCT/

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REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL
(Submitted Only via EFS-Web)

Application Number	10/619,691	Filing Date	2003-07-16	Docket Number (if applicable)	5550-2-CON2	Art Unit	
First Named Inventor	KRINSKY			Examiner Name	TRAN		

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV

SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

- ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
- ☐ Other _____

☒ Enclosed

- ☒ Amendment/Reply
- ☐ Information Disclosure Statement (IDS)
- ☐ Affidavit(s)/ Declaration(s)
- ☒ Other Extension of Time

MISCELLANEOUS

☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____ (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

☐ Other _____

FEES

The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.

☒ The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No 191970

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☒ Patent Practitioner Signature

☐ Applicant Signature

PTO/SB/30EFS (03/08)
Approved for use through 04/30/2008. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Signature of Registered U.S. Patent Practitioner			
Signature	/Jason H. Vick/	Date (YYYY-MM-DD)	2008-04-29
Name	Jason H. Vick	Registration Number	45285

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No.:	10/619,691	Confirmation No.:	7134
Applicant:	KRINSKY et al.	TC/A.U.	2611
Filed:	7-16-2003	Examiner:	TRAN
Docket No.:	5550-2-CON2		
For:	SYSTEMS AND METHODS FOR ESTABLISHING A DIAGNOSTIC TRANSMISSION MODE AND COMMUNICATING OVER THE SAME		

AMENDMENT AND RESPONSE

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicants submit this Amendment and Response in lieu of filing the Appeal Brief. By this paper, the Appeal to the Board of Appeals is withdrawn.

Please credit any overpayment or charge any underpayment to Deposit Account No. 19-1970.

Please amend the above-identified patent application as follows:

Amendments to the Claims are shown in the listing of claims which begins on page 2 of this paper.

Remarks begin on page 12 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. – 43. (Cancelled)

44. (Currently Amended) In a multicarrier modulation transceiver, a method of communicating diagnostic information over a communication channel using multicarrier modulation comprising:

transmitting or receiving an initiate diagnostic mode message; and

transmitting a diagnostic message using multicarrier modulation, wherein the diagnostic message comprises the diagnostic information about the communication channel and each bit in the diagnostic message is mapped to at least one DMT symbol, and wherein the diagnostic information about the communication channel is frequency domain received idle channel noise information.

45. (Currently Amended) A diagnostic system capable of communicating diagnostic information over a communication channel using multicarrier modulation comprising:

a transceiver capable of transmitting or receiving an initiate diagnostic mode message; and

a message determination module capable of determining and, in cooperation with the transceiver, transmitting a diagnostic message, wherein the diagnostic message comprises the diagnostic information about the communication channel and each bit in the diagnostic message is mapped to at least one DMT signal, and wherein the diagnostic information about the communication channel is frequency domain received idle channel noise information.

46. (Currently Amended) A multicarrier communication transceiver capable of communicating diagnostic information over a communication channel using multicarrier modulation comprising:

means for transmitting or receiving an initiate diagnostic mode message; and

means for transmitting a diagnostic message using multicarrier modulation, wherein the diagnostic message comprises the diagnostic information about the communication channel and each bit in the diagnostic message is mapped to at least one DMT symbol, and wherein the diagnostic information about the communication channel is frequency domain received idle channel noise information.

47. (Currently Amended) In a multicarrier communication transceiver, a protocol for communicating diagnostic information over a communication channel using multicarrier modulation comprising:

transmitting or receiving an initiate diagnostic mode message; and

transmitting a diagnostic message using multicarrier modulation, wherein the diagnostic message comprises the diagnostic information about the communication channel and each bit in the diagnostic message is mapped to at least one DMT symbol, and wherein the diagnostic information about the communication channel is frequency domain received idle channel noise information.

48. (Currently Amended) An information storage media comprising ~~information~~ instructions that when executed ~~communicates~~communicate diagnostic information over a communication channel using multicarrier modulation comprising:

~~information~~instructions that when executed direct a transceiver ~~receives or transmits~~to receive or transmit an initiate diagnostic mode message; and

~~information~~instructions that when executed ~~transmits~~transmit a diagnostic message using multicarrier modulation, wherein the diagnostic message comprises the diagnostic information about the communication channel and each bit in the diagnostic message is mapped to at least one DMT symbol, and wherein the diagnostic information about the communication channel is frequency domain received idle channel noise information.

49. (Currently Amended) In a multicarrier modulation transceiver, a method of communicating diagnostic information over a communication channel using multicarrier modulation comprising:

transmitting or receiving an initiate diagnostic mode message; and

transmitting a diagnostic message using multicarrier modulation with DMT symbols that are mapped to one bit of the diagnostic message, wherein the

diagnostic message comprises the diagnostic information about the communication channel, and wherein the diagnostic information about the communication channel is frequency domain received idle channel noise information.

50. (Currently Amended) A diagnostic system capable of communicating diagnostic information over a communication channel using multicarrier modulation comprising:

a transceiver capable of transmitting or receiving an initiate diagnostic mode message; and

a message determination module capable of determining and, in cooperation with the transceiver, transmitting a diagnostic message using multicarrier modulation with DMT symbols that are mapped to one bit of the diagnostic message, wherein the diagnostic message comprises the diagnostic information about the communication channel, and wherein the diagnostic information about the communication channel is frequency domain received idle channel noise information.

51. (Currently Amended) A multicarrier communication transceiver capable of communicating diagnostic information over a communication channel using multicarrier modulation comprising:

means for transmitting or receiving an initiate diagnostic mode message; and

means for transmitting a diagnostic message using multicarrier modulation with DMT symbols that are mapped to one bit of the diagnostic message, wherein the diagnostic message comprises the diagnostic information about the communication channel, and wherein the diagnostic information about the communication channel is frequency domain received idle channel noise information.

52. (Currently Amended) In a multicarrier communication transceiver, a protocol for communicating diagnostic information over a communication channel using multicarrier modulation comprising:

transmitting or receiving an initiate diagnostic mode message; and

transmitting a diagnostic message using multicarrier modulation with DMT symbols that are mapped to one bit of the diagnostic message, wherein the diagnostic message comprises the diagnostic information about the communication

channel, and wherein the diagnostic information about the communication channel is frequency domain received idle channel noise information.

53. (Currently Amended) An information storage media comprising ~~information~~ instructions that when executed ~~communicates~~communicate diagnostic information over a communication channel using multicarrier modulation comprising:

~~information~~instructions that when executed direct a transceiver to ~~receives or transmits~~receive or transmit an initiate diagnostic mode message; and

~~information~~ instructions that when executed ~~transmits~~transmit a diagnostic message using multicarrier modulation with DMT symbols that are mapped to one bit of the diagnostic message, wherein the diagnostic message comprises the diagnostic information about the communication channel, and wherein the diagnostic information about the communication channel is frequency domain received idle channel noise information.

54. (Previously Presented) The method of claim 44, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

55. (Previously Presented) The system of claim 45, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

56. (Previously Presented) The transceiver of claim 46, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

57. (Previously Presented) The protocol of claim 47, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady

state transmission mode, a forward error correction error, a user request and a CO technician request.

58. (Previously Presented) The media of claim 48, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

59. (Previously Presented) The method of claim 49, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

60. (Previously Presented) The system of claim 50, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

61. (Previously Presented) The transceiver of claim 51, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

62. (Previously Presented) The protocol of claim 52, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

63. (Previously Presented) The media of claim 53, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady

state transmission mode, a forward error correction error, a user request and a CO technician request.

64. (Previously Presented) The method of claim 44, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

65. (Previously Presented) The system of claim 45, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

66. (Previously Presented) The transceiver of claim 46, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

67. (Previously Presented) The protocol of claim 47, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

68. (Previously Presented) The media of claim 48, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral

density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

69. (Previously Presented) The method of claim 49, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

70. (Previously Presented) The system of claim 50, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

71. (Previously Presented) The transceiver of claim 51, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

72. (Previously Presented) The protocol of claim 52, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

73. (Previously Presented) The media of claim 53, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral

density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

74. (Previously Presented) The method of claim 44, wherein the transceiver is a central office modem or a remote terminal modem.

75. (Previously Presented) The system of claim 45, wherein the transceiver is a central office modem or a remote terminal modem.

76. (Previously Presented) The transceiver of claim 46, wherein the transceiver is a central office modem or a remote terminal modem.

77. (Previously Presented) The protocol of claim 47, wherein the transceiver is a central office modem or a remote terminal modem.

78. (Previously Presented) The method of claim 49, wherein the transceiver is a central office modem or a remote terminal modem.

79. (Previously Presented) The system of claim 50, wherein the transceiver is a central office modem or a remote terminal modem.

80. (Previously Presented) The transceiver of claim 51, wherein the transceiver is a central office modem or a remote terminal modem.

81. (Previously Presented) The protocol of claim 52, wherein the transceiver is a central office modem or a remote terminal modem.

82. (Currently Amended) In a multicarrier modulation transceiver, a method of communicating diagnostic information over a communication channel using multicarrier modulation comprising:

associating, in a diagnostic message and based on an initiate diagnostic mode message, each bit in the diagnostic message with at least one DMT symbol, wherein the diagnostic information about the communication channel is frequency domain received idle channel noise information.

83. (Currently Amended) In a multicarrier modulation transceiver, a method of communicating diagnostic information over a communication channel using multicarrier modulation comprising:

transmitting, during a diagnostic mode, a diagnostic message using multicarrier modulation, wherein the diagnostic message comprises the diagnostic information about the communication channel and at least one bit in the diagnostic

message is mapped to at least one DMT symbol, wherein the diagnostic information about the communication channel is frequency domain received idle channel noise information.

84. (Currently Amended) Means for communicating diagnostic information over a communication channel using multicarrier modulation comprising:

a diagnostic message, wherein each bit in the diagnostic message is mapped to at least one DMT symbol, wherein the diagnostic information about the communication channel is frequency domain received idle channel noise information.

85. (Currently Amended) Communicating diagnostic information over a communication channel using multicarrier modulation comprising:

communicating a diagnostic message, wherein each bit in the diagnostic message is mapped to at least one DMT symbol, wherein the diagnostic information about the communication channel is frequency domain received idle channel noise information.

REMARKS

Applicants respectfully request reconsideration of this application as amended.

Applicants would like to thank Examiner Tran for the courtesies extended to Applicants undersigned representative during the recent telephone conferences. During these telephone conferences, the status of the above application was discussed and an agreement reached that the claims reflected herein make the application allowable over the relied upon references. Examiner Tran indicated a further search would be required however before issuing a formal Notice of Allowance.

Accordingly, by this Amendment, the independent claims have been amended to recite that the diagnostic information about the communications channel is frequency domain received idle channel noise information. The information storage media claims have also been amended in accordance with the Examiner's recommendations.

Accordingly, Applicants believe claims 44-85 are patentably distinguishable from the relied upon references. A Notice of Allowance is respectfully requested.

Should the Examiner believe anything further is desirable in order to place the application in even better condition for allowance, the Examiner is encourage to contact Applicants undersigned representative at the telephone number listed below.

Based on the foregoing, Applicants believe that all pending claims are in condition for allowance and such disposition is respectfully requested. In the event that a telephone conversation would further prosecution and/or expedite allowance, the Examiner is invited to contact the undersigned.

Respectfully submitted,

SHERIDAN ROSS P.C.

Date: 29 Apr '08

By: _____

Jason H. Vick
Reg. No. 45,285
1560 Broadway, Suite 1200
Denver, Colorado 80202
Telephone: 303-863-9700

PTO/SB/22 (01-08)
Approved for use through 04/30/2008. OMB 0651-0031
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PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a) **FY 2008** *(Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).)*	Docket Number (Optional) 5550-2-CON2 Confirmation No. 7134
Application Number 10/619,691	Filed 7/16/2003
For SYSTEMS AND METHODS FOR ESTABLISHING A DIAGNOSTIC TRANSMISSION MODE AND COMMUNICATING OVER THE SAME	
Art Unit 2611	Examiner TRAN, K.

This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above identified application.

The requested extension and fee are as follows (check time period desired and enter the appropriate fee below):

		Fee	Small Entity Fee	
☐	One month (37 CFR 1.17(a)(1))	$120	$60	$
☐	Two months (37 CFR 1.17(a)(2))	$460	$230	$
☐	Three months (37 CFR 1.17(a)(3))	$1050	$525	$
☐	Four months (37 CFR 1.17(a)(4))	$1640	$820	$
☒ XX	Five months (37 CFR 1.17(a)(5))	$2230	$1115	$ 2230

☐ Applicant claims small entity status. See 37 CFR 1.27.

☐ A check in the amount of the fee is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☐ The Director has already been authorized to charge fees in this application to a Deposit Account.

☒ XX The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number 19-1970. I have enclosed a duplicate copy of this sheet.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

I am the

☐ applicant/inventor.

☐ assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed (Form PTO/SB/96).

☒ XX attorney or agent of record. Registration Number 45,285

☐ attorney or agent under 37 CFR 1.34.
Registration number if acting under 37 CFR 1.34 _____

Signature	April 29, 2008 Date
Jason H. Vick Typed or printed name	(303) 863-9700 Telephone Number

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☐ Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.136(a). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 6 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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Electronic Patent Application Fee Transmittal

Application Number:	10619691
Filing Date:	16-Jul-2003
Title of Invention:	Systems and methods for establishing a diagnostic transmission mode and communicating over the same
First Named Inventor/Applicant Name:	David M. Krinsky
Filer:	Jason Vick/Christine Jacquet
Attorney Docket Number:	5550-2-CON2

Filed as Large Entity

Utility Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Extension - 5 months with $0 paid	1255	1	2230	2230

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Request for continued examination	1801	1	810	810
		Total in USD ($)		**3040**

Electronic Acknowledgement Receipt	
EFS ID:	3228373
Application Number:	10619691
International Application Number:	
Confirmation Number:	7134
Title of Invention:	Systems and methods for establishing a diagnostic transmission mode and communicating over the same
First Named Inventor/Applicant Name:	David M. Krinsky
Customer Number:	62574
Filer:	Jason Vick/Christine Jacquet
Filer Authorized By:	Jason Vick
Attorney Docket Number:	5550-2-CON2
Receipt Date:	29-APR-2008
Filing Date:	16-JUL-2003
Time Stamp:	18:08:09
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$3040
RAM confirmation Number	3252
Deposit Account	191970
Authorized User	
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes) /Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Continued Examination (RCE)	RCE_TRANS.pdf	721069 12c36c83158f63a23db9564b36ede2ea47b8989a	no	3
Warnings:					
Information:					
2		AMEND_AND_EOT.pdf	1204750 737f3b6a46c1b228091b906ba7e6ed98de8f0d48	yes	12

Multipart Description/PDF files in .zip description

Document Description	Start	End
Amendment Submitted/Entered with Filing of CPA/RCE	1	1
Claims	2	10
Applicant Arguments/Remarks Made in an Amendment	11	11
Extension of Time	12	12

Warnings:					
Information:					
3	Fee Worksheet (PTO-06)	fee-info.pdf	8357 522cbd88f356e05e6166522d6d315b312cbee5a3	no	2
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If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

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If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 10/619,691	Filing Date 07/16/2003	☐ To be Mailed

APPLICATION AS FILED – PART I

	(Column 1)	(Column 2)	SMALL ENTITY ☐		OR	OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE ($)	FEE ($)		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT	04/29/2008	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 42	Minus	** 43	= 0	X $ =		OR	X $50=	0
	Independent (37 CFR 1.16(h))	* 14	Minus	***14	= 0	X $ =		OR	X $210=	0
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	0

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =		OR	X $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =		OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

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Legal Instrument Examiner:
/DEBRA a. SAVOY/

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99)**		
	Application Number	10619691
	Filing Date	2003-07-16
	First Named Inventor	Krinsky
	Art Unit	2611
	Examiner Name	TRAN, KHANH C
	Attorney Docket Number	5550-2-CON2

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	10619691
	Filing Date	2003-07-16
	First Named Inventor	Krinsky
	Art Unit	2611
	Examiner Name	TRAN, KHANH C
	Attorney Docket Number	5550-2-CON2

	1	PCT International Search Report dated Oct. 9, 2002 for PCT/US01/41653, 3 pages (Attorney's Ref. No. 5550-2-PCT-3)	☐
	2	International Search Report for PCT/US01/00418 dated Jul. 16, 2001; 4 pages (Attorney's Ref. No. 5550-2-PCT)	☐
	3	Written Opinion for International (PCT) Patent Application No. PCT/US01/00418, completed March 9, 2002, 2 pages (Attorney's Ref. No. 5550-2-PCT)	☐
	4	International Preliminary Examination Report for International (PCT) Patent Application No. PCT/US01/00418, completed March 9, 2002, 2 pages (Attorney's Ref. No. 5550-2-PCT)	☐
	5	European Search Report for European Patent Application No. EP 06022008 completed January 8, 2007, 8 pages (Attorney's Ref. No. 5550-2-PEP5)	☐
	6	Examiner's First Report for Australian Patent Application No. 2004203321, mailed November 16, 2006, 2 pages (Attorney's Ref. No. 5550-2-PAU4)	☐

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EXAMINER SIGNATURE

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	10619691
	Filing Date	2003-07-16
	First Named Inventor	Krinsky
	Art Unit	2611
	Examiner Name	TRAN, KHANH C
	Attorney Docket Number	5550-2-CON2

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☐ Fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ None

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Jason H. Vick/	Date (YYYY-MM-DD)	2007-10-25
Name/Print	Jason H. Vick	Registration Number	45285

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt	
EFS ID:	2371007
Application Number:	10619691
International Application Number:	
Confirmation Number:	7134
Title of Invention:	Systems and methods for establishing a diagnostic transmission mode and communicating over the same
First Named Inventor/Applicant Name:	David M. Krinsky
Customer Number:	62574
Filer:	Jason Vick/Debra Kesner
Filer Authorized By:	Jason Vick
Attorney Docket Number:	5550-2-CON2
Receipt Date:	25-OCT-2007
Filing Date:	16-JUL-2003
Time Stamp:	16:39:03
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes) /Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Filed	IDS_03.pdf	808426 26f707db1fb5e250255e6e482acade8e96e34d59	no	4
Warnings:					

Information:					
A U.S. Patent Number Citation or a U.S. Publication Number Citation is required in the Information Disclosure Statement (IDS) form for autoloading of data into USPTO systems. You may remove the form to add the required data in order to correct the Informational Message if you are citing U.S. References. If you chose not to include U.S. References, the image of the form will be processed and be made available within the Image File Wrapper (IFW) system. However, no data will be extracted from this form. Any additional data such as Foreign Patent Documents or Non Patent Literature will be manually reviewed and keyed into USPTO systems.					
2	NPL Documents	5550-2-PCT-3_Search_Report.pdf	146869 884805bc2f978cbd8b79adb5d8e30c17bd636b5f	no	3
Warnings:					
Information:					
3	NPL Documents	5550-2-PCT_Search_Report.pdf	156202 ce80d36e54318f42cd19132342bee0ba2645a706	no	4
Warnings:					
Information:					
4	NPL Documents	5550-2-PCT_Written_Opinion.pdf	241613 635fc12cf9d6917802d2146cce503dd896125fd7	no	2
Warnings:					
Information:					
5	NPL Documents	5550-2-PCT_IPER.pdf	85503 dfb67c85e9bdcc84d0df1b969e85eaecf8ee0d83	no	2
Warnings:					
Information:					
6	NPL Documents	5550-2-PEP5_European_Search_Report_for_EP_06022008_1-8-07.pdf	696810 9ae058a5710f5b8d193a484700c79ac3032c01db	no	8
Warnings:					
Information:					
7	NPL Documents	5550-2-PAU4_Examiners_First_Report_for_AU2004203321_11-16-06.pdf	131297 4ff0b79b6b7cf7cdcb00e51ab03715623ad52424	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	2266720		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/31 (10-07)
Approved for use through 10/31/2007. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

NOTICE OF APPEAL FROM THE EXAMINER TO THE BOARD OF PATENT APPEALS AND INTERFERENCES

Docket Number (Optional): 5550-2-CON2

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)]
on _____

Signature _____

Typed or printed name _____

In re Application of: David M. Krinsky

Application Number	Filed
10619691	2003-07-16

For: Systems and Methods for Establishing a Diagnostic Transmission Mode and Communicating Over the Same

Art Unit	Examiner
2611	TRAN, K.

Applicant hereby appeals to the Board of Patent Appeals and Interferences from the last decision of the examiner.

The fee for this Notice of Appeal is (37 CFR 41.20(b)(1)) $ 500.00

☐ Applicant claims small entity status. See 37 CFR 1.27. Therefore, the fee shown above is reduced by half, and the resulting fee is: $ _____

☐ A check in the amount of the fee is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☐ The Director has already been authorized to charge fees in this application to a Deposit Account. I have enclosed a duplicate copy of this sheet.

☒ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. 19-1970 . I have enclosed a duplicate copy of this sheet.

☒ A petition for an extension of time under 37 CFR 1.136(a) (PTO/SB/22) is enclosed.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

I am the

☐ applicant/inventor.

☐ assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

☒ attorney or agent of record. Registration number 45285.

☐ attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34. _____

/Jason H. Vick/
Signature

Jason H. Vick
Typed or printed name

(303) 863-9700
Telephone number

October 1, 2007
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☒ *Total of 1 forms are submitted.

This collection of information is required by 37 CFR 41.31. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PTO/SB/22 (10-04)
Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PETITION FOR EXTENSION OF TIME UNDER 37 CFR § 1.136(a)
FY 2006
(Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818))

Docket Number (Optional): 5550-2-CON2

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage for Express mail (EV 829370565 US) in an envelope addressed to Mail Stop AF Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450
Signature:_____

Name: Christine Jacquet

In re Application of David M. Krinsky

Application Number: 10619691 | Filed 2003-07-16

For: "Systems and Methods for Establishing a Diagnostic Transmission Mode and Communicating Over the Same

Art Unit 2611 | Examiner TRAN, K.

This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above identified application.

The requested extension and fee are as follows (check time period desired and enter the appropriate fee below): (Should additional extensions be required, those extension(s) are hereby requested)

	Fee	Small Entity Fee	
☐ One month (37 CFR 1.17(a)(1))	$120	$60	$_____
☐ Two months (37 CFR 1.17(a)(2))	$450	$225	$_____
☒ Three months (37 CFR 1.17(a)(3))	$1020	$510	$1020
☐ Four months (37 CFR 1.17(a)(4))	$1590	$795	$_____
☐ Five months (37 CFR 1.17(a)(5))	$2160	$1080	$_____

☐ Applicant claims small entity status. See 37 CFR 1.27.

☐ A check in the amount of the fee is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☐ The Director has already been authorized to charge fees in this application to Deposit Account.

☒ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number 19-1970. I have enclosed a duplicate copy of this sheet.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

I am the ☐ applicant/inventor

☐ assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).

☒ attorney or agent of record. Registration Number: 45,285

☐ attorney or agent under 37 CFR 1.34(a).
Registration number if acting under 37 CFR 1.34(a) _____.

/Jason H. Vick/ — Signature

October 1, 2007 — Date

Jason H. Vick, Reg. No. 45,285 — Typed or printed name

303 863-9700 — Telephone Number

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☒ Total of one forms are submitted.

Electronic Patent Application Fee Transmittal

Application Number:	10619691
Filing Date:	16-Jul-2003
Title of Invention:	Systems and methods for establishing a diagnostic transmission mode and communicating over the same
First Named Inventor/Applicant Name:	David M. Krinsky
Filer:	Jason Vick/Christine Jacquet
Attorney Docket Number:	5550-2-CON2

Filed as Large Entity

Utility Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Notice of appeal	1401	1	510	510
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension - 3 months with $0 paid	1253	1	1020	1020
Miscellaneous:				
		Total in USD ($)		**1530**

Electronic Acknowledgement Receipt	
EFS ID:	2265732
Application Number:	10619691
International Application Number:	
Confirmation Number:	7134
Title of Invention:	Systems and methods for establishing a diagnostic transmission mode and communicating over the same
First Named Inventor/Applicant Name:	David M. Krinsky
Customer Number:	62574
Filer:	Jason Vick/Christine Jacquet
Filer Authorized By:	Jason Vick
Attorney Docket Number:	5550-2-CON2
Receipt Date:	01-OCT-2007
Filing Date:	16-JUL-2003
Time Stamp:	18:12:57
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment was successfully received in RAM	$1530
RAM confirmation Number	2925
Deposit Account	191970
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.16 and 1.17	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes) /Message Digest	Multi Part /.zip	Pages (if appl.)
1		NOT_OF_APPEAL_AND_EOT.pdf	295930 fc6a5595eaff716b32e089be9ac7a8be71ecc3d7	yes	2
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Notice of Appeal Filed		1	1	
	Extension of Time		2	2	
Warnings:					
Information:					
2	Fee Worksheet (PTO-06)	fee-info.pdf	8352 9015feb4d5bd7220c2e3653612e00bc6a317fea3	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	304282		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,691	07/16/2003	David M. Krinsky	5550-2-CON2	7134

62574 7590 03/30/2007
SHERIDAN ROSS P C
SUITE 1200
1560 BROADWAY
DENVER, CO 80202

EXAMINER	
TRAN, KHANH C	
ART UNIT	PAPER NUMBER
2611	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/30/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/619,691	KRINSKY ET AL.	
	Examiner	Art Unit	
	Khanh Tran	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 January 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *44-85* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *44-85* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07/16/2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The Amendment filed on 01/12/2007 has been entered. Claims 44-85 are pending in this Office action.

Response to Arguments

2. Applicant's arguments with respect to new claims 44-85 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 48, 53 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claimed subject matter "information storage media" lacks of written description in the original disclosure, e.g. information storage media including floppy diskettes, optical discs, ROMs, RAMs, EPROMs, flash memory ....

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 44-85 are rejected under 35 U.S.C. 103(a) as being unpatentable over Milbrandt U.S. Patent 6,633,545 B1.

Regarding claim 44, Milbrandt invention is directed to a system for determining the data rate capacity of digital subscriber lines employing DMT modulation; see column 10 lines 35-50).

In column 11 lines 5-50, see also FIGS. 1 and 2, Milbrandt teaches that during modem training, an ADSL modem 60 employing DMT modulation technology may collect subscriber line information 28 used to determine attenuation information and noise information for each channel of the data frequency spectrum for a particular subscriber line 16. To collect subscriber line information 28 for subscriber line 16 during the downlink transmission of data, for example, modem 60 transmits a data signal at a known transmit power spectrum density, Q_f, for each channel of the data frequency spectrum allocated for downlink transmission.

Milbrandt further teaches that in some situations, modems 60 and 42 may not establish a connection over the entire frequency spectrum of a subscriber line 16. Rather, the modems 60 and 42 may only connect over a subrange of frequencies. In

these instances where a modem 60 fails to operate over the entire frequency spectrum supported by a subscriber line 16, central office 14 may enter a modem 60 into a diagnostic mode. In the diagnostic mode, a modem 60 communicates to modem 42 a signal pulse at a known transmit power spectrum density, Q_f, for one or more sub-frequencies within the frequency spectrum over which the modems 60 and 42 may still connect. In light of the foregoing disclosure, the transmit power spectrum density, Q_f, corresponds to the claimed diagnostic message

Milbrandt does not explicitly disclose each bit in the diagnostic message is mapped to at least one DMT symbol as claimed in the application claim.

Because the transmit power spectrum density, Q_f, has direct relationship with the SNR_f, R uplink data capacity and R downlink data capacity, one of ordinary skill in the art at the time the invention was made would have recognized that the transmit power spectrum density, Q_f, represent bits of diagnostic message, the bits being mapped to DMT symbol containing subrange of frequencies. Furthermore, the transmit power spectrum density, Q_f, is transmitted via the channel to modem 42, and hence, contains channel information.

Regarding claim 45, claim is rejected on the same ground as for claim 44 because of similar scope.

Regarding claim 46, claim is rejected on the same ground as for claim 44 because of similar scope.

Regarding claim 47, claim is rejected on the same ground as for claim 44 because of similar scope.

Regarding claim 48, claim is rejected on the same ground as for claim 44 because of similar scope. Furthermore, a communication server 58 comprises any suitable combination of hardware and software that resides at central office 14, at a remote terminal, or any other suitable access point in system 10 that allows coupling to local loops formed by subscriber lines 16; see column 6 lines 30-40, also FIG. 1.

Regarding claim 49, claim is rejected on the same ground as for claim 44 because of similar scope. Furthermore, as recited in claim 44 rejection, in the diagnostic mode, a modem 60 communicates to modem 42 a signal pulse at a known transmit power spectrum density, Q_f, for one or more sub-frequencies within the frequency spectrum over which the modems 60 and 42 may still connect. ADSL modem 60 employs DMT modulation technology. In view of that, DMT symbols are mapped to the signal pulse, representing bits of diagnostic message.

Regarding claim 50, claim is rejected on the same ground as for claim 49 because of similar scope.

Regarding claim 51, claim is rejected on the same ground as for claim 49 because of similar scope.

Regarding claim 52, claim is rejected on the same ground as for claim 49 because of similar scope.

Regarding claim 53, claim is rejected on the same ground as for claim 49 because of similar scope.

Regarding claims 54-63, in column 11 lines 20-30, Milbrandt teaches in some situations, modems 60 and 42 may not establish a connection over the entire frequency spectrum of a subscriber line 16. In these instances where a modem 60 fails to operate over the entire frequency spectrum supported by a subscriber line 16, central office 14 may enter a modem 60 into a diagnostic mode. Hence, the foregoing disclosure addresses the claimed limitations "the initiate diagnostic mode message based on a bit rate failure".

Regarding claims 64-73, in column 11 lines 20-35, Milbrandt further teaches in the diagnostic mode, a modem 60 communicates to modem 42 *a signal pulse at a known transmit power spectrum density, Q_f,* for one or more sub-frequencies within the frequency spectrum over which the modems 60 and 42 may still connect.

Regarding claims 74-81, see also FIG2. 1-2, modems 60 and 42 are CO modem and subscriber modem; see also column 8 lines 55-61.

Regarding claim 82, claim is rejected on the same ground as for claim 44 because of similar scope.

Regarding claim 83, claim is rejected on the same ground as for claim 44 because of similar scope.

Regarding claim 84, claim is rejected on the same ground as for claim 44 because of similar scope.

Regarding claim 85, claim is rejected on the same ground as for claim 44 because of similar scope.

Conclusion

4.The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Liu et al. U.S. Patent 6,073,179 discloses "Program for controlling DMT based modem using sub-channel selection to achieve scaleable data rate based on available signal processing resources".

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh Tran whose telephone number is 571-272-3007. The examiner can normally be reached on Monday - Friday from 08:00 AM - 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KCT

Khanh Cong Tran

03/28/2007
Khanh Tran
Primary Examiner, AU 2611

Notice of References Cited	Application/Control No. 10/619,691	Applicant(s)/Patent Under Reexamination KRINSKY ET AL.	
	Examiner Khanh Tran	Art Unit 2611	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,633,545	10-2003	Milbrandt, Celite	370/252
*	B	US-6,073,179	06-2000	Liu et al.	709/229
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
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NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

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Bib Data Sheet

CONFIRMATION NO. 7134

SERIAL NUMBER	FILING OR 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
10/619,691	07/16/2003 RULE	375	2611	5550-2-CON2

APPLICANTS

David M. Krinsky, Acton, MA;
Robert Edmund Pizzano JR., Stoneham, MA;

**** CONTINUING DATA ***************************

This application is a DIV of 09/755,173 01/08/2001 PAT 6,658,052 which claims benefit of 60/224,308 08/10/2000
and claims benefit of 60/174,865 01/07/2000

**** FOREIGN APPLICATIONS *********************

IF REQUIRED, FOREIGN FILING LICENSE GRANTED
** 07/07/2004

Foreign Priority claimed	STATE OR COUNTRY	SHEETS DRAWING	TOTAL CLAIMS	INDEPENDENT CLAIMS
☐ yes ☐ no	MA	2	43	9

35 USC 119 (a-d) conditions met ☐ yes ☐ no ☐ Met after Allowance

Verified and Acknowledged _____ Examiner's Signature Initials

ADDRESS
62574

TITLE

Systems and methods for establishing a diagnostic transmission mode and communicating over the same

FILING FEE RECEIVED		
2668	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

Index of Claims

Application/Control No.	Applicant(s)/Patent under Reexamination
10/619,691	KRINSKY ET AL.
Examiner	**Art Unit**
Khanh Tran	2611

√	Rejected	–	(Through numeral) Cancelled	N	Non-Elected	A	Appeal
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Claim		Date								
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Search Notes	Application/Control No.	Applicant(s)/Patent under Reexamination
	10/619,691	KRINSKY ET AL.
	Examiner	Art Unit
	Khanh Tran	2611

SEARCHED			
Class	Subclass	Date	Examiner
375	224-225 227,284	3/29/2007	KCT
370	241,252		

INTERFERENCE SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES (INCLUDING SEARCH STRATEGY)		
	DATE	EXMR
Update EAST Searches	3/29/2007	KCT

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	"6633545".pn.	US-PGPUB; USPAT	OR	ON	2007/03/29 09:09
L2	1	"6673179".pn.	US-PGPUB; USPAT	OR	ON	2007/03/29 09:09
L3	1	"6073179".pn.	US-PGPUB; USPAT	OR	ON	2007/03/29 09:10
S1	674	"375"/$.CCLS. and (channel adj cod$5) and diversity	US-PGPUB; USPAT	OR	ON	2005/09/09 09:15
S2	230	"375"/$.CCLS. and ((channel adj cod$5) same diversity)	US-PGPUB; USPAT	OR	ON	2007/03/27 07:06
S3	1	"6247158".pn.	US-PGPUB; USPAT	OR	ON	2005/09/08 16:58
S4	7	("4577317" | "5283780" | "5907582" | "5909439" | "5970085" | "6023492" | "6049566").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/08 17:00
S5	1	"6178196".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/08 17:00
S6	1	"6389063".PN.	US-PGPUB; USPAT	OR	ON	2005/09/09 09:16
S7	1	"6603807".PN.	US-PGPUB; USPAT	OR	ON	2005/09/09 09:16
S8	1	"6359926".PN.	US-PGPUB; USPAT	OR	ON	2005/09/09 09:16
S9	15	"375"/260.CCLS. and ((channel adj cod$5) same diversity)	US-PGPUB; USPAT	OR	ON	2005/09/15 15:55
S10	1	"6178196".pn.	US-PGPUB; USPAT	OR	ON	2005/09/15 16:00
S11	1	"6693982".pn.	US-PGPUB; USPAT	OR	ON	2005/09/15 16:41
S12	0	cross adj correlated adj base adj band	US-PGPUB; USPAT	OR	ON	2006/02/24 11:01
S13	762	(cross adj correlated) near2 signal	US-PGPUB; USPAT	OR	ON	2005/09/15 16:42
S14	589	(cross adj correlated) near signal	US-PGPUB; USPAT	OR	ON	2005/09/15 16:42
S15	43	S14 with transmit$5	US-PGPUB; USPAT	OR	ON	2005/09/15 16:50
S16	362	transmitter same diversity same delay	US-PGPUB; USPAT	OR	ON	2005/09/15 16:51
S17	3	transmitter same diversity same (delay adj path)	US-PGPUB; USPAT	OR	ON	2005/09/15 16:51

EAST Search History

S18	1196	diversity with delay	US-PGPUB; USPAT	OR	ON	2005/09/15 17:03
S19	139	diversity same (multi adj user)	US-PGPUB; USPAT	OR	ON	2005/09/15 17:04
S20	15	diversity same (plurality adj user) same transmitter	US-PGPUB; USPAT	OR	ON	2005/09/15 17:12
S21	24	diversity same (plurality adj user) same transmission	US-PGPUB; USPAT	OR	ON	2005/09/15 17:06
S22	0	diversity same (plurality adj user) same (different adj PN)	US-PGPUB; USPAT	OR	ON	2005/09/15 17:11
S23	18	diversity same (plurality adj user) same (PN adi code)	US-PGPUB; USPAT	OR	ON	2005/09/15 17:12
S24	0	diversity same (plurality adj user) same (PN adj code)	US-PGPUB; USPAT	OR	ON	2005/09/15 17:12
S25	34	(plurality adj antenna) same (plurality adj user)	US-PGPUB; USPAT	OR	ON	2005/09/15 17:16
S26	17	(plurality adj antenna) same (plurality adj user) same transmi$5	US-PGPUB; USPAT	OR	ON	2005/09/15 17:17
S27	0	(plurality adj antenna) same (distinct adj signal)	US-PGPUB; USPAT	OR	ON	2005/09/15 17:18
S28	3	(plurality adj antenna) same (different adj spread adj code)	US-PGPUB; USPAT	OR	ON	2005/09/15 17:18
S29	12	(diversity) same (different adj spread adj code)	US-PGPUB; USPAT	OR	ON	2005/09/15 17:19
S30	0	multiusers same (channel adj coder) same (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 14:54
S31	3	data same (channel adj coder) same (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 14:54
S32	1	MIMO same (channel adj coder) same (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:03
S33	3	(MIMO same (channel adj coder)) and (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 14:56
S34	86	multi adj user adj data	US-PGPUB; USPAT	OR	ON	2005/09/16 14:58
S35	2	S34 and mimo	US-PGPUB; USPAT	OR	ON	2005/09/16 14:56
S36	10	S34 and diversity	US-PGPUB; USPAT	OR	ON	2005/09/16 14:57
S37	0	S34 and (seial adj parallel)	US-PGPUB; USPAT	OR	ON	2005/09/16 14:58
S38	0	S34 and (serial adj parallel)	US-PGPUB; USPAT	OR	ON	2005/09/16 14:58
S39	194399	data same channel coder same (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 14:59

EAST Search History

S40	3	data same (channel adj coder) same (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 14:59
S41	8	data same (coder) same (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:00
S42	31	data and (channel adj coder) and (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:01
S43	3	(channel adj coder) same MIMO	US-PGPUB; USPAT	OR	ON	2005/09/16 15:02
S44	5	(channel adj coder) same (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:03
S45	66	(encoder) same (plurality adj antenna)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:16
S46	5	"6285720"	US-PGPUB; USPAT	OR	ON	2005/09/16 15:06
S47	13	"375"/$.ccls. and (multi adj user adj data)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:19
S48	48	"375"/$.ccls. and ((multi adj user) same TDMA)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:20
S49	9	"375"/$.ccls. and ((multi adj user) same FDD)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:21
S50	10	"370"/$.ccls. and ((multi adj user) same FDD)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:22
S51	1	"370"/$.ccls. and ((channel adj encoder) same FDD)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:24
S52	0	"370"/$.ccls. and ((channel adj coder) same FDD)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:24
S53	1	((channel adj coder) same FDD)	US-PGPUB; USPAT	OR	ON	2005/09/16 15:24
S54	0	((channel adj coder) same (multi adj user))	US-PGPUB; USPAT	OR	ON	2005/09/16 15:24
S55	1	((channel adj encoder) same (multi adj user))	US-PGPUB; USPAT	OR	ON	2005/09/16 15:26
S56	16	((spatial adj diversity) same (multi adj user))	US-PGPUB; USPAT	OR	ON	2005/09/16 15:27
S57	99	((spatial adj diversity) and (multi adj user))	US-PGPUB; USPAT	OR	ON	2005/09/16 15:36
S58	3	"6359864"	US-PGPUB; USPAT	OR	ON	2005/09/16 15:31
S59	106	((FDD and CDMA) and (multi adj user))	US-PGPUB; USPAT	OR	ON	2005/09/16 15:31
S60	11	((spatial adj diversity) and (channel adj coder))	US-PGPUB; USPAT	OR	ON	2005/09/16 15:36

EAST Search History

S61	5	("5321725" | "5784417" | "6031474" | "6088408" | "6473878").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:48
S62	38154	data adj source	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:48
S63	19	S62 with (multi adj user)	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:53
S64	3	(frequency adj division adj duplex) same (multi adj user) same CDMA	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:51
S65	5	("5559723" | "5905946" | "5933457" | "6161209" | "6615024").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:52
S66	0	(multi adj user adj source)	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:53
S67	25	((multi adj user) near2 source)	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:53
S68	23266	((multi adj user) near2 source) amd MIMO	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:53
S69	0	((multi adj user) near2 source) and MIMO	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 15:55
S70	1	"6693982".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 16:11
S71	1	"5886967".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 16:11
S72	1	"5886987".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 16:13
S73	6	(information adj source) near2 (different adj source)	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 16:13
S74	323	"375"/$.ccls. and (multiple adj access adj interference)	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 16:14
S75	32	"375"/$.ccls. and (multiple adj access adj interference) and (demultiplex$5)	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 16:16

EAST Search History

S76	7	"375"/$.ccls. and (multiple adj access adj interference) and (demultiplex$5) and coder	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 16:14
S77	28	"375"/$.ccls. and (multiple adj channel) and (channel adj coder)	US-PGPUB; USPAT; USOCR	OR	ON	2005/09/16 16:16
S78	1	"6741658".pn.	US-PGPUB; USPAT	OR	ON	2005/09/18 08:43
S79	1	"6898248".pn.	US-PGPUB; USPAT	OR	ON	2005/09/18 08:44
S80	1	"6359864".pn.	US-PGPUB; USPAT	OR	ON	2006/02/21 10:50
S81	1	"6310923".pn.	US-PGPUB; USPAT	OR	ON	2006/02/21 10:50
S82	3	375/267.ccls. and (transmit near (different adj information))	US-PGPUB; USPAT	OR	ON	2006/02/24 13:52
S83	1	"6693982".pn.	US-PGPUB; USPAT	OR	ON	2006/02/24 15:16
S84	561	mapper with identif$8	US-PGPUB; USPAT	OR	ON	2006/02/24 15:16
S85	71	"375"/$.ccls. and (mapper with identif$8)	US-PGPUB; USPAT	OR	ON	2006/02/24 15:16
S86	1	"6693982".pn.	US-PGPUB; USPAT	OR	ON	2006/02/27 09:36
S87	171	space adj time adj block adj code	US-PGPUB; USPAT	OR	ON	2006/02/27 13:37
S88	25	S87 and (spread adj spectrum)	US-PGPUB; USPAT	OR	ON	2006/02/27 10:11
S89	2	S87 and (spread adj code)	US-PGPUB; USPAT	OR	ON	2006/02/27 09:36
S90	126	(angle adj diversity)	US-PGPUB; USPAT	OR	ON	2006/02/27 10:12
S91	0	S87 and S90	US-PGPUB; USPAT	OR	ON	2006/02/27 10:11
S92	155	space adj time adj diversity	US-PGPUB; USPAT	OR	ON	2006/02/27 10:12
S93	3	S90 and S92	US-PGPUB; USPAT	OR	ON	2006/02/27 10:12
S94	3	(angle adj diversity) same (fading adj channel)	US-PGPUB; USPAT	OR	ON	2006/02/27 10:17
S95	1	(angle adj diversity) same (directed adj antenna adj beam)	US-PGPUB; USPAT	OR	ON	2006/02/27 10:17
S96	1	((plurality adj antenna) same (code adj rate) same adapt$8)	US-PGPUB; USPAT	OR	ON	2006/02/27 10:54

EAST Search History

S97	4	((plurality adj antenna) same (code adj rate)) and adapt$8	US-PGPUB; USPAT	OR	ON	2006/02/27 10:55
S98	0	((plurality adj antenna) same (adapt$8 adj code adj rate))	US-PGPUB; USPAT	OR	ON	2006/02/27 10:55
S99	0	((adaptive adj antenna) same (adapt$8 adj code adj rate))	US-PGPUB; USPAT	OR	ON	2006/02/27 10:55
S100	0	((adaptive adj antenna) and (adapt$8 adj code adj rate))	US-PGPUB; USPAT	OR	ON	2006/02/27 15:02
S101	94	((adaptive adj modulation) and (adaptive adj cod$5))	US-PGPUB; USPAT	OR	ON	2006/02/27 13:11
S102	1	"5383219".pn.	US-PGPUB; USPAT	OR	ON	2006/02/27 13:36
S103	50	S87 and (transmit adj power)	US-PGPUB; USPAT	OR	ON	2006/02/27 13:43
S104	1	"6693982".pn.	US-PGPUB; USPAT	OR	ON	2006/02/27 14:05
S105	5828	channel adj estimat$5	US-PGPUB; USPAT	OR	ON	2006/02/27 14:05
S106	1751	channel adj estimator	US-PGPUB; USPAT	OR	ON	2006/02/27 14:06
S107	48	S106 same (channel adj equalizer)	US-PGPUB; USPAT	OR	ON	2006/02/27 14:08
S108	3	S107 and (space adj time)	US-PGPUB; USPAT	OR	ON	2006/02/27 14:08
S109	7	375/267.ccls. and recod$5	US-PGPUB; USPAT	OR	ON	2006/02/27 15:07
S110	3	("5781845" | "6067324" | "6122260").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/02/27 15:06
S111	3	"375"/$.ccls. and recod$5 and (MAI)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:08
S112	1	"375"/$.ccls. and reencod$5 and (MAI)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:10
S113	7	reencod$5 and (MAI)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:08
S114	0	"375"/148.ccls. and reencod$5 and (MAI)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:14
S115	0	"375"/148.ccls. and reencod$5 and (space adj time adj diversity)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:14
S116	0	"375"/$.ccls. and reencod$5 and (space adj time adj diversity)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:14
S117	0	"375"/$.ccls. and reencod$5 and ((space adj time) near2 code)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:15

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S118	0	"375"/$.ccls. and reencod$5 and ((space adj time) with code)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:15
S119	7	"375"/$.ccls. and (re adj encod$5) and ((space adj time) with code)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:15
S120	56	375/260.ccls. and Channeliz$6	US-PGPUB; USPAT	OR	ON	2006/08/10 16:58
S121	180	375/267.ccls. and (space adj time adj cod$8)	US-PGPUB; USPAT	OR	ON	2006/08/11 11:15
S122	1	"6366888".pn.	US-PGPUB; USPAT	OR	ON	2006/08/11 11:15
S123	3	375/267.ccls. and (non adj interleav$8)	US-PGPUB; USPAT	OR	ON	2006/08/11 11:17
S124	11	375/260.ccls. and (non adj interleav$8)	US-PGPUB; USPAT	OR	ON	2006/08/11 11:22
S125	0	"375"/$.ccls. and ((inner adj cod$5) same (outer adj cod$6) same(non adj interleav$8))	US-PGPUB; USPAT	OR	ON	2006/08/11 11:24
S126	2	"375"/$.ccls. and ((inner adj cod$5) same (outer adj cod$6)) and(non adj interleav$8)	US-PGPUB; USPAT	OR	ON	2006/08/11 11:24
S127	0	"375"/$.ccls. and ((outer adj cod$6) same(non adj interleav$8))	US-PGPUB; USPAT	OR	ON	2006/08/11 11:25
S128	3	"375"/267.ccls. and ((cod$6) same(non adj interleav$8))	US-PGPUB; USPAT	OR	ON	2006/08/11 11:25
S129	2	"375"/267.ccls. and ((transmit$5) with(non adj interleav$8))	US-PGPUB; USPAT	OR	ON	2006/08/11 11:27
S130	4	"375"/267.ccls. and ((transmit$5) with(without adj interleav$8))	US-PGPUB; USPAT	OR	ON	2006/08/11 11:27
S131	180	"375"/267.ccls. and (space adj time adj cod$6)	US-PGPUB; USPAT	OR	ON	2006/08/11 11:28
S132	1	"6115427".pn.	US-PGPUB; USPAT	OR	ON	2006/08/16 08:06
S133	1	"6693982".pn.	US-PGPUB; USPAT	OR	ON	2006/08/16 08:06
S134	3	09/393235	US-PGPUB; USPAT	OR	ON	2006/08/16 13:47
S135	353	combin$3 with serializ$3	US-PGPUB; USPAT	OR	ON	2006/08/16 13:48
S136	3383513	number of transmitter antennas	US-PGPUB; USPAT	OR	ON	2007/03/20 07:30
S137	1	10/184054	US-PGPUB; USPAT	OR	ON	2007/03/20 09:21
S138	1	10/619691	US-PGPUB; USPAT	OR	ON	2007/03/20 09:37

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S139	1	"6636603".pn.	US-PGPUB; USPAT	OR	ON	2007/03/20 09:41
S140	1	"20040202237"	US-PGPUB; USPAT	OR	ON	2007/03/20 15:17
S141	1	09/798727	US-PGPUB; USPAT	OR	ON	2007/03/20 15:17
S142	1	"6745050".pn.	US-PGPUB; USPAT	OR	ON	2007/03/23 08:55
S143	6	("20020097779" | "4794556" | "4941178" | "5668830" | "6480557" | "RE31943").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:55
S144	695	CDMA same (multi adj user)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:55
S145	374	"375"/$.ccls. and (CDMA same (multi adj user))	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:56
S146	287	"375"/$.ccls. and (CDMA with (multi adj user))	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:56
S147	0	"375"/$.ccls. and (CDMA with (multi adj user)) and (interference adj cancel$&)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:57
S148	89	"375"/$.ccls. and (CDMA with (multi adj user)) and (interference adj cancel$5)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:57
S149	8	("4134071" | "4744093" | "5136612" | "5164959" | "5361219" | "5363403" | "5481533" | "5790590").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:58
S150	14	("5956333").URPN.	USPAT	OR	OFF	2007/03/23 09:01
S151	1	09/326222.app.	US-PGPUB; USPAT; DERWENT; IBM_TDB	OR	OFF	2007/03/23 09:01
S152	11	("4124818" | "4992798" | "5418814" | "5467368" | "5566165" | "5596600" | "5724378" | "5956333" | "6032026" | "6088383" | "6229857").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:03
S153	11	"375"/$.ccls. and (multi adj user adj demodul$8)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 11:53
S154	0	"375"/$.ccls. and (multi adj user) and remodult$6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:09

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S155	23	"375"/$.ccls. and (multi adj user) and remodulat$6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:05
S156	0	"370"/$.ccls. and (multi adj user) and remodult$6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:09
S157	0	"455"/$.ccls. and (multi adj user) and remodult$6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:10
S158	0	"455"/$.ccls. and (user) and remodult$6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:10
S159	237	"455"/$.ccls. and (user) and remodulat$6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:10
S160	10	"455"/$.ccls. and (multiuser) and remodulat$6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:11
S161	30	(multiuser) and remodulat$6 and CDMA	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:14
S162	873	(multiuser) and CDMA	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:14
S163	523	"375"/$.ccls. and (multiuser) and CDMA	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:14
S164	299	"375"/$.ccls. and ((multiuser) same CDMA)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:14
S165	1	"5956333".pn.	US-PGPUB; USPAT	OR	ON	2007/03/26 09:23
S166	1	"5644592".pn.	US-PGPUB; USPAT	OR	ON	2007/03/26 09:30
S167	1	10/184054	US-PGPUB; USPAT	OR	ON	2007/03/26 10:06
S168	1	"6115427".pn.	US-PGPUB; USPAT	OR	ON	2007/03/26 10:28
S169	49	375/267.ccls. and (multiuser)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:32
S170	6	375/260.ccls. and (multiuser same diversity)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:33
S171	2	375/295.ccls. and (multiuser same diversity)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:34
S172	8	375/130.ccls. and (multiuser same diversity)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:38

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S173	1	375/299.ccls. and (multiuser same diversity)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:35
S174	16	375/299.ccls. and (multiuser)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:35
S175	41	375/130.ccls. and (multiuser)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:38
S176	13	375/130.ccls. and (multiuser and PN)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:40
S177	355	375/299.ccls.	US-PGPUB; USPAT	OR	ON	2007/03/26 10:40
S178	167	375/299.ccls. and user	US-PGPUB; USPAT	OR	ON	2007/03/26 10:40
S179	10	375/299.ccls. and (user same PN)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:53
S180	708	"375"/$.ccls. and (multi adj user) and CDMA	US-PGPUB; USPAT	OR	ON	2007/03/26 10:54
S181	294	"375"/$.ccls. and (multi adj user) and CDMA and diversity	US-PGPUB; USPAT	OR	ON	2007/03/26 10:54
S182	19	"375"/$.ccls. and ((multi adj user) same CDMA same diversity)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:59
S183	14	"455"/$.ccls. and ((multi adj user) same CDMA same diversity)	US-PGPUB; USPAT	OR	ON	2007/03/26 11:03
S184	134	"375"/267.ccls. and ((user) same CDMA)	US-PGPUB; USPAT	OR	ON	2007/03/26 11:18
S185	0	"375"/267.ccls. and (variable near3 rate) same (number adj antenna)	US-PGPUB; USPAT	OR	ON	2007/03/26 11:19
S186	9	"375"/267.ccls. and (variable near3 rate) and (number adj antenna)	US-PGPUB; USPAT	OR	ON	2007/03/26 11:19
S187	7	"375"/$.ccls. and (variable near3 rate) and (number adj antenna) and (variable adj coding adj rate)	US-PGPUB; USPAT	OR	ON	2007/03/26 11:34
S188	1	"6349216".pn.	US-PGPUB; USPAT	OR	ON	2007/03/26 11:35

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S189	53	("4041395" | "4147985" | "4165493" | "4348644" | "4356458" | "4370622" | "4442407" | "4546313" | "4647871" | "4827219" | "4890062" | "4924191" | "4985686" | "4990866" | "4994757" | "5060294" | "5101172" | "5113414" | "5119040" | "5170496" | "5195045" | "5220276" | "5251330" | "5251331" | "5276912" | "5278997" | "5300894" | "5302914" | "5329244" | "5339041" | "5351016" | "5361403" | "5408691" | "5420536" | "5428828" | "5483680" | "5553318" | "5564086" | "5589796" | "5598127" | "5640691" | "5673001" | "5694433" | "5742201" | "5880633" | "5901346" | "5905407" | "5907797" | "6020787" | "6069525" | "6141541" | "6160449" | "6166598").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 13:31
S190	1	"6947491".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 14:03
S191	188	(code adj rate) and (increas$5 with antenna)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 14:04
S192	6	(code adj rate) same (increas$5 with antenna)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:23
S193	243	375/267.ccls. and (close loop adj power adj control)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:23
S194	1986913	375/267.ccls. and multiuser (close loop adj power adj control)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:24
S195	7	375/267.ccls. and multiuser and (close loop adj power adj control)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:24
S196	0	375/267.ccls. and multiuser and (close$2 adj loop adj power adj control)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:25
S197	1	"6115406".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:25
S198	6	("4901307" | "5652764" | "5886987" | "5952968" | "5982327" | "5991332"). PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:31
S199	13	("4835790" | "5267262" | "5347535" | "5412686" | "5485486" | "5548835" | "5559789" | "5574983" | "5581547" | "5590409" | "5598404" | "5604766" | "5646937").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:45

EAST Search History

S200	26	("5886987").URPN.	USPAT	OR	OFF	2007/03/26 15:47
S201	13	("4835790" | "5267262" | "5347535" | "5412686" | "5485486" | "5548835" | "5559789" | "5574983" | "5581547" | "5590409" | "5598404" | "5604766" | "5646937").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:57
S202	5	"375"/267.CCLS. and (MIMO and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:06
S203	7	"375"/260.CCLS. and (MIMO and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:07
S204	30	"375"/$.CCLS. and (MIMO and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:08
S205	18	"370"/$.CCLS. and (MIMO and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:09
S206	7	"455"/$.CCLS. and (MIMO and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:09
S207	10	"455"/$.CCLS. and (OFDM and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:12
S208	39	"370"/$.CCLS. and (OFDM and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:10
S209	39	"375"/$.CCLS. and (OFDM and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 08:04
S210	1	"6115427".pn.	US-PGPUB; USPAT	OR	ON	2007/03/27 08:05
S211	81	(code adj rate) same (number near antenna)	US-PGPUB; USPAT	OR	ON	2007/03/27 08:20
S212	1	"6560295".pn.	US-PGPUB; USPAT	OR	ON	2007/03/27 08:52
S213	387	(space adj time) same CDMA	US-PGPUB; USPAT	OR	ON	2007/03/27 08:53
S214	68	375/267.ccls. and ((space adj time) same CDMA)	US-PGPUB; USPAT	OR	ON	2007/03/27 09:15
S215	2	375/267.ccls. and (compar$8 with uplink with downlink)	US-PGPUB; USPAT	OR	ON	2007/03/27 09:16
S216	1	375/222.ccls. and (compar$8 with uplink with downlink)	US-PGPUB; USPAT	OR	ON	2007/03/27 09:21
S217	0	375/222.ccls. and ((compar$8 with uplink with downlink) same interference)	US-PGPUB; USPAT	OR	ON	2007/03/27 09:21
S218	9	"375"/$.ccls. and ((compar$8 with uplink with downlink) same interference)	US-PGPUB; USPAT	OR	ON	2007/03/27 09:22

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S219	0	"375"/222.ccls. and (diagnostic adj bit)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 11:54
S220	0	"375"/222.ccls. and (diagnostic adj tone)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 11:54
S221	0	"370"/$.ccls. and (diagnostic adj tone)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 13:14
S222	19	"370"/$.ccls. and (diagnostic with tone)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 13:17
S223	0	375/222.ccls. and (diagnostic adj tone)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:19
S224	0	375/222.ccls. and (diagnostic with tone)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:19
S225	22	375/222.ccls. and (diagnostic with bit)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:26
S226	8	("5889856" | "6137839" | "6263016" | "6374288" | "6400759" | "6442195" | "6477595" | "6594306").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 13:22
S227	0	375/222.ccls. and (diagnostic with DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:43
S228	0	"375"/$.ccls. and (diagnostic with DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:26
S229	0	"370"/$.ccls. and (diagnostic with DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:26
S230	0	"370"/$.ccls. and (diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:27
S231	1	"375"/$.ccls. and (diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:39
S232	113	"375"/$.ccls. and (diagnostic same message)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:39
S233	4	"375"/$.ccls. and (diagnostic same message) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:41
S234	6	"370"/$.ccls. and (diagnostic same message) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:42
S235	0	"370"/$.ccls. and (diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:42
S236	1	"375"/$.ccls. and (diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:45
S237	15	(diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:43
S238	1	375/222.ccls. and (diagnostic adj message)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:43

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S239	0	375/260.ccls. and (diagnostic adj message) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:44
S240	0	375/260.ccls. and (diagnostic adj message)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:44
S241	21	375/260.ccls. and (diagnostic)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:44
S242	5	375/260.ccls. and (diagnostic) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:45
S243	5	375/260.ccls. and (diagnostic) and OFDM	US-PGPUB; USPAT	OR	ON	2007/03/27 13:45
S244	1	"379"/$.ccls. and (diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:45
S245	5	"379"/$.ccls. and (diagnostic same bins)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:46
S246	3	"375"/$.ccls. and (diagnostic same bins)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:46
S247	12	"370"/$.ccls. and (diagnostic same bins)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:47
S248	3	"370"/$.ccls. and (bit with diagnostic) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:48
S249	7	"375"/$.ccls. and (bit with diagnostic) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:50
S250	0	"702"/$.ccls. and (bit with diagnostic) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:50
S251	0	"370"/249.ccls. and (bit with diagnostic) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:52
S252	0	"370"/249.ccls. and (diagnostic) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:52
S253	65	"370"/249.ccls. and (diagnostic)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:52
S254	1	"370"/249.ccls. and (diagnostic adj message)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:52
S255	1	"370"/249.ccls. and (initiat$5 near2 diagnostic)	US-PGPUB; USPAT	OR	ON	2007/03/27 14:37
S256	0	dianostic same (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/27 14:37
S257	0	diagnostic same (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/27 14:37
S258	0	"375"/$.ccls. and (diagnostic same (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2007/03/27 14:37
S259	9	"375"/$.ccls. and (diagnostic and (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2007/03/27 14:57
S260	1	"375"/$.ccls. and (diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 14:58

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S261	19	"375"/$.ccls. and (bit near2 diagnostic)	US-PGPUB; USPAT	OR	ON	2007/03/27 15:00
S262	1	"375"/$.ccls. and (map$5 with (bit near2 diagnostic))	US-PGPUB; USPAT	OR	ON	2007/03/27 15:00
S263	12	("4566100" | "5128619" | "5608643" | "5864602" | "5964891" | "6075821" | "6188717" | "6219378" | "6404774" | "6411678" | "6449307" | "6512789"). PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 15:07
S264	0	map$7 with diagnostic with DMT	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 15:08
S265	0	map$7 with diagnostic with DMT	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:09
S266	0	map$7 with (diagnostic adj bit) with DMT	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:09
S267	1	375/260.ccls. and DMT and diagnostic	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:13
S268	13	375/222.ccls. and DMT and diagnostic	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:10
S269	0	375/260.ccls. and (diagnostic adj bit)	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:13
S270	1	"375"/$.ccls. and (diagnostic adj bit)	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:13
S271	1	"379"/$.ccls. and (diagnostic adj bit)	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:14
S272	69	(diagnostic adj bit)	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:15
S273	0	(diagnostic adj bit) and DMT	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:14
S274	0	(diagnostic adj bit) and multicarrier	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:14
S275	0	(diagnostic adj meassage) and (DMT adj symbol)	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:16

EAST Search History

S276	1	(diagnostic adj message) and (DMT adj symbol)	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 16:15
S277	4	10/127164	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 16:15
S278	44	("20020006169" | "20020191709" | "20030067995" | "3898566" | "4878232" | "5163181" | "5228055" | "5249201" | "5490172" | "5493587" | "5579342" | "5608760" | "5621762" | "5636247" | "5638404" | "5651028" | "5727026" | "5751705" | "5805640" | "5822360" | "5930678" | "5991262" | "6009090" | "6032029" | "6041081" | "6125103" | "6128351" | "6130918" | "6175551" | "6222873" | "6229995" | "6236864" | "6240141" | "6246725" | "6294956" | "6356606" | "6449302" | "6504862" | "6687511" | "6701163" | "6931053" | "6931079" | "6931239" | "6931240").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 16:19
S279	1	"5930678".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 16:19
S280	0	(diagnostic adj DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:37
S281	29	(diagnostic adj tone)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:37
S282	0	"375"/$.ccls. and (diagnostic adj tone)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:37
S283	0	"375"/$.ccls. and (diagnostic near tone)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:37
S284	7	"375"/$.ccls. and (diagnostic near bits)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:38
S285	0	"375"/$.ccls. and (diagnos$6 near DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:38
S286	0	"375"/$.ccls. and (diagnos$6 with DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:38
S287	479	"375"/$.ccls. and (bit with DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:39
S288	207	"375"/$.ccls. and (bit near3 DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:39
S289	13	"375"/$.ccls. and (bit near3 DMT) and diagnost$5	US-PGPUB; USPAT	OR	ON	2007/03/28 07:47
S290	1	"375"/$.ccls. and (DMT same diagnost$5)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:47

EAST Search History

S291	40	"375"/$.ccls. and (DMT and diagnost$5)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:49
S292	43	"375"/222.ccls. and (diagnos$5 near3 modem)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:50
S293	10	"375"/222.ccls. and (diagnos$5 near3 modem) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/28 07:56
S294	0	"370"/484.ccls. and (diagnos$5 near3 modem) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/28 07:52
S295	0	"370"/484.ccls. and (diagnos$5) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/28 07:52
S296	1	"370"/484.ccls. and (diagnos$5)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:52
S297	16	"370"/480.ccls. and (diagnos$5)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:52
S298	11	"375"/222.ccls. and (diagnos$5 adj mode)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:08
S299	1	"6658052".pn.	US-PGPUB; USPAT	OR	ON	2007/03/28 08:26
S300	96171	(one adj bit)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:27
S301	5	(one adj bit) with (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:28
S302	197	(bit) with (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:28
S303	27	(bit) with (DMT adj symbol) and (diagnos$7)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:30
S304	0	(bit near test$5) with (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:31
S305	0	(diagnost near tone) and (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:31
S306	0	(diagnos$5 near tone) and (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:31
S307	0	(diagnos$5 near tone) and (DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:31
S308	0	(diagnos$5 near carrier) and (DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:36
S309	5	diagnos$5 with (DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 09:12
S310	106	(Pulse adj width adj modulat$6) same (FSK)	US-PGPUB; USPAT	OR	ON	2007/03/28 10:04
S311	1	"6633545".pn.	US-PGPUB; USPAT	OR	ON	2007/03/28 10:48
S312	1	10/619691	US-PGPUB; USPAT	OR	ON	2007/03/28 10:48

Docket No. 5550-2-CON2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:	)	
David M. KRINSKY	)	Group Art Unit: 2611
Application No. 10/619,691	)	Examiner: TRAN, Khanh C.
Filed: July 16, 2003	)	
For: SYSTEMS AND METHODS ESTABLISHING A DIAGNOSTIC TRANSMISSION MODE AND COMMUNICATING OVER THE SAME	)	

AMENDMENT

Commissioner for Patents
Alexandria, VA 22313-1450

Sir:

In response to the Office Action dated October 31, 2006, please amend the above-identified application as follows. Please charge Deposit Account No. 19-1970 the amount of $1,000.00 to pay for the five additional independent claims.

Amendments to the claims begin on page 2 of this paper.

Remarks begin on page 11 of this paper.

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. – 43. (Cancelled)

44. (New) In a multicarrier modulation transceiver, a method of communicating diagnostic information over a communication channel using multicarrier modulation comprising:

transmitting or receiving an initiate diagnostic mode message; and

transmitting a diagnostic message using multicarrier modulation, wherein the diagnostic message comprises the diagnostic information about the communication channel and each bit in the diagnostic message is mapped to at least one DMT symbol.

45. (New) A diagnostic system capable of communicating diagnostic information over a communication channel using multicarrier modulation comprising:

a transceiver capable of transmitting or receiving an initiate diagnostic mode message; and

a message determination module capable of determining and, in cooperation with the transceiver, transmitting a diagnostic message, wherein the diagnostic message comprises the diagnostic information about the communication channel and each bit in the diagnostic message is mapped to at least one DMT signal.

46. (New) A multicarrier communication transceiver capable of communicating diagnostic information over a communication channel using multicarrier modulation comprising:

means for transmitting or receiving an initiate diagnostic mode message; and means for transmitting a diagnostic message using multicarrier modulation, wherein the

diagnostic message comprises the diagnostic information about the communication channel and each bit in the diagnostic message is mapped to at least one DMT symbol.

47. (New) In a multicarrier communication transceiver, a protocol for communicating diagnostic information over a communication channel using multicarrier modulation comprising:

transmitting or receiving an initiate diagnostic mode message; and

transmitting a diagnostic message using multicarrier modulation, wherein the diagnostic message comprises the diagnostic information about the communication channel and each bit in the diagnostic message is mapped to at least one DMT symbol.

48. (New) An information storage media comprising information that when executed communicates diagnostic information over a communication channel using multicarrier modulation comprising:

information that when executed receives or transmits an initiate diagnostic mode message; and

information that when executed transmits a diagnostic message using multicarrier modulation, wherein the diagnostic message comprises the diagnostic information about the communication channel and each bit in the diagnostic message is mapped to at least one DMT symbol.

49. (New) In a multicarrier modulation transceiver, a method of communicating diagnostic information over a communication channel using multicarrier modulation comprising:

transmitting or receiving an initiate diagnostic mode message; and

transmitting a diagnostic message using multicarrier modulation with DMT symbols that are mapped to one bit of the diagnostic message, wherein the diagnostic message comprises the diagnostic information about the communication channel.

50. (New) A diagnostic system capable of communicating diagnostic information over a communication channel using multicarrier modulation comprising:

a transceiver capable of transmitting or receiving an initiate diagnostic mode message; and

a message determination module capable of determining and, in cooperation with the transceiver, transmitting a diagnostic message using multicarrier modulation with DMT symbols that are mapped to one bit of the diagnostic message, wherein the diagnostic message comprises the diagnostic information about the communication channel.

51. (New) A multicarrier communication transceiver capable of communicating diagnostic information over a communication channel using multicarrier modulation comprising:

means for transmitting or receiving an initiate diagnostic mode message; and

means for transmitting a diagnostic message using multicarrier modulation with DMT symbols that are mapped to one bit of the diagnostic message, wherein the diagnostic message comprises the diagnostic information about the communication channel.

52. (New) In a multicarrier communication transceiver, a protocol for communicating diagnostic information over a communication channel using multicarrier modulation comprising:

transmitting or receiving an initiate diagnostic mode message; and

transmitting a diagnostic message using multicarrier modulation with DMT symbols that are mapped to one bit of the diagnostic message, wherein the diagnostic message comprises the diagnostic information about the communication channel.

53. (New) An information storage media comprising information that when executed communicates diagnostic information over a communication channel using multicarrier modulation comprising:

information that when executed receives or transmits an initiate diagnostic mode message; and

information that when executed transmits a diagnostic message using multicarrier modulation with DMT symbols that are mapped to one bit of the diagnostic message, wherein the diagnostic message comprises the diagnostic information about the

communication channel.

54. (New) The method of claim 44, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

55. (New) The system of claim 45, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

56. (New) The transceiver of claim 46, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

57. (New) The protocol of claim 47, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

58. (New) The media of claim 48, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

59. (New) The method of claim 49, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

60. (New) The system of claim 50, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

61. (New) The transceiver of claim 51, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

62. (New) The protocol of claim 52, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

63. (New) The media of claim 53, wherein the initiate diagnostic mode message is based on at least one of an initialization failure, a bit rate failure, a CRC error in an initialization message, a CRC error during the normal steady state transmission mode, a forward error correction error, a user request and a CO technician request.

64. (New) The method of claim 44, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

65. (New) The system of claim 45, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain

received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

66. (New) The transceiver of claim 46, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

67. (New) The protocol of claim 47, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

68. (New) The media of claim 48, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

69. (New) The method of claim 49, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

70. (New) The system of claim 50, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

71. (New) The transceiver of claim 51, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

72. (New) The protocol of claim 52, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

73. (New) The media of claim 53, wherein the diagnostic message comprises diagnostic information about the communication channel including at least one of a length of the diagnostic information, a time domain received reverb signal, a frequency domain reverb signal, an amplifier setting, a CO transmitter power spectral density, a frequency domain received idle channel, a signal to noise ratio, bits and gain information, and upstream and or downstream transmission rates.

74. (New) The method of claim 44, wherein the transceiver is a central office modem or a remote terminal modem.

75. (New) The system of claim 45, wherein the transceiver is a central office modem or a remote terminal modem.

76. (New) The transceiver of claim 46, wherein the transceiver is a central office modem or a remote terminal modem.

77. (New) The protocol of claim 47, wherein the transceiver is a central office modem or a remote terminal modem.

78. (New) The method of claim 49, wherein the transceiver is a central office modem or a remote terminal modem.

79. (New) The system of claim 50, wherein the transceiver is a central office modem or a remote terminal modem.

80. (New) The transceiver of claim 51, wherein the transceiver is a central office modem or a remote terminal modem.

81. (New) The protocol of claim 52, wherein the transceiver is a central office modem or a remote terminal modem.

82. (New) In a multicarrier modulation transceiver, a method of communicating diagnostic information over a communication channel using multicarrier modulation comprising:

associating, in a diagnostic message and based on an initiate diagnostic mode message, each bit in the diagnostic message with at least one DMT symbol.

83. (New) In a multicarrier modulation transceiver, a method of communicating diagnostic information over a communication channel using multicarrier modulation comprising:

transmitting, during a diagnostic mode, a diagnostic message using

multicarrier modulation, wherein the diagnostic message comprises the diagnostic information about the communication channel and at least one bit in the diagnostic message is mapped to at least one DMT symbol.

84. (New) Means for communicating diagnostic information over a communication channel using multicarrier modulation comprising:

a diagnostic message, wherein each bit in the diagnostic message is mapped to at least one DMT symbol.

85. (New) Communicating diagnostic information over a communication channel using multicarrier modulation comprising:

communicating a diagnostic message, wherein each bit in the diagnostic message is mapped to at least one DMT symbol.

REMARKS

Applicants respectfully request reconsideration of this application, as amended.

By this amendment, claim 1-43 have been cancelled without prejudice or disclaimer in favor of newly presented claims 44-85.

Applicants believe the newly presented claims are clearly patentably distinguishable from the cited references and respectfully request a Notice of Allowance.

Should the Examiner believe anything further is desirable in order to place the application in even better condition for allowance, the Examiner is encouraged to contact Applicant's undersigned representative at the telephone number listed below.

The Commissioner is hereby authorized to charge to Deposit Account No. 19-1970 (5550-2-CON2) any fees under 37 C.F.R. §§ 1.16 and 1.17 that may be required by this paper and to credit any overpayment to the same Account. If any extension of time is required in connection with the filing of this paper, and has not been separately requested, such extension is hereby petitioned.

Respectfully submitted,

Date: January 12, 2007

By: _____
Jason H. Vick
Reg. No. 45,285

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Electronic Patent Application Fee Transmittal

Application Number:	10619691
Filing Date:	16-Jul-2003
Title of Invention:	Systems and methods for establishing a diagnostic transmission mode and communicating over the same
First Named Inventor/Applicant Name:	David M. Krinsky
Filer:	Jason Vick/Christine Jacquet
Attorney Docket Number:	081513-334
Filed as Large Entity	

Utility Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Independent claims in excess of 3	1201	5	200	1000
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
			Total in USD ($)	**1000**

Electronic Acknowledgement Receipt	
EFS ID:	1435727
Application Number:	10619691
International Application Number:	
Confirmation Number:	7134
Title of Invention:	Systems and methods for establishing a diagnostic transmission mode and communicating over the same
First Named Inventor/Applicant Name:	David M. Krinsky
Customer Number:	62574
Filer:	Jason Vick/Christine Jacquet
Filer Authorized By:	Jason Vick
Attorney Docket Number:	081513-334
Receipt Date:	12-JAN-2007
Filing Date:	16-JUL-2003
Time Stamp:	14:23:56
Application Type:	Utility

Payment information:

Submitted with Payment	yes
Payment was successfully received in RAM	$1000
RAM confirmation Number	1701
Deposit Account	191970
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.16 and 1.17	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)	Multi Part /.zip	Pages (if appl.)
1		AMEND_RESP.pdf	889743	yes	11
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Amendment - After Non-Final Rejection		1	1	
	Claims		2	10	
	Applicant Arguments/Remarks Made in an Amendment		11	11	
Warnings:					
Information:					
2	Fee Worksheet (PTO-06)	fee-info.pdf	8207	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	897950		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 10/619,691	Filing Date 07/16/2003	☐ To be Mailed

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY ☐ RATE ($)	SMALL ENTITY ☐ FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT	01/12/07	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 42	Minus	** 43	= 0	X $ =		OR	X $50=	0
	Independent (37 CFR 1.16(h))	* 14	Minus	***9	= 5	X $ =		OR	X $200=	1000
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	1000

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =		OR	X $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =		OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:
Rozenia Harmon

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,691	07/16/2003	David M. Krinsky	081513-334	7134

62574 7590 10/31/2006

SHERIDAN ROSS P C
SUITE 1200
1560 BROADWAY
DENVER, CO 80202

EXAMINER	
TRAN, KHANH C	
ART UNIT	**PAPER NUMBER**
2611	

DATE MAILED: 10/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

SF

Office Action Summary	Application No.	Applicant(s)	
	10/619,691	KRINSKY ET AL.	
	Examiner	Art Unit	
	Khanh Tran	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 July 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-43* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-43* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1, 3-5, 7-11, 13-15, 17-23, 25-31, 33-39 and 41-42 are rejected under 35 U.S.C. 102(e) as being anticipated by Milbrandt U.S. Patent 6,636,603 B1.

Regarding claim 1, in column 11 lines 25-65, Milbrandt teaches that in some situations, modems 60 and 42 may not establish a connection over the entire frequency spectrum of a subscriber line 16. In these instances where a modem 60 fails to operate over the entire frequency spectrum supported by a subscriber line 16, central office 14 may enter a modem 60 into a diagnostic mode. The foregoing disclosure addresses the claimed limitations "*initiate diagnostic mode trigger that instructs a transmitting modem to forward an initiate diagnostic mode message to a receiving modem*".

In the diagnostic mode, a modem 60 communicates to modem 42 a signal pulse at a known transmit power spectrum density for one or more sub-frequencies within the frequency spectrum over which the modems 60 and 42 may still connect, such as over a sub-frequency in the voice frequency spectrum. The foregoing disclosure addresses

the claimed limitations "*a message determination device that determines a diagnostic link message*".

Modem 42 at subscriber premises 12 receives the data signal that is communicated by modem 60 and determines subscriber line information 28, such as attenuation information, noise information, received signal power spectrum density, or any other information describing the physical or operating characteristics of subscriber line 16 at the one or more sub-frequencies over which the connection between modem 60 and 42 is established. Modem 42 then extrapolates subscriber line information 28 for all frequencies in the frequency spectrum supported by subscriber line 16 and communicates the determined subscriber line information 28 to central office 14 over any achievable range of sub-frequencies using any suitable communication protocols.

The foregoing disclosure addresses the claimed limitations "*a receiving modem diagnostic device that receives the diagnostic link message and determines the accuracy of the diagnostic link message*".

Regarding claim 3, in column 11 lines 50-65, Milbrandt teaches if the number of times a modem 60 fails an attempt to communicate with a modem 42 using a first communication protocol exceeds a predetermined threshold, then server 18 initiates the operation of the particular modem 60 using an alternative communication protocol supported by the particular subscriber line 16. In view of that, the known transmit power spectrum density has been retransmitted a number of times.

Regarding claim 4, as recited in claim 1 rejection, modem 60 communicates to modem 42 a signal pulse at a known transmit power spectrum density for one or more sub-frequencies within the frequency spectrum over which the modems 60 and 42 may still connect, such as over a sub-frequency in the voice frequency spectrum.

Regarding claim 5, as recited in claim 3 rejection, modem 60 communicates to modem 42 a signal pulse at a known transmit power spectrum density for one or more sub-frequencies within the frequency spectrum over which the modems 60 and 42 may still connect, such as over a sub-frequency in the voice frequency spectrum, using a first communication protocol.

Regarding claim 7, as recited in claim 1, Milbrandt teaches that in some situations, modems 60 and 42 may not establish a connection over the entire frequency spectrum of a subscriber line 16. In these instances where a modem 60 fails to operate over the entire frequency spectrum supported by a subscriber line 16, central office 14 may enter a modem 60 into a diagnostic mode.

Regarding claim 8, modems 60 and 42 operate over the entire frequency spectrum (e.g. range of sub-frequencies) of a subscriber line 16. As recited in claim 1 rejection, in instances where a modem 60 fails to operate over the entire frequency spectrum supported by a subscriber line 16, central office 14 may enter a modem 60

into a diagnostic mode. In view of that, modem 60 completes a portion of a modem initialization sequence before entering into a diagnostic mode.

Regarding claims 9-10 and 19-20, modems 60 and 42 are remote modems.

Regarding claim 11, claim is rejected on the same ground as for claim 1 because of similar scope.

Regarding claim 13, claim is rejected on the same ground as for claim 3 because of similar scope.

Regarding claim 14, claim is rejected on the same ground as for claim 4 because of similar scope.

Regarding claim 15, claim is rejected on the same ground as for claim 5 because of similar scope.

Regarding claim 17, claim is rejected on the same ground as for claim 7 because of similar scope.

Regarding claim 18, claim is rejected on the same ground as for claim 8 because of similar scope.

Regarding claim 21, claim is rejected on the same ground as for claim 1 in view of claims 2-3 because of similar scope.

Regarding claim 22, claim is rejected on the same ground as for claim 4 because of similar scope.

Regarding claim 23, claim is rejected on the same ground as for claim 5 because of similar scope.

Regarding claim 25, claim is rejected on the same ground as for claim 7 because of similar scope.

Regarding claim 26, claim is rejected on the same ground as for claim 8 because of similar scope.

Regarding claim 27, claim is rejected on the same ground as for claim 9 because of similar scope.

Regarding claim 28, claim is rejected on the same ground as for claim 10 because of similar scope.

Regarding claim 29, claim is rejected on the same ground as for claim 21 because of similar scope.

Regarding claim 30, claim is rejected on the same ground as for claim 4 because of similar scope.

Regarding claim 31, claim is rejected on the same ground as for claim 5 because of similar scope.

Regarding claim 33, claim is rejected on the same ground as for claim 7 because of similar scope.

Regarding claim 34, claim is rejected on the same ground as for claim 8 because of similar scope.

Regarding claim 35, claim is rejected on the same ground as for claim 1 because of similar scope. Furthermore, referring to FIG. 1, in column 7 line 65 via column 8 line 15, the system management server 18 comprises any suitable computing platform 100 operating a system management application 102. Computing platform 100 includes a processor 104 coupled to one or more output devices 106, such as a display or speaker, and one or more input devices 108, such as a keyboard or mouse. Platform 100 also includes a communication interface 110, such as the appropriate hardware

(e.g., one or more modems, terminal adapters, or network interface cards) and software (e.g., protocol conversion and data processing software) to communicate with modems 60 using interface controller 74. Platform 100 also includes memory 112 that stores application 102 and any associated files, tables, or buffers, in RAM, ROM, CD-ROM, or any other form of magnetic or optical storage.

Regarding claim 36, claim is rejected on the same ground as for claim 21 in view of claim 35 because of similar scope.

Regarding claim 37, claim is rejected on the same ground as for claim 29 in view of claim 35 because of similar scope.

Regarding claim 38, claim is rejected on the same ground as for claim 8 in view of claims 5 and 7 because of similar scope.

Regarding claim 39, claim is rejected on the same ground as for claim 3 because of similar scope.

Regarding claim 41, claim is rejected on the same ground as for claim 38 because of similar scope.

Regarding claim 42, claim is rejected on the same ground as for claim 39 because of similar scope.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 2, 6, 12, 16, 24, 32, 40 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Milbrandt U.S. Patent 6,636,603 B1.

Regarding claim 2, Milbrandt does not explicitly disclose a power control device performing functionality as set forth in the application claim.

In column 11 lines 50-65, Milbrandt further teaches that in those instances where modems 60 and 42 fail to establish a connection using a particular communication protocol, such as an xDSL communication protocol, server 18 may initiate the operation of modem 60 using an alternative communication protocol. Because of selection an alternative communication protocol best adapted to provide optimum transmit power spectrum, one of ordinary skill in the art at the time the invention was made would have recognized that Milbrandt teachings perform equivalent function of increasing transmission power. Server 18 corresponds to the claimed power control device.

Regarding claim 6, Milbrandt does not explicitly disclose the accuracy as set forth in the application claim.

However, in column 11 lines 35-55, Milbrandt further discloses that modem 42 at subscriber premises 12 receives the data signal that is communicated by modem 60 and determines subscriber line information 28, such as attenuation information, noise information, received signal power spectrum density or any other information describing the physical or operating characteristics of subscriber line 16 at the one or more sub-frequencies over which the connection between modem 60 and 42 is established. AS common knowledge of one of ordinary skill in the art, because attenuation information and noise information are directly related to bit error rate, therefore, one of ordinary skill in the art at the time the invention was made would have been motivated to modify Milbrandt teachings to include bit error detection for better describing the physical or operating characteristics of subscriber line 16 at the one or more sub-frequencies.

Regarding claim 12, claim is rejected on the same ground as for claim 2 because of similar scope.

Regarding claim 16, claim is rejected on the same ground as for claim 6 because of similar scope.

Regarding claim 24, claim is rejected on the same ground as for claim 6 because of similar scope.

Regarding claim 32, claim is rejected on the same ground as for claim 6 because of similar scope.

Regarding claim 40, claim is rejected on the same ground as for claim 2 because of similar scope.

Regarding claim 43, claim is rejected on the same ground as for claim 2 because of similar scope.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Milbrandt U.S. Patent 6,631,120 B1 discloses "System And Method For Determining A Communication Protocol Of A Communication Device Operating On Digital Subscriber Lines".

Hershey et al. U.S. Patent 6,175,934 B1 discloses " Method And Apparatus For Enhanced Service Quality Through Remote Diagnostics".

Rosbury et al. U.S. Patent 4,385,384 discloses " Modem Diagnostics And Control System".

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh Tran whose telephone number is 571-272-3007. The examiner can normally be reached on Monday - Friday from 08:00 AM - 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KCT

Khanh Tran
Primary Examiner

Notice of References Cited	Application/Control No. 10/619,691	Applicant(s)/Patent Under Reexamination KRINSKY ET AL.	
	Examiner Khanh Tran	Art Unit 2611	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,636,603	10-2003	Milbrandt, Celite	379/399.01
*	B	US-6,631,120	10-2003	Milbrandt, Celite	370/252
*	C	US-6,175,934	01-2001	Hershey et al.	714/25
*	D	US-4,385,384	05-1983	Rosbury et al.	714/717
	E	US-			
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	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
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NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
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	V	
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	X	

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Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

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PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

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Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 1

Complete it Known	
Application Number	10/619,691
Filing Date	July 16, 2003
First Named Inventor	KRINSKY, DAVID M.
Art Unit	2631
Examiner Name	
Attorney Docket Number	T3653-8765US02

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. [1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
KCT		Cioffi, John M., ADSL Maintenance with DMT, T1E1.4 ADSL Project, Amati Communications Corporation, December 1, 1992, pages 1-14	

Examiner Signature	/Khanh Tran/ (10/27/2006)	Date Considered	

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] See attached Kinds of U.S. Patent Documents. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard St.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

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Substitute for form 1449A/PTO	*Complete if Known*	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT *(use as many sheets as necessary)*	Application Number	New Divisional Application based on USSN: 09/755,173
	Filing Date	July 16, 2003
	First Named Inventor	David M. Krinsky et al.
	Art Unit	2634
	Examiner Name	Kevin Kim
Sheet | | of |	Attorney Docket Number	081513-334

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	U.S. Patent Document Number - Kind Code[2] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
KCT		US-4,566,100	01-21-1986	Mizuno et al.	
KCT		US-5,128,619	07-07-1992	Bjork et al.	
KCT		US-5,608,643	03-04-1997	Wichter et al.	
KCT		US-5,864,602	01-26-1999	Needle	
KCT		US-5,964,891	01-12-1999	Casewell et al.	
KCT		US-6,075,821	06-13-2000	Kao et al.	
KCT		US-6,219,378	04-17-2001	Wu	
KCT		US-6,404,774	06-11-2002	Jenness	
KCT		US-6,411,678	06-25-2002	Tomlinson, Jr. et al.	
KCT		US-6,449,307	09-10-2002	Ishikawa et al.	
KCT		US-6,512,789	01-28-2003	Mirfakhraei	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3] Number[4] Kind Code[5] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Application of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
KCT		WO 97/01900	01-16-1997	Pfeiffer		
KCT		WO 99/26375	05-27-1999	Hakanson		
KCT		WO 99/63427	12-09-1999	Eichen et al.		
KCT		WO 00/64130	10-26-2000	Rudinski et al.		
KCT		EP 0 889 615	01-07-1999	Liu et al.		
KCT		GB 2 303 032	02-05-1997	Chun		

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
KCT		Boets P. et al.: *"The Modeling Aspect of Transmission Line Networks"* Proceedings Of The Instrumentation And Measurement Technology Conference, US, New York, IEEE, 12 May 1992, pages 137-141, XP000343913 ISBN: 0-7803-0640-6.	
KCT		LEWIS L. et al. "Extending Trouble Ticket System To Fault Diagnostics" IEEE Network, IEEE Inc. New York, US, 1 November 1993, pages 44-51, XP 000575228.	

Examiner Signature	/Khanh Tran/ (10/27/2006)	Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.
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[1] Applicant's unique citation designation number (optional). [2] Applicant is to place a check mark here if English language Translation is attached.

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Index of Claims

Application/Control No.	Applicant(s)/Patent under Reexamination
10/619,691	KRINSKY ET AL.
Examiner	**Art Unit**
Khanh Tran	2611

√	Rejected	–	(Through numeral) Cancelled	N	Non-Elected	A	Appeal
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Claim		Date
Final	Original	10/27/06
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Bib Data Sheet

CONFIRMATION NO. 7134

SERIAL NUMBER	FILING OR 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
10/619,691	07/16/2003 RULE	375	2611	081513-334

APPLICANTS

David M. Krinsky, Acton, MA;
Robert Edmund Pizzano JR., Stoneham, MA;

**** CONTINUING DATA ***************************

This application is a DIV of 09/755,173 01/08/2001 PAT 6,658,052 which claims benefit of 60/224,308 08/10/2000 YES
and claims benefit of 60/174,865 01/07/2000 YES
KCT

**** FOREIGN APPLICATIONS ******************** NO
KCT

IF REQUIRED, FOREIGN FILING LICENSE GRANTED
** 07/07/2004

Foreign Priority claimed	STATE OR COUNTRY	SHEETS DRAWING	TOTAL CLAIMS	INDEPENDENT CLAIMS
☐ yes ☒ no	MA	2	43	9
35 USC 119 (a-d) conditions met ☐ yes ☐ no ☐ Met after Allowance				
Verified and Acknowledged Khanh cong Tran KCT Examiner's Signature Initials				

ADDRESS
62574

TITLE

Systems and methods for establishing a diagnostic transmission mode and communicating over the same

FILING FEE RECEIVED	
1668	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:

- ☐ All Fees
- ☐ 1.16 Fees (Filing)
- ☐ 1.17 Fees (Processing Ext. of time)
- ☐ 1.18 Fees (Issue)
- ☐ Other _____
- ☐ Credit

Search Notes	Application/Control No.	Applicant(s)/Patent under Reexamination	
	10/619,691	KRINSKY ET AL.	
	Examiner	Art Unit	
	Khanh Tran	2611	

SEARCHED			
Class	Subclass	Date	Examiner
375	222,225 227,220	10/27/2006	KCT
370	252,282		
379	22.02		
	22.04		
	27.01		
	27.03		

INTERFERENCE SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES (INCLUDING SEARCH STRATEGY)		
	DATE	EXMR
Search EAST	10/27/2006	KCT
Inventor Name Searches		