Case 1:15-cv-00121-RGA Docum	ent 42 Filed 03/13/15	Page 1 of 4 PageID #: 1558
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AO 120 (Rev. 08/10)

Mail Stop 8	REPORT ON THE
TO: Director of the U.S. Patent and Trademark Office	FILING OR DETERMINATION OF AN
P.O. Box 1450	ACTION REGARDING A PATENT OR
Alexandria, VA 22313-1450	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 \_\_\_\_\_\_\_ Transferred to Delaware from Alabama \_\_\_\_\_\_ on the following

DOCKET NO. 15-cv-121-RGA	DATE FILED 7/17/2014	U.S. DISTRICT COURT 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				
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In the above-entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED 3/13/2015	INCLUDED BY	Iment	Answer	Cross Bill	Other Pleading
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK		HOLDER	R OF PATENT OR T	RADEMARK
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
		1

Case 1:15-cv-00121-RGA Document 42 Filed 03/13/15 Page 2 of 4 PageID #: 1559 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

Case 1:15-cv-00121-RGA	Document 42	Filed 03/13/15	Page 3 of 4 PageID #: 1560
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TQ Delta, LLC
TQ Delta, LLC

Case 1:15-cv-00121-RGA Document 42 Filed 03/13/15 Page 4 of 4 PageID #: 1561 Attachment #2

	PATENT OR	DATE OF PATENT	HOLDER OF PATENT OR TRADEMARK
	TRADEMARK NO.	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

# Case 1:14-cv-00954-UNA Document 3 Filed 07/17/14 Page 1 of 2 PageID #: 592

AO 120 (Rev. 08/10)

то:	Mail Stop 8	
	Director of the U.S. Patent and Trademark Office	
		P.O. Box 1450
		Alexandria, VA 22313-1450
1		

### **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 on the following District of Delaware filed in the U.S. District Court

DOCKET NO.	DATE FILED 7/18/2014	U.S. DISTRICT COURT 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		
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In the above-entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY			C. Other Disading
		dment 🗌 Answe	r 🗌 Cross Bill	Other Pleading
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	НС	DLDER 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

	PATENT OR	DATE OF PATENT	HOLDER OF PATENT OR TRADEMARK
	TRADEMARK NO.	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
$\frac{27}{28}$	US 8,276,048 B2	9/25/2012	TQ Delta, LLC
<u>28</u> 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: Sent: To: Subject:	ded_nefreply@ded.uscourts.gov Wednesday, November 20, 2013 4:56 PM ded_ecf@ded.uscourts.gov Activity in Case 1:13-cv-01835-RGA TQ Delta LLC v. Pace Americas Inc. Patent/Trademark Report to Commissioner
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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 <u>bfarnan@farnanlaw.com</u>, <u>tfarnan@farnanlaw.com</u>

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: Sent:	ded_nefreply@d <b>ed.us</b> courts.gov Wednesday, November 20, 2013 5:07 PM
То:	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 <u>bfarnan@farnanlaw.com</u>, <u>tfarnan@farnanlaw.com</u>

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

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

# Case 1:13-cv-02013-UNA Document 3 Filed 12/09/13 Page 1 of 2 PageID #: 504

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

DOCKET NO.	DATE FILED 12/9/2013		STRICT COURT District of Delaware
PLAINTIFF TQ Delta, LLC			DEFENDANT 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	dment 🗌 Answer	Cross Bill Other Pleading
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLD	ER OF PATENT OR TRADEMARK
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In the above--entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT		
		DATE
CLERK	(BY) DEPUTY CLERK	DATE

Case 1:12 ov 02012 UNA	Document 3	Filed 12/09/13	Page 2 of 2 PageID #: 505
Case 1:13-cv-02013-UNA	Document 5	Filed 12/03/13	Tuge 2 of 2 Tuge 2

	HOLDER OF PATENT OR TRADEMARK
	TQ Delta, LLC
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	TQ Delta, LLC
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	TQ Delta, LLC
10/5/2010	TQ Delta, LLC
7/12/2011	TQ Delta, LLC
4/16/2013	TQ Delta, LLC
9/14/2010	TQ Delta, LLC
2/15/2011	TQ Delta, LLC
11/16/2010	TQ Delta, LLC
8/4/2009	TQ Delta, LLC
8/7/2012	TQ Delta, LLC
4/30/2013	TQ Delta, LLC
11/11/2008	TQ Delta, LLC
8/20/2013	TQ Delta, LLC
7/12/2011	TQ Delta, LLC
4/12/2011	TQ Delta, LLC
6/11/2013	TQ Delta, LLC
7/12/2011	TQ Delta, LLC
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	TQ Delta, LLC
11/16/2010	TQ Delta, LLC
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and the second	TQ Delta, LLC
	4/16/2013 9/14/2010 2/15/2011 11/16/2010 8/4/2009 8/7/2012 4/30/2013 11/11/2008 8/20/2013 7/12/2011 4/12/2011 6/11/2013 7/12/2011 9/3/2002 5/7/2013

AO 120 (Rev. 08/10)

	Mail Stop 8
TO:	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 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 Northern District of Texas, Dallas Division
3:12-cv-1462-L	5/10/2012	
PLAINTIFF		DEFENDANT
Boulie 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
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# In the above-entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED 12/9/2013	INCLUDED BY	dment 🗌 Answer 🔲 Cross Bill 📋 Other Pleading
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 Karen Mitchell	(BY) DEPUTY CLERK s/A. Lowe-Monserrate	DATE 12/10/2013

### Case 1:13-cv-01835-UNA Document 3 Filed 11/04/13 Page 1 of 2 PageID #: 286

AO 120 (Rev. 08/10)

то:	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

DOCKET NO.	DATE FILED 11/4/2013	U.S. DISTRICT COURT 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		
2		
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#### In the above-entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY				
		ment [	Answer	Cross Bill	Other Pleading
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK		HOLDEI	R OF PATENT OR T	TRADEMARK
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In the above-entitled case, the following decision has been rendered or judgement issued:

(BY) DEPUTY CLERK	DATE
-	(BY) DEPUTY CLERK

	PATENT OR	DATE OF PATENT	HOLDER OF DATENT OF TRADEMARK
	TRADEMARK NO.	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
9	US 8,422,511 B2	4/16/2013	TQ Delta, LLC
10	US 7,889,784 B2	2/15/2011	TQ Delta, LLC
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

## Case 1:13-cv-01835-UNA Document 3 Filed 11/04/13 Page 2 of 2 PageID #: 287

Case 1:13-cv-01836-UNA Document 3 Filed 11/04/13 Page 1 of 2 PageID #: 362

AO 120 (Rev. 08/10)

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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 11/4/2013	U.S. DISTRICT COURT 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
I 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

	PATENT OR	DATE OF PATENT	HOLDER OF DATENT OF TRADEMARK
	TRADEMARK NO.	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

# Case 1:13-cv-01836-UNA Document 3 Filed 11/04/13 Page 2 of 2 PageID #: 363

UNITED STA	ates Patent and Tradem	UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS PC. Box 1450 Alexandra, Virginia 22313-1450 www.usprogov		
APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE	
10/619,691	07/16/2003	David M. Krinsky		
			<b>CONFIRMATION NO. 7134</b>	
62574		POA ACC	EPTANCE LETTER	
Jason H. Vick				
Sheridan Ross, PC			OC000000057783463*	
Suite # 1200		^	000000057783463*	
1560 Broadway				
Denver, CO 80202				

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

page 1 of 1

UNITED STA	tes Patent and Tradem	UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS PO. Box 1450 Alexandra, Virguia 22313-1450 www.uspi.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	
62574 Jason H. Vick Sheridan Ross, PC Suite # 1200 1560 Broadway Denver, CO 80202			CONFIRMATION NO. 7134 F ATTORNEY NOTICE	

# 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)
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Approved for use through 11/30/2014. OM 8061-0035 Approved for use through 11/30/2014. OM 8061-0035 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							
	reby revo er 37 CFI			ttorney	given in the	applicat	ion identified in th	e attached statement
	reby appo							
	Practi	tioners as	sociated with Customer N	umber:	62574			
	OR				02572	r		
	Practi	tioner(s) r	named below (if more than	ten pate	nt practitioners	are to be r	amed, then a custom	er number must be used):
	_ 		Name	Regi	stration	<b></b>	Name	Registration
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As at	ttornev(s) o	r agent(s)	) to represent the undersid	ned befr	ore the United S	itates Pate	nt and Trademark Off	fice (USPTO) in connection with
any a	and all pate	nt applica		undersig				rds or assignments documents
			pondence address for the		on Identified In	the attache	ad statement under 37	7 CER 3 73(c) to:
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	The a	ddress as	ssociated with Customer N	lumber:	62574	ŀ		
OR								]
	Firm or Individual	Name						
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	City				State			Zip
	Country		,,,					- L
	Telephon	Α				Email		
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Assi	gnee Name	and Add	ress: TQ DELTA, LLC 805 Las Cimas I Austin, Texas 78	Parkwa	y, Suite 240			
								valent) is required to be
File	d in each i	applicati	on in which this form is	s used,	The statemer	it under 3	7 CFR 3.73(c) may	be completed by one of of Attorney is to be filed.
H					RE of Assign			
	The	a individu	ual whose signature and				rized to act on beh	-
Sigr	nature	~	nach	Ken	e	~	Date 10/	4/12
Nan	ne	Mark K. Roche Telephone 512-609-1810						
Title	)	Mana	aging Director			, and a second state of the second state of th	L	
This co	liection of int			32 and 1 3	3 The informatio	n in required	l lo obtain ar retain a ber	pefit by the public which is to file (and

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 the (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 settimated 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	no				
File Listin	g:						
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)		
1		EntityStatus 373c w POA.pdf	422445	yes	4		
			f429657d255a7cfb0cb985ddb690d8f4cdd 3b5a5	,	·		

	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:		- 1		
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.

### 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 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
Under the Paperwork Reduction Act o	Approved for use through 01/31/2013. OMB 0651-003 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCI f 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number
	STATEMENT UNDER 37 CFR 3.73(c)
Applicant/Patent Owner: TQ DELT	
Application No./Patent No.: 7,570,6	586 Filed/Issue Date: August 4, 2009
	R 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 <b><u>one</u> of options 1, 2, 3 or 4 below</b> ):
<ol> <li>The assignee of the entire right</li> </ol>	ght, title, and interest.
2. 🗌 An assignee of less than the	entire right, title, and interest (check applicable box):
holding the balance of the int	e) of its ownership interest is%. Additional Statement(s) by the owners terest <u>must be submitted</u> to account for 100% of the ownership interest.
There are unspecified pe right, title and interest are:	rcentages of ownership. The other parties, including inventors, who together own the entire
right, title, and interest. 3.  The assignee of an undivide	y the owner(s) holding the balance of the interest <u>must be submitted</u> to account for the entir d interest in the entirety (a complete assignment from one of the joint inventors was made). s, who together own the entire right, title, and interest are:
right, title, and interest. 4.  The recipient, via a court pro-	the owner(s) holding the balance of the interest <u>must be submitted</u> to account for the entire ceeding or the like ( <i>e.g.</i> , bankruptcy, probate), of an undivided interest in the entirety (a
	est was made). The certified document(s) showing the transfer is attached.
A. 🗌 An assignment from the inve	or 3 above (not option 4) is evidenced by either (choose <u>one</u> of options A or B below): entor(s) of the patent application/patent identified above. The assignment was recorded in a Trademark Office at Reel, Frame, or for which a copy
3. 🗸 A chain of title from the inver	ntor(s), of the patent application/patent identified above, to the current assignee as follows:
	and Robert Edmund Pizzano, Jr. To: AWARE, INC.
The document was	s recorded in the United States Patent and Trademark Office at , Frame 0842, or for which a copy thereof is attached. 
	s recorded in the United States Patent and Trademark Office at, Frame_0937, or for which a copy thereof is attached.

[Page 1 of 2] This collection of information is required by 37 CFR 3.73(b). 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. 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/AIA/96 (08-12) Approved for use through 01/31/2013. OMB 0651-0031

Under the	e Paperwork Reductio	n Act of 1995, no persons are r	U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMM required to respond to a collection of information unless it displays a valid OMB control nu
		<b>STATEME</b>	NT UNDER 37 CFR 3.73(c)
3. From:			То:
	The docume	ent was recorded in the	United States Patent and Trademark Office at
	Reel	, Frame	, or for which a copy thereof is attached.
4. From:			То:
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5. From:			То:
	The docume	ent was recorded in the I	United States Patent and Trademark Office at
	Reel	, Frame	, or for which a copy thereof is attached.
6. From:			То:
	The docume	ent was recorded in the	United States Patent and Trademark Office at
	Reel	, Frame	, or for which a copy thereof is attached.
Ad	ditional documen	ts in the chain of title are	e listed on a supplemental sheet(s).
As re	equired by 37 CFF	R 3.73(c)(1)(i), the docur	mentary evidence of the chain of title from the original owner to the itted for recordation pursuant to 37 CFR 3.11.
[NOT	E: A separate co	py (i.e., a true copy of th	he original assignment document(s)) must be submitted to Assignmer record the assignment in the records of the USPTO. See MPEP 302.
The undersig	gned (whose title i	s supplied below) is aut	thorized to act on behalf of the assignee.
			S Nov 17
Signature			<u>S</u> №00 72 Date
Jason ⊦	ł. Vick		45,285
Printed or Ty	rped Name		Title or Registration Number

[Page 2 of 2]



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

Mail Date: 04/20/2010

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

Applicant: David M. Krinsky: DECISION ON REQUEST FORPatent Number: 7570686: RECALCULATION OF PATENTIssue Date: 08/04/2009: TERM ADJUSTMENT IN VIEWAppliction No: 10/619,691: OF WYETHFiled: 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  $37 \ \text{CFR} 1.705 \ \text{(d)};$ 

(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)

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 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 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 & Fel 10
Name (Print/Typed) Jason H. Vick	Registration Number 45,285
<b>Note:</b> Signatures of all the inventors or assignees of record of the entire interest or the CFR 1.33 and 11.18. Please see 37 CFR 1.4(d) for the form of the signature. If necess see below*.	ir representative(s) are required in accordance with 37 ary, submit multiple forms for more than one signature,
*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.

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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 wi	th 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		PTA Recalculation.pdf	62038	no	1		
	Wyeth		Tri_necalculation.par	213d0df0194fc3f8efa9700f23927364f7096 466	110	ľ		
Warnings:								
Information:								

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.



1560 Broadway Denver, CO 80202

## UNITED STATES PATENT AND TRADEMARK OFFICE

A CONTRACT OF CONTRACT					
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 Ros					
Suite # 1200					

## **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 DEPARTMENT OF COMMERCE

	'ED STATES PATENT A	AND TRADEMARK OFFICE	UNITED STATES DEPAR United States Patent and Address: COMMISSIONER F P.O. Box 1450 Alexandria, Virginia 22: www.usplo.gov	Trademark Office FOR PATENTS
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 Jason H. Vick	7590 07/06/2009		EXAM	INER
Sheridan Ross,	PC		TRAN, K	HANH C
Suite # 1200 1560 Broadway	V		ART UNIT	PAPER NUMBER
Denver, CO 80			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

	Application No.	Applicant(s)
Supplemental	10/619,691	KRINSKY ET AL.
Notice of Allowability	Examiner	Art Unit
	KHANH C. TRAN	2611
The MAILING DATE of this communication app All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85 NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT R of the Office or upon petition by the applicant. See 37 CFR 1.31	ears on the cover sheet with the G (OR REMAINS) CLOSED in this ) or other appropriate communica RIGHTS. This application is subje	application. If not included ation will be mailed in due course. <b>THIS</b>
1. This communication is responsive to the correction of the	specification.	
2. The allowed claim(s) is/are		
<ul> <li>3. Acknowledgment is made of a claim for foreign priority of a) All b) Some* c) None of the:</li> <li>1. Certified copies of the priority documents hav</li> <li>2. Certified copies of the priority documents hav</li> <li>3. Copies of the certified copies of the priority documents hav</li> <li>3. Copies of the certified copies of the priority documents hav</li> <li>4. Applicant has THREE MONTHS FROM THE "MAILING DATE" noted below. Failure to timely comply will result in ABANDONI THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.</li> <li>4. A SUBSTITUTE OATH OR DECLARATION must be submin INFORMAL PATENT APPLICATION (PTO-152) which give</li> </ul>	e been received. e been received in Application No ocuments have been received in t ' of this communication to file a re MENT of this application. nitted. Note the attached EXAMIN	D this national stage application from the aply complying with the requirements NER'S AMENDMENT or NOTICE OF
5. CORRECTED DRAWINGS ( as "replacement sheets") mu	st be submitted.	
(a) ☐ including changes required by the Notice of Draftsper		TO-948) attached
1) hereto or 2) to Paper No./Mail Date		,
(b) ☐ including changes required by the attached Examiner Paper No./Mail Date		ne Office action of
Identifying indicia such as the application number (see 37 CFR each sheet. Replacement sheet(s) should be labeled as such in		
6. DEPOSIT OF and/or INFORMATION about the depo attached Examiner's comment regarding REQUIREMENT		
Attachment(s) 1.  Notice of References Cited (PTO-892) 2.  Notice of Draftperson's Patent Drawing Review (PTO-948)	5. ☐ Notice of Inform 6. ☐ Interview Summ Paper No./Mail	nary (PTO-413),
3. Information Disclosure Statements (PTO/SB/08),	7. 🛛 Examiner's Ame	
Paper No./Mail Date 4.  Examiner's Comment Regarding Requirement for Deposit of Biological Material	8.	ement of Reasons for Allowance
/KHANH C. TRAN/		
Primary Examiner, Art Unit 2611		
U.S. Patent and Trademark Office PTOL-37 (Rev. 08-06) N	otice of Allowability	Part of Paper No./Mail Date 20090630



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
				EXAMINER
Jason H. Vick Sheridan Ross, PC			KH.	ANH C TRAN
Suite # 1200 1560 Broadway Denver, CO 80202			ART UNIT	PAPER
Deriver, CO 80202			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)

Application/Control Number: 10/619,691 Art Unit: 2611

# 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.

## Application/Control Number: 10/619,691 Art Unit: 2611

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

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Substitute for form 1449A/PTO			Complete if Known									
INFORMATION DISCLOSURE			Application Number			New Divisional Application based on US3N: 09/755,173-						
STATEMENT BY APPLICANT						ly 16, 2003						
1	(use as n	any sheets as	necessa	n)		First Named Inventor			David	M.	Krinsky et al.	
1						Art Unit			2634			
						Examiner Name			Kevit	Ki	m	
Sheet			of			Attorney Docket Nun	tber		0815	3-3	34	
	U.S. PATENT DOCUMENTS											
Examiner Initials	Cite No.'		U.S. Patens Documens ber - Kind Code <sup>2</sup> (J known)		Publication Date Name of Patt MM-DD-YYYY Applicant of Cato				Relevant			
KCT		US-4,5	66 100	<u>,                                     </u>	01-2	21-1986		Mizuno et al			•	
KCT		US-5,1	·····			07-1992		Bjork et al.				
KCT		US-5,6	_			04-1997		Wichter et a	1			
KĊT	+	US-5.8		and the second se		26-1999		Needle	<b></b>			
KCT	+	US-5,9		and the second se	_	12-1999		Casewell et	al			
KCT	+	US-6.0				3-2000		Kao et al.				
KCT		US-6,2			_	7-2001		Wu				
KCT		US-6,4			_	1-2002		Jenness				
ŔČŤ		US-6,4			06-25-2002		Tomlinson, Jr. et al.					
KCT		US-6,4			09-10-2002			Ishikawa et al.				
KCT	+	US-6,5				28-2003		Mirfakhraei				
					FOR	EIGN PATENT DO	CUME	ENTS				
Examiner Initials	Cine No.1	Forei	igo Patent	Document	1	Publication Date MM-DD-YYYY	Name of Prientee or					
		Country Coo	de <sup>1</sup> Numb	Kind Co af (if buo:		MM-DL-TTT	Арри	ication of Cited Docum	ent Figures Appear		T <sup>4</sup>	
KCT		WO 97				01-16-1997	Pfei					
KCT		WO 99				)5-27-1999		anson				
KCT		WO 99				12-09-1999		en et al.				
KCT		WO 00				0-26-2000		inski et al.				
KCT		EP 0 88				01-07-1999		et al.	· · ·			
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			0	THER PRI	OR AR	T - NON PATENT LI	TERAT	URE DOCUMEN	TS			
Examiner Cite Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the Initials No. <sup>1</sup> item (book, magazine, journal, serial, symposium, catalog, etc.)., date, page(s), volume-issue number(s), publisher, city and/or country where published.						T <sup>2</sup>						
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	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 Date Considered /Khanh Tran/ (10/27/2006) Signature

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

attached.

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Page 34 of 303

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	ED STATES PATENT A	AND TRADEMARK OFFICE	UNITED STATES DEPAR United States Patent and Address: COMMISSIONER F P.O. Box 1450 Alexandria, Virginia 22: www.usplo.gov	Trademark Office OR PATENTS
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 Jason H. Vick	7590 06/02/2009		EXAM	INER
Sheridan Ross,	PC		TRAN, K	HANH C
Suite # 1200 1560 Broadway	J		ART UNIT	PAPER NUMBER
Denver, CO 80			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

	Application No.	Applicant(s)
Supplemental	10/619,691	KRINSKY ET AL.
Notice of Allowability	Examiner	Art Unit
	KHANH C. TRAN	2611
The MAILING DATE of this communication app All claims being allowable, PROSECUTION ON THE MERITS Is herewith (or previously mailed), a Notice of Allowance (PTOL-8 NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT of the Office or upon petition by the applicant. See 37 CFR 1.37	S (OR REMAINS) CLOSED in th 5) or other appropriate communi <b>RIGHTS.</b> This application is sub	nis application. If not included cation will be mailed in due course. <b>THIS</b>
1. This communication is responsive to the IDS filed on 5/20	<u>0/2009</u> .	
2. The allowed claim(s) is/are		
<ul> <li>3. Acknowledgment is made of a claim for foreign priority a)</li> <li>a) All b) Some* c) None of the:</li> <li>1. Certified copies of the priority documents have</li> <li>2. Certified copies of the priority documents have</li> <li>3. Copies of the certified copies of the priority documents have</li> <li>4. Copies of the certified copies of the priority documents have</li> <li>3. Copies of the certified copies of the priority documents have</li> <li>4. Certified copies of the certified copies of the priority documents have</li> <li>5. Certified copies of the certified copies of the priority documents have</li> <li>6. Certified copies not received:</li> </ul>	ve been received. ve been received in Application I	No
Applicant has THREE MONTHS FROM THE "MAILING DATE noted below. Failure to timely comply will result in ABANDON THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.	IMENT of this application.	
4. A SUBSTITUTE OATH OR DECLARATION must be sub INFORMAL PATENT APPLICATION (PTO-152) which gi		
5. CORRECTED DRAWINGS ( as "replacement sheets") m	ust be submitted.	
(a) 🔲 including changes required by the Notice of Draftspe		PTO-948) attached
1) 🔲 hereto or 2) 🔲 to Paper No./Mail Date		
(b) including changes required by the attached Examine Paper No./Mail Date	r's Amendment / Comment or in	the Office action of
ldentifying indicia such as the application number (see 37 CFR each sheet. Replacement sheet(s) should be labeled as such in		
6. DEPOSIT OF and/or INFORMATION about the dep attached Examiner's comment regarding REQUIREMENT		
<ul> <li>Attachment(s)</li> <li>1. □ Notice of References Cited (PTO-892)</li> <li>2. □ Notice of Draftperson's Patent Drawing Review (PTO-948</li> <li>3. ☑ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date</li> <li>4. □ Examiner's Comment Regarding Requirement for Deposit of Biological Material</li> </ul>	) 6. Interview Sum Paper No./Ma 7. Examiner's Ar 8. Examiner's St	mal Patent Application mary (PTO-413), ail Date nendment/Comment atement of Reasons for Allowance
	9. 🗌 Other	
/KHANH C. TRAN/ Primary Examiner, Art Unit 2611		
U.S. Patent and Trademark Office PTOL-37 (Rev. 08-06)	Notice of Allowability	Part of Paper No./Mail Date 20090528



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	4	ATTORNEY DOCKET NO.
10619691	7/16/2003	KRINSKY ET AL.		5550-2-CON2
			E	EXAMINER
Jason H. Vick Sheridan Ross, PC			КНА	NH C TRAN
Suite # 1200 1560 Broadway Denver, CO 80202			ART UNIT	PAPER
Denver, CO 60202			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)

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

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

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

					U.S.I	PATENTS			Remove		
Examiner Initial*	Cite No	Patent Number	Kind Code <sup>1</sup>	Issue [	)ate	of cited Decument		,Columns,Lines where ant Passages or Releva s Appear			
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Examiner Initial*	Cite No	Foreign Document Number³			Kind Code⁴	Publication Date	Applicant of cited		Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear		T⁵
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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /KCT/ EFS Web 2.1.13

# INFORMATION DISCLOSURE 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/	/KCT/ 1 Examiner's First Report for Australian Patent Application No. 2008203520, mailed March 9, 2009 (5550-2-PAU4-DIV)							
If you wis	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)			/Khanh Tran/ (05/28/2009)	Date Considered	05/28/2009			
			reference considered, whether or not citation is in confor ormance and not considered. Include copy of this form wi					
Standard S <sup>4</sup> Kind of do	T.3). <sup>3</sup> F cument	For Japa by the	TO Patent Documents at <u>www.USPTO.GOV</u> or MPEP 901.04. <sup>2</sup> Enter or panese patent documents, the indication of the year of the reign of the E appropriate symbols as indicated on the document under WIPO Standa on is attached.	mperor must precede the se	rial number of the patent doo	cument.		

# EFS Web 2.1.13 ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /KCT/

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

		CERTIFICATION	ISTATEMENT			
Plea	ase see 37 CFR 1	.97 and 1.98 to make the appropriate selecti	on(s):			
X	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	Ł					
	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 ce	rtification statement.				
×	Fee set forth in 3	37 CFR 1.17 (p) has been submitted herewith	۱.			
	None					
	ignature of the ap n of the signature.	SIGNA plicant or representative is required in accord		l8. Please see CFR 1.4(d) for the		
Sigr	nature	/Jason H. Vick/	Date (YYYY-MM-DD)	2009-05-20		
Nan	ne/Print	Jason H. Vick	Registration Number	45285		
pub 1.14 app requ Pate FEE	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. <b>SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.</b>					

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /KCT/ EFS Web 2.1.13

# **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:

- 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).
- 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: <u>Mail</u> Mail Stop ISSUE FEE Commissioner for Patents P.O. Box 1450

- Alexandria, Virginia 22313-1450 (571)-273-2885
- or <u>Fax</u>

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. 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. CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address) 62574 7590 05/15/2009 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 ISSITE FEE address above, or being fassimile Jason H. Vick Sheridan Ross, PC

Mail Stop ISSUE FEE address above, or being facsimi USPTO (571) 273-2885, on the date indicated below. (Depositor's name	addressed to the transmitted to the	Suite # 1200 1560 Broadway				
(Signature		Denver, CO 80202				
(Date						
ATTORNEY DOCKET NO. CONFIRMATION NO.	FIRST NAMED INVENTOR	FILING DATE	APPLICATION 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
EXAM	IINER	ART UNIT	CLASS-SUBCLASS			
TRAN, K	HANH C	2611	375-222000			
CFR 1.363). Change of corresp Address form PTO/SI	ence address or indicatio ondence address (or Cha B/122) attached. lication (or "Fee Address )2 or more recent) attach	nge of Correspondence	or agents OR, alternativ (2) the name of a single registered attorney or a	3 registered patent attorn vely, e firm (having as a memb ugent) and the names of u raeys or agents. If no nam	pera 2 Jason	AN ROSS P.C. H. Vick
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) Aware, Inc. Bedford, MA						
Please check the appropriate	riate assignee category or	categories (will not be p	rinted on the patent):	Individual A.Corporat	ion or other private group	pentity 🖵 Government
	are submitted: No small entity discount   # of Copies	permitted)	b. Payment of Fee(s): (Plea A check is enclosed. Payment by credit car AThe Director is hereby overpayment, to Depo	d. Form PTO-2038 is atta	ached.	
	tus (from status indicate as SMALL ENTITY stat	,	b. Applicant is no lon	ger claiming SMALL EN	TITY status. See 37 CFR	(1.27(g)(2).
NOTE: The Issue Fee ar interest as shown by the	nd Publication Fee (if req records of the United Sta	uired) will not be accepte ites Patent and <u>Trademar</u>	d from anyone other than t Office.	he applicant; a registered	attorney or agent; or the	assignee or other party in
Authorized Signature	Jason	H. Vick		Date2 ` Registration No	~~ <sup>01</sup> 45,285	
Alexanoria, virginia 22.	515-1450.		on is required to obtain or i 1.14. This collection is ess y depending upon the indiv the Chief Information Offic COMPLETED FORMS To complete to a collection of indi-			
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PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

OMB 0651-0033

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Electronic Patent Application Fee Transmittal							
Application Number:	10	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:	Da	vid M. Krinsky					
Filer:	Jas	on Vick/Christine Ja	acquet				
Attorney Docket Number:	55	50-2-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:	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	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)					
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	any Additional Fees required under 37 C.F any Additional Fees required under 37 C.F				
File Listin	g:				
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		COMMENTS_REASONS_FOR_A LLOW_AND_ISSUE_FEE_TRANS	258413	yes	2
		.pdf	e0847827de95abf5d82db30f07b225abcb0 c51b2	yes	-
	Multip	oart Description/PDF files in .	zip description		
	Document De	scription	Start	E	nd
	Post Allowance Commur	ication - Incoming	1		1
	Issue Fee Paymen	t (PTO-85B)	2		2
Warnings:					
Information:					
2	Fee Worksheet (PTO-875)	fee-info.pdf	32375	no	2
_			7dfe6ba501fdc75ac6089292e6286ff9e951 7e3e		_
Warnings:					
Information:			1		
		Total Files Size (in bytes)	29	90788	
characterized Post Card, as <u>New Applica</u> If a new appl 1.53(b)-(d) an Acknowledg <u>National Stac</u> If a timely su U.S.C. 371 an national stag <u>New Internat</u> If a new inter an internatio and of the In	ledgement Receipt evidences receip d by the applicant, and including par- d described in MPEP 503. tions Under 35 U.S.C. 111 ication is being filed and the applican and MPEP 506), a Filing Receipt (37 CF ement Receipt will establish the filin ge of an International Application un bmission to enter the national stage and other applicable requirements a F ge submission under 35 U.S.C. 371 w tional Application Filed with the USF contaional application is being filed a bonal filing date (see PCT Article 11 an ternational Filing Date (Form PCT/Ru urity, and the date shown on this Ack on.	ge counts, where applicable. tion includes the necessary of R 1.54) will be issued in due g date of the application. <u>Inder 35 U.S.C. 371</u> of an international applicati form PCT/DO/EO/903 indicati ill be issued in addition to the <u>PTO as a Receiving Office</u> and the international application d MPEP 1810), a Notification D/105) will be issued in due c	It serves as evidence omponents for a filin course and the date s on is compliant with ng acceptance of the Filing Receipt, in du ion includes the nece of the International J ourse, subject to pres	e of receipt s ag date (see shown on th the condition application e course. ssary comp Application scriptions co	similar to a 37 CFR is ons of 35 as a onents for Number oncerning

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:	<b>Confirmation No.:</b>	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: 2 Jun 16

By:

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

Doc description: Information Disclosure Statement (IDS) Filed

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

	Application Number		10619691	
	Filing Date		2003-07-16	
INFORMATION DISCLOSURE	First Named Inventor	Krinsł	<y< th=""></y<>	
STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Art Unit		2611	
	Examiner Name TRAN		AN, KHANH C	
	Attorney Docket Numb	er	5550-2-CON2	

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Examiner Initial*	Cite No	Patent Number	Kind Code <sup>1</sup>	Issue Da	ate	of sited Document			s,Columns,Lines where rant Passages or Releves Appear		
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Examiner Initial*	Cite No	Publication Number	Kind Code <sup>1</sup>	Publicat Date	ion	Name of Pate of cited Docu		nns,Lines where ssages or Relevant ear			
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				FOREIG	N PAT	ENT DOCUM	ENTS		Remove		
Examiner Initial*	Cite No	Foreign Document Number³	Country Code <sup>2</sup>		Kind Code⁴	Publication Date	Name of Patentee Applicant of cited Document	eor \  \	where Rel	or Relevant	<b>T</b> 5
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If you wis	h to ao	dd additional Foreign Pa	atent Do	cument c	itation	information pl	ease click the Add	button	Add		
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Examiner Initials*	Examiner Cite Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item									T5	

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

	1	Exam	miner's First Report for Australian Patent Application No. 2008203520, mailed March 9, 2009 (5550-2-PAL	J4-DIV)	
If you wis	sh to ao	dd add	ditional non-patent literature document citation information please click the Add button Add	]	
			EXAMINER SIGNATURE		
Examiner	r Signa	Date Considered			
			f reference considered, whether or not citation is in conformance with MPEP 609. Draw line three ormance and not considered. Include copy of this form with next communication to applicant.	ough a	
Standard S <sup>*</sup> <sup>4</sup> Kind of do	T.3). <sup>3</sup> F cument	For Japa by the a	PTO Patent Documents at <u>www.USPTO.GOV</u> or MPEP 901.04. <sup>2</sup> Enter office that issued the document, by the two-lette panese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the paperopriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>5</sup> Applicant is to place a clinion is attached.	patent doc	ument.

INFORMATION DISCLOSURE	Application Number		10619691	
	Filing Date		2003-07-16	
	First Named Inventor Krinsk		sky	
(Not for submission under 37 CFR 1.99)	Art Unit		2611	
	Examiner Name TR		I, KHANH C	
	Attorney Docket Numb	er	5550-2-CON2	

	CERTIFICATION STATEMENT								
Plea	Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):								
X	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).								
OF	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 ce	rtification statement.							
×	Fee set forth in 3	7 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.								
Sigi	nature	/Jason H. Vick/	Date (YYYY-MM-DD)	2009-05-20					
Nar	ne/Print	Jason H. Vick	Registration Number	45285					
pub 1.14 app	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:

- 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.

EFS Web 2.1.13

Electronic Patent Application Fee Transmittal						
Application Number:	10	519691				
Filing Date:	16	Jul-2003				
Title of Invention:	1	SYSTEMS AND METHODS FOR ESTABLISHING A DIAGNOSTIC TRANSMISSION MODE AND COMMUNICATING OVER THE SAME				
First Named Inventor/Applicant Name:	Da	David M. Krinsky				
Filer:	Jas	Jason Vick/Debra Kesner				
Attorney Docket Number:	55	50-2-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					
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File Listin	g:				
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	no	4
			b8050396e1a30fd890a0e4f0647bd3dd619 393a3		
Warnings:					
Information	:				
autoloading of you are citing l within the Imag	lumber Citation or a U.S. Publication Numbe data into USPTO systems. You may remove U.S. References. If you chose not to include l ge File Wrapper (IFW) system. However, no Non Patent Literature will be manually revi	the form to add the required dat U.S. References, the image of the f data will be extracted from this fo	a in order to correct the Ir orm will be processed an rm. Any additional data s	nformational d be made av	Message if ailable
2	NPL Documents	5550-2-PAU4-DIV_OA_3-9-09.	72889	no	2
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Warnings:					
Information	:				
3	Fee Worksheet (PTO-875)	fee-info.pdf	30517	no	2
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Warnings:					
Information	:				
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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		EXAM	IINER
Jason H. Vic	k			TRAN, K	HANH C
Sheridan Ross	s, PC			ART UNIT	PAPER NUMBER
Suite # 1200 1560 Broadw Denver, CO 8				2611 DATE MAILED: 05/15/200	9

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. <u>PROSECUTION ON THE MERITS IS CLOSED</u>. 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 <u>THREE MONTHS</u> FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. <u>THIS STATUTORY PERIOD CANNOT BE EXTENDED</u>. 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:	If the SMALL ENTITY is shown as NO:
A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.	A. Pay TOTAL FEE(S) DUE shown above, or
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	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.

#### PART B - FEE(S) TRANSMITTAL

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				or <u>Fax</u>	(57	1)-273-2885	ina 22	-515-1450	
INSTRUCTIONS: This appropriate. All further indicated unless correcte maintenance fee notificat	form should be used f correspondence includir d below or directed oth ions.	or tran g the erwise	smitting the ISSU Patent, advance on in Block 1, by (a	JE FEE and PUBLIC rders and notification a) specifying a new c	CATI of n orres	ON FEE (if requinaintenance fees w pondence address;	red). B vill be 1 and/or	locks 1 through 5 sh nailed to the current (b) indicating a sepa	nould be completed where correspondence address as rate "FEE ADDRESS" for
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62574	7590 05/15	/2009			nave				
Jason H. Vick Sheridan Ross, PC Suite # 1200 1560 Broadway					I her State addr trans	Cer reby certify that th es Postal Service w essed to the Mail smitted to the USP	tificate is Fee(s /ith suff Stop 1 ΓΟ (57)	of Mailing or Transı ) Transmittal is being icient postage for firs (SSUE FEE address 1) 273-2885, on the da	<b>nission</b> deposited with the United t class mail in an envelope above, or being facsimile ate indicated below.
Denver, CO 802	02								(Depositor's name)
	02								(Signature)
									(Date)
APPLICATION NO.	FILING DATE			FIRST NAMED INVEN	TOR		ATTO	RNEY DOCKET NO.	CONFIRMATION NO.
10/619,691	07/16/2003			David M. Krinsk	7		5	550-2-CON2	7134
TITLE OF INVENTION OVER THE SAME		THOI	DS FOR ESTABL	-	·	TRANSMISSIO			
APPLN. TYPE	SMALL ENTITY	IS	SUE FEE DUE	PUBLICATION FEE I	DUE	PREV. PAID ISSUI	E FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO		\$1510	\$300		\$0		\$1810	08/17/2009
EXAM	INER		ART UNIT	CLASS-SUBCLASS	3				
TRAN, K	HANH C		2611	375-222000					
🖵 "Fee Address" indi	ondence address (or Cha 3/122) attached. ication (or "Fee Address" 2 or more recent) attach	' Indic	ation form	registered attorney or agent) and the names of up to					
3. ASSIGNEE NAME A PLEASE NOTE: Unl recordation as set forth (A) NAME OF ASSIC	ess an assignee is ident n in 37 CFR 3.11. Comp				he pa g an a	ntent. If an assign assignment.			ocument has been filed for
Please check the appropri	ate assignee category or	catego	ories (will not be pi	rinted on the patent):		Individual 🖵 Co	orporati	on or other private gro	up entity Government
4a. The following fee(s) are submitted: ☐ Issue Fee ☐ Publication Fee (No small entity discount permitted) ☐ Advance Order - # of Copies				<ul> <li>4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above) <ul> <li>A check is enclosed.</li> <li>Payment by credit card. Form PTO-2038 is attached.</li> <li>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).</li> </ul></li></ul>					
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).						FR 1.27(g)(2).			
NOTE: The Issue Fee and interest as shown by the r	d Publication Fee (if requeed a contract of the United States of the Uni	uired) tes Pat	will not be accepte ent and Trademark	d from anyone other tl c Office.	nan tl	ne applicant; a regi	stered a	ttorney or agent; or the	e assignee or other party in
Authorized Signature						Date			
Typed or printed name Registration No									
This collection of inform an application. Confident submitting the completec this form and/or suggesti Box 1450, Alexandria, V Alexandria, Virginia 223 Under the Paperwork Rec	iality is governed by 35 l application form to the ons for reducing this but irginia 22313-1450. DC 13-1450.	U.S.C USPT den, s NOT	. 122 and 37 CFR O. Time will vary hould be sent to th SEND FEES OR (	1.14. This collection is depending upon the e Chief Information C COMPLETED FORM	is est indiv Office IS TC	imated to take 12 1 idual case. Any co r, U.S. Patent and D THIS ADDRESS	ninutes mments Tradem S. SENI	to complete, including s on the amount of tin ark Office, U.S. Depa O TO: Commissioner f	by the USPTO to process) g gathering, preparing, and ne you require to complete rtment of Commerce, P.O. for Patents, P.O. Box 1450, number.

OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

	IITED STATES PATE	ENT AND TRADEMARK OFFICE	UNITED STATES DEPAR United States Patent and / Address: COMMISSIONER / O. Box 1450 Alexandria, Virginia 223 www.uspto.gov	Trademark Office OR PATENTS
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 7	7590 05/15/2009		EXAM	INER
Jason H. Vick			TRAN, K	HANH C
Sheridan Ross, PC	2		ART UNIT	PAPER NUMBER
Suite # 1200 1560 Broadway Denver, CO 80202	2		2611 DATE MAILED: 05/15/200	9

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.

	Application No.	Applicant(s)
	10/619,691	KRINSKY ET AL.
Notice of Allowability	Examiner	Art Unit
	KHANH C. TRAN	2611
The MAILING DATE of this communication app All claims being allowable, PROSECUTION ON THE MERITS Is herewith (or previously mailed), a Notice of Allowance (PTOL-86 NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT of the Office or upon petition by the applicant. See 37 CFR 1.37	S (OR REMAINS) CLOSED in 5) or other appropriate commu <b>RIGHTS</b> . This application is su	this application. If not included nication will be mailed in due course. <b>THIS</b>
1. X This communication is responsive to the Amendment file	<u>d on 2/26/2009</u> .	
2. The allowed claim(s) is/are 44-83 and 85, which have been appreciated as the second	en renumbered as set forth in t	the Office action.
<ul> <li>3. ☐ Acknowledgment is made of a claim for foreign priority of a) ☐ All b) ☐ Some* c) ☐ None of the:</li> <li>1. ☐ Certified copies of the priority documents have</li> <li>2. ☐ Certified copies of the priority documents have</li> <li>3. ☐ Copies of the certified copies of the priority documents have</li> <li>4. ☐ Certified copies of the priority documents have</li> <li>3. ☐ Copies of the certified copies of the priority documents have</li> </ul>	ve been received. ve been received in Application	n No
* Certified copies not received: Applicant has THREE MONTHS FROM THE "MAILING DATE noted below. Failure to timely comply will result in ABANDON THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.		a reply complying with the requirements
4. A SUBSTITUTE OATH OR DECLARATION must be sub INFORMAL PATENT APPLICATION (PTO-152) which gi		
5. CORRECTED DRAWINGS ( as "replacement sheets") m	ust be submitted.	
(a) ☐ including changes required by the Notice of Draftspe	rson's Patent Drawing Review	(PTO-948) attached
1) 🔲 hereto or 2) 🔲 to Paper No./Mail Date		
(b) including changes required by the attached Examine Paper No./Mail Date	r's Amendment / Comment or	in the Office action of
ldentifying indicia such as the application number (see 37 CFR each sheet. Replacement sheet(s) should be labeled as such in		
6. DEPOSIT OF and/or INFORMATION about the dep attached Examiner's comment regarding REQUIREMENT		
Attachment(s) 1. ⊠ Notice of References Cited (PTO-892)	5. 🗖 Notice of Inf	ormal Patent Application
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948	) 6. 🔲 Interview Su	mmary (PTO-413),
3. Information Disclosure Statements (PTO/SB/08),	Paper No./۱ ۲. 🛛 Examiner's	Mail Date Amendment/Comment
Paper No./Mail Date 4.  Examiner's Comment Regarding Requirement for Deposit of Biological Material	8. ⊠ Examiner's \$ 9. □ Other	Statement of Reasons for Allowance
/KHANH C. TRAN/ Primary Examiner, Art Unit 2611		
U.S. Patent and Trademark Office		
	Notice of Allowability	Part of Paper No./Mail Date 20090508

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.	
Nonce of Neierences Oneu	Examiner	Art Unit	
	KHANH C. TRAN	2611	Page 1 of 1

#### U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	А	US-6,725,176	04-2004	Long et al.	702/183
	В	US-			
	С	US-			
	D	US-			
	Е	US-			
	F	US-			
	G	US-			
	н	US-			
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	L	US-			
	М	US-			

#### FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
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#### NON-PATENT DOCUMENTS

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*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)					
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	x	is reference in pathology furnished with this Office action (See MDED S 707 0F( $\alpha$ ))					

\*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.

U.S. Patent and Trademark Office PTO-892 (Rev. 01-2001)

#### Notice of References Cited

Part of Paper No. 20090508

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

~	Rejected	-	Cancelled	N	Non-Elected	Α	Appeal
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U.S. Patent and Trademark Office

Part of Paper No.: 20090508

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

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5	45	=	✓ ✓	=				
9	46	=		=				
13	47	=	<ul> <li>✓</li> </ul>	=				
17	48	=	✓	=				
20	49	=	✓	=				
24	50	=	<ul> <li>✓</li> </ul>	=				
28	51	=	√	=				
32	52	=	√	=				
36	53	=	√	=				
2	54	=	√	=				
6	55	=	√	=				
10	56	=	√	=				
14	57	=	~	=				
18	58	=	~	=				
21	59	=	√	=				
25	60	=	✓	=				
29	61	=	✓	=				
33	62	=	~	=				
37	63	=	√	=				
3	64	=	~	=				
7	65	=	~	=				
11	66	=	~	=				
15	67	=	~	=				
19	68	=	√	=				
22	69	=	√	=				
26	70	=	√	=				
30	71	=	√	=				

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

$\checkmark$	Rejected	-	Cancelled	N	Non-Elected	4	4	Appeal
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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	=	√	=			

Part of Paper No.: 20090508

# 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
83	1	"6247158".pn.	US-PGPUB; USPAT	OR	ON	2005/09/08 16:58
54	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

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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
\$37	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
839	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 TD <b>MA</b> )	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"	US-PGPUB;	OR	ON	2005/09/16
		"5905946"   "5933457"   "6161209"   "6615024").PN.	USPAT; USOCR			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

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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"	US-PGPUB;	OR	OFF	2007/03/26
			USPAT; USOCR			13:31
		"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.		l		
S190	1	"6947491".pn.	US-PGPUB;	OR	OFF	2007/03/26
		IF I	USPAT; USOCR			14:03
Q101	100	(and a adj rate) and				um faanaannaannaannaannaa
S191	188	(code adj rate) and (increas\$5 with	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 14:04
		(§ *)	USFAI, USUUR			14.04
		antenna)				
S192	6	(code adj rate) same	US-PGPUB;	OR	OFF	2007/03/26
		(increas\$5 with	USPAT; USOCR			15:23
		antenna)				
S193	243	375/267.ccls. and	US-PGPUB;	OR	OFF	2007/03/26
		(close loop adj power	USPAT; USOCR			15:23
		adj control)				
S104	1086012					2007/02/06
S194	1986913	375/267.ccls. and	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:24
		multiuser (close loop	USPAT, USUUR			15.24
	ļ	adj power adj control)				
S195	7	375/267.ccls. and	US-PGPUB;	OR	OFF	2007/03/26
		multiuser and (close	USPAT; USOCR			15:24
		loop adj power adj				
		control)	1	3	\$	\$

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
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"/267.00 and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:06
S203	7	"375"/260.00LS. 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 D <b>M</b> T)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:42
S236	1	"375"/\$.ccls. and (diagnostic same D <b>M</b> T)	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 D <b>M</b> T)	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
\$278	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"   "6229873"   "6229995"   "6236864"   "6240141"	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27

		"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 D <b>M</b> T)	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
\$293	10	"375"/222.ccls. and ( diagnos\$5 near3 modem) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/28 07:56
\$294	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; OR 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; OR USPAT		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
\$307	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
\$310	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
\$312	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
\$315	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	318 0 (diagnos\$6 and ((frequency adj domain) with (idle ad 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	Г		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
\$328	4	"375"/\$.ccls. and ((diagnostic) same (multicarrier))	US-PGPUB; USPAT; DERWENT; IBM_TDB	OR	ON	2008/06/08 23:34
\$329	3	"375"/\$.ccls. and ((diagnostic adj information) same (multicarrier))	US-PGPUB; USPAT; DERWENT; IBM_TDB	OR	ON	2008/06/08 23:34
\$330	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
\$332	12	09/755173	US-PGPUB; USPAT	OR	ON	2008/06/09 07:55
\$333	142	idle adj channel adj noise	US-PGPUB; USPAT	OR	ON	2008/06/09 08:08

		.3				00.00
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			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
\$344	0	"370"/\$.ccls with (test adj symbol)			ON	2008/06/09 08:23
\$345	0	"370"/\$.ccls with (test with symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:23
\$346	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
\$349	0	(diagnos\$6 with (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/09 08:25
\$350	0	(diagnos\$6 same (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/09 08:26
\$351	646	(map\$7same (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/09 08:26
\$352	0	((diagnostic) with (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/09 08:27
\$353	0	((diagnostic) same (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/09 08:27
\$354	9421	transmit\$7 with diagnostic	US-PGPUB; USPAT	OR	ON	2008/06/09 09:42
\$355	185	"375"/\$.ccls. and (transmit\$7 with diagnostic)	US-PGPUB; USPAT	OR	ON	2008/06/09 09:42

US-PGPUB;

USPAT

OR

2008/06/09 08:09

ON

S334

3

S333 and DMT

\$356	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
\$370	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
\$372	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
\$375	1	(upgrad\$7 adj firmware) same (cable adj modem)	US-PGPUB; USPAT	OR	ON	2008/10/10 15:27
\$376	0	(upgrad\$7 adj firmware) same (CMTS and TFTP)	US-PGPUB; USPAT	OR	ON	2008/10/10 15:27

\$377	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	OMTS 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	3; 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			2008/10/13 09:12
\$387	20	(diagnostic and (idle adj channel adj noise))	US-PGPUB; USPAT			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
\$390	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
\$394	1	10/619691	US-PGPUB; USPAT	OR	ON	2008/10/13 10:17
\$395	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 US-PGPUB; message) same USPAT variables same array)		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	((diagnostic with information) same variables )		US-PGPUB; USPAT	OR	ON	2009/04/29 09:48
S419	((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 US-PGPUB; OR ((diagnostic with mode) Same DMT)		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
\$444	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
\$447	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

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# **BIB DATA SHEET**

## **CONFIRMATION NO. 7134**

SERIAL NUM	DED	FILING or	271(0)		CLASS	CP	OUP ART	· · INIIT	ATTO	RNEY DOCKET	
10/619,69		DATE			375		2611	UNIT		NÔ.	
10/619,69	71	07/16/20			375		2011		5	550-2-CON2	
		RULE									
	Krinsky	/, Acton, MA; Pizzano JR., S	toneham	ı, MA;							
** CONTINUING DATA **********************************											
** FOREIGN A	PPLICA	ATIONS *******	*********** T	******	* NO						
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ADDRESS											
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TITLE											
Systems	and me	thods for estab	olishing a	ı diagn	ostic transmissio	n mo	de and co	ommunic	ating o	over the same	
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	Application/Control No.	Applicant(s)/Patent Under Reexamination
Issue Classification	10619691	KRINSKY ET AL.
	Examiner	Art Unit
	KHANH C TRAN	2611

	ORIGINAL				INTERNATIONAL CLASSIFICATION				ATION				
	CLASS			SUBCLASS					С	LAIMED		N	ON-CLAIMED
375			222			н	0	4	В	1 / 38 (2006.01.01)			
CROSS REFERENCE(S)				SS REFERENCE(S)		н	0	4	L	12 / 26 (2006.01.01)			
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	Claims renumbered in the same order as presented by applicant								CP	A C	] T.D.	[	] R.1.	47	
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	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	Total Claims Allowed:					
(Assistant Examiner)	(Date)	41				
/KHANH C TRAN/ Primary Examiner.Art Unit 2611	05/08/2009	O.G. Print Claim(s)	O.G. Print Figure			
(Primary Examiner)	(Date)	1	1			

U.S. Patent and Trademark Office

Part of Paper No. 20090508

	Application/Control No.	Applicant(s)/Patent Under Reexamination
Search Notes	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		

U.S. Patent and Trademark Office

Part of Paper No.: 20090508

# 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	)		
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#### 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 <u>at the multicarrier modulation transceiver</u> an initiate diagnostic mode message; and

transmitting from the multicarrier modulation transceiver a diagnostic message using multicarrier modulation, wherein the diagnostic message comprises <u>a</u> <u>plurality of data variables representing</u> 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 <u>one variable comprises an array representing is</u> 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 <u>a plurality of data variables representing</u> the diagnostic information about the communication channel and each bit in the diagnostic message is mapped to at least one DMT signal, and wherein <u>one variable comprises an</u> <u>array representing</u> 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 <u>at the multicarrier communication</u> <u>transceiver</u> an initiate diagnostic mode message; and

means for transmitting <u>from the multicarrier communication transceiver</u> a diagnostic message using multicarrier modulation, wherein the diagnostic message comprises <u>a plurality of data variables representing</u> 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 <u>one variable comprises an array representing</u> 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 <u>a</u> <u>plurality of data variables representing</u> 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 <u>one variable comprises an array representing</u> 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  $\underline{\text{from the}}$ transceiver using multicarrier modulation, wherein the diagnostic message comprises  $\underline{a}$  <u>plurality of data variables representing</u> 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 <u>a plurality of data</u> <u>variables representing</u> the diagnostic information about the communication channel, and wherein the diagnostic information about the communication channel is <u>one variable</u> <u>comprises an array representing</u> 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 <u>from the transceiver</u> a diagnostic message using multicarrier modulation with DMT symbols that are mapped to one bit of the diagnostic message, wherein the diagnostic message comprises <u>a plurality of data</u> <u>variables representing</u> the diagnostic information about the communication channel, and wherein the diagnostic information about the communication channel is <u>one variable</u> <u>comprises an array representing</u> 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 <u>at the multicarrier communication</u> <u>transceiver</u> 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 <u>plurality</u> of <u>data variables representing</u> the diagnostic information about the communication channel, and wherein the diagnostic information about the communication channel is <u>one</u> <u>variable comprises an array representing</u> 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 <u>a plurality of data</u> <u>variables representing</u> the diagnostic information about the communication channel, and wherein the diagnostic information about the communication channel is <u>one variable</u> <u>comprises an array representing</u> 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 <u>from the transceiver</u> a diagnostic message using multicarrier modulation with DMT symbols that are mapped to one bit of

the diagnostic message, wherein the diagnostic message comprises <u>a plurality of data</u> <u>variables representing</u> the diagnostic information about the communication channel, and wherein the diagnostic information about the communication channel <u>one variable</u> <u>comprises an array representing</u> 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 <u>including a plurality of data variables</u> 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<u>one variable</u> 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 <u>a plurality of data</u> <u>variables representing</u> 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 <u>one variable comprises an</u> <u>array representing</u> frequency domain received idle channel noise information.

84. (Canceled)

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

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

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

#### PTO/SB/22 (01-09)

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	FOR EXTENSION OF TIME UNDER FY 2009		Docket Number (Option 5550-2-CON2	conf. no. 713
	pursuant to the Consolidated Appropriations Act, Number 10/619,691	2005 (H.R. 4818).)	Filed 07/16/2003	
	em and Methods for Establishing a Dia	agnostic Transmissi	ion Mode and Comm	unicating Over
Art Unit 26			Examiner Tran	
	uest under the provisions of 37 CFR 1.13	6(a) to extend the peri		e above identifi
application.				
The request	ed extension and fee are as follows (chec	·	and enter the appropria Small Entity Fee	te fee below):
	One month (37 CFR 1.17(a)(1))	<u>Fee</u> \$130	\$65	\$
	Two months (37 CFR 1.17(a)(2))	\$490	\$245	\$ <u>490</u>
	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	\$
	nt claims small entity status. See 37 CFR			
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	k in the amount of the fee is enclosed			
- ·	ent by credit card. Form PTO-2038 is a			
The Di	rector has already been authorized to	charge fees in this	application to a Depo	sit Account.
	rector is hereby authorized to charge it Account Number <u>191970</u>	any fees which may 	y be required, or credi	t any overpay
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I am the	applicant/inventor.			
	assignee of record of the entir Statement under 37 CFR 3			
	attorney or agent of record. R	egistration Number		
	attorney or agent under 37 CF Registration number if acting und	<sup>-</sup> R 1.34. er <u>37 CER 1.34</u> 45285	5	
		-	February 26,	2009
/	Signature			Date
Jason	H. Vick		(303) 863-970	00
	Typed or printed name		Telepi	none Number
	res of all the inventors or assignees of record of the e quired, see below.	ntire interest or their represe	entative(s) are required. Submi	it multiple forms if m

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

Electronic Patent Application Fee Transmittal							
Application Number:	10	619691					
Filing Date:	16	-Jul-2003					
Title of Invention:       Systems and methods for establishing a diagnostic transmission mode communicating over the same							
First Named Inventor/Applicant Name:	David M. Krinsky						
Filer:	Jason Vick/Christine Jacquet						
Attorney Docket Number:	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 Acl	knowledgement 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 charg	e indicated fees and credit any overpayment as follows:
Charge any Additional Fees required under 37 C.F.R. Se	ction 1.17 (Patent application and reexamination processing fees)
Charge any Additional Fees required under 37 C.F.R. Se	ction 1.19 (Document supply fees)

	any Additional Fees required under 37 C.F. any Additional Fees required under 37 C.F.		,					
File Listin	g:							
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)			
1		AMEND_AND_EOT_2_26_09.	1264882		12			
1		pdf	f983afcd06d518352ebe08b95d2f1e7e33a2 c794	yes	13			
	Multip	art Description/PDF files in .	zip description					
	Document Description Start En				nd			
	Amendment/Req. Reconsiderati	1		1				
	Claims	2	1	11				
	Applicant Arguments/Remarks	12	1	12				
	Extension of	Time	13	1	13			
Warnings:								
Information:			1					
2	Fee Worksheet (PTO-06) fee-info.pdf		30451	1				
			227f520c27ffefd914f8ee3820d5bdb2945ca 05b					
Warnings:								
Information:			1					
		Total Files Size (in bytes)	12	95333				
characterized Post Card, as <u>New Applica</u> If a new appl 1.53(b)-(d) an Acknowledg <u>National Stag</u> If a timely su U.S.C. 371 an national stag <u>New Internat</u> If a new inter an international second	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							
the applicati	vii.							

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	BASIC FEE (37 CFR 1.16(a), (b),	or (c))	N/A		N/A	1 [	N/A			N/A	
	SEARCH FEE (37 CFR 1.16(k), (i),		N/A		N/A	1 Г	N/A			N/A	
	EXAMINATION FE	E	N/A		N/A	1	N/A			N/A	
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ND	CFR 1.16(I)) EPENDENT CLAIM CFR 1.16(h))	IS		inus 3 = *		×	\$ =			X\$ =	
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The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1

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

	TED STATES PATENT A	UNITED STATES DEPAR United States Patent and Address: COMMISSIONER F P.O. Box 1450 Alexandria, Virginia 22: www.uspto.gov	OR PATENTS	
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 Jason H. Vick	7590 10/20/2008		EXAM	INER
Sheridan Ross,	PC		TRAN, K	HANH C
Suite # 1200 1560 Broadway	V		ART UNIT	PAPER NUMBER
Denver, CO 80			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

	Application No.	Applicant(s)
	10/619,691	KRINSKY ET AL.
Office Action Summary	Examiner	Art Unit
	KHANH C. TRAN	2611
The MAILING DATE of this communication app Period for Reply	pears on the cover sheet with the o	correspondence address
<ul> <li>A SHORTENED STATUTORY PERIOD FOR REPL WHICHEVER IS LONGER, FROM THE MAILING D</li> <li>Extensions of time may be available under the provisions of 37 CFR 1.1 after SIX (6) MONTHS from the mailing date of this communication.</li> <li>If NO period for reply is specified above, the maximum statutory period</li> <li>Failure to reply within the set or extended period for reply will, by statute Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).</li> </ul>	ATE OF THIS COMMUNICATIO 36(a). In no event, however, may a reply be til will apply and will expire SIX (6) MONTHS from , cause the application to become ABANDONE	N. mely filed n the mailing date of this communication. ED (35 U.S.C. § 133).
Status		
1) Responsive to communication(s) filed on $01 J_{0}$	ulv 2008.	
	action is non-final.	
3) Since this application is in condition for allowa		osecution as to the merits is
closed in accordance with the practice under <i>E</i>		
Disposition of Claims		
4)⊠ Claim(s) <u>44-83 and 85</u> is/are pending in the ap	plication	
4a) Of the above claim(s) is/are withdra		
5) Claim(s) is/are allowed.		
6)⊠ Claim(s) <u>44-83 and 85</u> is/are rejected.		
7) Claim(s) is/are objected to.		
8) Claim(s) are subject to restriction and/c	r election requirement.	
Application Papers		
9) The specification is objected to by the Examine	er.	
10) The drawing(s) filed on <u>7/16/2003</u> is/are: a)		the Examiner.
Applicant may not request that any objection to the	drawing(s) be held in abeyance. Se	e 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correct	tion is required if the drawing(s) is ob	pjected to. See 37 CFR 1.121(d).
11) The oath or declaration is objected to by the Ex	caminer. Note the attached Office	e 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:	- have been uponized	
1. Certified copies of the priority document		ion No
2. Certified copies of the priority document 3. Copies of the certified copies of the prio		
application from the International Burea	•	ed in this National Stage
* See the attached detailed Office action for a list	· · · · · ·	ed.
Attachment(s)		
1) X Notice of References Cited (PTO-892)	4) 🔲 Interview Summary	
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail D 5)	
3) Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date	6)  Other:	
U.S. Patent and Trademark Office		

0.5. Patent and Trademark On	ICe
PTOL-326 (Rev. 08-06)	)

Office Action Summary

Part of Paper No./Mail Date 20081013

### 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<sub>f</sub>, 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 subfrequencies 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<sub>f</sub>, 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<sub>f</sub>, 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* **Communication Czerwiec 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<sub>f</sub>, 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<sub>f</sub>, 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<sub>f</sub>, 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

Application/Control Number: 10/619,691 Page 8 Art Unit: 2611 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<sub>f</sub>, 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)/Pater Reexamination KRINSKY ET AL.	nt Under
Nonce of Neterences Oned	Examiner	Art Unit	
	KHANH C. TRAN	2611	Page 1 of 1

#### U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	А	US-5,361,293	11-1994	Czerwiec, Richard M.	379/27.02
*	В	US-6,631,120	10-2003	Milbrandt, Celite	370/252
	с	US-			
	D	US-			
	ш	US-			
	F	US-			
	G	US-			
	н	US-			
	Ι	US-			
	J	US-			
	к	US-			
	L	US-			
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#### FOREIGN PATENT DOCUMENTS

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Notice of References Cited

Part of Paper No. 20081013



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# **BIB DATA SHEET**

### **CONFIRMATION NO. 7134**

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SERIAL NUM	IBER	FILING or	371(c)		CLASS	GR	OUP ART	UNIT	АТТС	RNEY DOCKET
10/619,69	91	07/16/2	-		375		2611		5550-2-CON2	
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# 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
\$37	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

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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 TD <b>MA</b> )	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"	US-PGPUB;	OR	OFF	2007/03/26
			USPAT; USOCR			13:31
		"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.		l		
S190	1	"6947491".pn.	US-PGPUB;	OR	OFF	2007/03/26
		1-	USPAT; USOCR			14:03
C101	100	(and a adj rate) and				
S191	188	(code adj rate) and (increas\$5 with	US-PGPUB;	OR	OFF	2007/03/26 14:04
		(§ *)	USPAT; USOCR			14.04
		antenna)				
S192	6	(code adj rate) same	US-PGPUB;	OR	OFF	2007/03/26
		(increas\$5 with	USPAT; USOCR			15:23
		antenna)				
S193	243	375/267.ccls. and	US-PGPUB;	OR	OFF	2007/03/26
		(close loop adj power	USPAT; USOCR			15:23
		adj control)	,			
S104	1086012					2007/02/06
S194	1986913	375/267.ccls. and	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:24
		multiuser (close loop adj power adj control)	USPAT, USUUR			10.24
	ļ					
S195	7	375/267.ccls. and	US-PGPUB;	OR	OFF	2007/03/26
		multiuser and (close	USPAT; USOCR			15:24
		loop adj power adj				
	:}	control)	1	3	\$	\$

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
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
S202	5	"375"/267.CCLS. and (MIMO and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:06
S203	7	"375"/260.00LS. 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 D <b>M</b> T)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:42
S236	1	"375"/\$.ccls. and (diagnostic same D <b>M</b> T)	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 D <b>M</b> T)	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
\$278	44	("20020006169"   "20020191709"   "20030067995"   "3898566"   "4878232"   "5163181"   "5228055"   "5249201"   "5490172"   "5490172"   "5493587"   "5579342"   "5608760"   "5621762"   "5636247"   "5638404"   "5651028"   "5727026"   "5751705"   "5805640"   "5822360"   "5930678"   "5991262"   "6009090"   "6032029"   "6041081"   "6125103"   "6128351"   "6130918"   "6175551"   "622995"   "6236864"   "6240141"	US-PGPUB; USPAT; USOCR	OR		2007/03/27

		"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

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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
\$307	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
\$309	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
\$315	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
\$317	0	(diagnos\$6 same ((frequency adj domain) with (idle adj channel adj noise)))	US-PGPUB; USPAT	OR	ON	2008/05/27 09:52

\$318	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
\$332	12	09/755173	US-PGPUB; USPAT	OR	ON	2008/06/09 07:55
\$333	142	idle adj channel adj noise	US-PGPUB; USPAT	OR	ON	2008/06/09 08:08

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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
\$344	0	"370"/\$.ccls with (test adj symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:23
\$345	0	"370"/\$.ccls with (test with symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:23
\$346	0	"375"/\$.ccls with (test with symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:23
\$347	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
\$349	0	(diagnos\$6 with (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/09 08:25
\$350	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
\$352	0	((diagnostic) with (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/09 08:27
\$353	0	((diagnostic) same (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/09 08:27
\$354	9421	transmit\$7 with diagnostic	US-PGPUB; USPAT	OR	ON	2008/06/09 09:42
\$355	185	"375"/\$.ccls. and (transmit\$7 with diagnostic)	US-PGPUB; USPAT	OR	ON	2008/06/09 09:42

US-PGPUB;

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S333 and DMT

2008/06/09 08:09

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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
\$370	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
\$372	1	"6697969".pn.	US-PGPUB; USPAT	OR	ON	2008/10/10 14:50
\$373	1	"6510162".pn.	US-PGPUB; USPAT	OR	ON	2008/10/10 15:10
\$374	1	(upgrad\$7 adj firmware) with (cable adj modem)	US-PGPUB; USPAT	OR	ON	2008/10/10 15:26
\$375	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

\$377	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

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		Application	/Control N	lo.	Applic Reexa	ant(s mina	s)/Pat ition	tent Unde	r
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CL	AIM Original 73	06/09/2008	10/13/2008 ✓		plicant		СРА		] T.(	D.	R.1.47
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CL	AIM Original 73 74 75	06/09/2008 = = =	10/13/2008 ✓ ✓		pplicant		СРА		] T.[		R.1.47
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CL	AIM Original 73 74 75 76 77	06/09/2008 = = = = = =	10/13/2008		plicant		СРА		] T.(		R.1.47
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	Application/Control No.	Applicant(s)/Patent Under Reexamination
Search Notes	10619691	KRINSKY ET AL.
	Examiner	Art Unit
	KHANH C TRAN	2611

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Class	Subclass	Date	Examiner

SEARCH NOT	ES	
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

U.S. Patent and Trademark Office

## 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	)		
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## 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: 15.1, 08

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

Electronic Acl	knowledgement 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 wi	th Payment	no					
File Listir	File Listing:						
Document Number	Document Description	File Name	File Size(Bytes) /Message Digest	Multi Part /.zip	Pages (if appl.)		
1		AMEND_02_AFTER_RCE.p	1005414	VOS	11		
		df	e08278713941334505571418c89f78650 47de532	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:		1				
Information:						
	Total Files Size (in bytes):	100	5414			

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.

۲7	ATENT APPL		FEE DETI		N RECORD		Docket Number 9,691		ing Date 16/2003	To be Maile
APPLICATION AS FILED – PART I (Column 1) (Column 2)					Column 2)	SMALL		OR		HER THAN
	FOR		NUMBER FII	.ED NUI	MBER 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),		N/A		N/A	N/A			N/A	
	EXAMINATION FE (37 CFR 1.16(o), (p),	E	N/A		N/A	N/A			N/A	
	TAL CLAIMS CFR 1.16(i))	or (q))	mir	nus 20 = *		x \$ =		OR	X\$ =	
٧D	EPENDENT CLAIM CFR 1.16(h))	IS	m	inus 3 = *		X\$ =			X\$ =	
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	APP			DED – PART II (Column 2) HIGHEST	(Column 3)	SMAI	L ENTITY	OR		ER THAN LL ENTITY
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	07/02/2008 Total (37 CFR 1.16())	(Column 1) (Calims REMAINING AFTER AMENDMEN * 41	S AMENE	Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR ** 43	PRESENT EXTRA = 0		ADDITIONAL	OR	SMA	ADDITIONAL FEE (\$)
	07/02/2008	(Column 1) CLAIMS REMAINING AFTER AMENDMEN * 41 * 13	S AMENE	DED – PART II (Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL		SMA RATE (\$)	LL ENTITY ADDITIONA FEE (\$)
	07/02/2008	(Column 1) (Calims REMAINING AFTER AMENDMEN * 41	S AMENE	Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR ** 43	PRESENT EXTRA = 0	RATE (\$) X \$ =	ADDITIONAL	OR OR	SMA RATE (\$) X \$50=	ADDITIONAL FEE (\$)
	07/02/2008	(Column 1) CLAIMS REMAINING AFTER AMENDMEN * 41 * 13 ize Fee (37 CFf	S AMENE T Minus R 1.16(s))	Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR ** 43	PRESENT EXTRA = 0 = 0	RATE (\$) x \$ = x \$ = TOTAL	ADDITIONAL	OR OR OR	SMA RATE (\$) X \$50= X \$210= TOTAL	ADDITIONAL FEE (\$) 0
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	07/02/2008         Total (37 CFR         1.16(i))         Independent         (37 CFR 1.18(h))         FIRST PRESEN	LICATION A (Column 1) CLAIMS REMAINING AFTER AMENDMEN * 41 * 13 ize Fee (37 CFf ATATION OF MUL (Column 1) CLAIMS REMAINING AFTER AMENDMEN * * * ize Fee (37 CFf	S AMENE T Minus Minus R 1.16(s)) TIPLE DEPEN Minus R 1.16(s))	DED – PART II (Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR ** 43 ***14 DENT CLAIM (37 CFI (Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR **	PRESENT EXTRA = 0 = 0 R 1.16(j)) (Column 3) PRESENT EXTRA = =	RATE (\$)         x \$ =         x \$ =         TOTAL         ADD'L         FEE         RATE (\$)         x \$ =	ADDITIONAL FEE (\$)	OR OR OR OR	SMA RATE (\$) X \$50= X \$210= TOTAL ADD'L FEE RATE (\$) X \$ =	ADDITIONAL FEE (\$) 0 0 0 0 0 0 0

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

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. 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.

	ED STATES PATENT A	UNITED STATES DEPAR United States Patent and Address: COMMISSIONER F P.O. Box 1450 Alexandria, Virginia 223 www.uspto.gov	Trademark Office OR PATENTS	
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 Jason H. Vick	7590 06/13/2008		EXAM	INER
Sheridan Ross,	PC		TRAN, K	HANH C
Suite # 1200 1560 Broadway	V		ART UNIT	PAPER NUMBER
Denver, CO 80			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

		Application No.	Applicant(s)		
		10/619,691	KRINSKY ET AL.		
	Office Action Summary	Examiner	Art Unit		
		KHANH C. TRAN	2611		
Period fo	The MAILING DATE of this communication app or Reply	bears on the cover sheet with the o	correspondence address		
<ul> <li>A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.</li> <li>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.</li> <li>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.</li> <li>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).</li> </ul>					
Status					
1)🖂	Responsive to communication(s) filed on 29 A	pril 2008.			
· · · · · · · · · · · · · · · · · · ·		action is non-final.			
3)	Since this application is in condition for allowa		osecution as to the merits is		
	closed in accordance with the practice under E	Ex parte Quayle, 1935 C.D. 11, 4	53 O.G. 213.		
Disposit	on of Claims				
4)🕅	Claim(s) 4485 is/are pending in the application				
/	4a) Of the above claim(s) is/are withdraw				
	Claim(s) <u>44-83 and 85</u> is/are allowed.				
6)🖂	Claim(s) <u>84</u> is/are rejected.				
7)	Claim(s) is/are objected to.				
8)	Claim(s) are subject to restriction and/o	r election requirement.			
Applicat	on Papers				
9)	The specification is objected to by the Examine	r.			
10)	The drawing(s) filed on <u>16 July 2003</u> is/are: a)	⊠ accepted or b)⊡ objected to I	by the Examiner.		
	Applicant may not request that any objection to the	drawing(s) be held in abeyance. Se	e 37 CFR 1.85(a).		
	Replacement drawing sheet(s) including the correct	ion is required if the drawing(s) is ob	jected to. See 37 CFR 1.121(d).		
11)	The oath or declaration is objected to by the Ex	aminer. Note the attached Office	e Action or form PTO-152.		
Priority u	ınder 35 U.S.C. § 119				
	Acknowledgment is made of a claim for foreign ☐ All  b)[] Some * c)[] None of:	priority under 35 U.S.C. § 119(a	)-(d) or (f).		
	1. ☐ Certified copies of the priority document	s have been received.			
	2. Certified copies of the priority document		ion No.		
	3. Copies of the certified copies of the prior				
	application from the International Bureau	· ·	c -		
* 5	See the attached detailed Office action for a list	of the certified copies not receive	ed.		
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	e of References Cited (PTO-892) e of Draftsperson's Patent Drawing Review (PTO-948)	4) 🔲 Interview Summary Paper No(s)/Mail D			
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Office Action Summary

Part of Paper No./Mail Date 20080608

# 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

Page 5

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

#### U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	А	US-4,385,384	05-1983	Rosbury et al.	714/717
	В	US-			
	С	US-			
	D	US-			
	Е	US-			
	F	US-			
	G	US-			
	Н	US-			
	Ι	US-			
	J	US-			
	к	US-			
	L	US-			
	М	US-			

#### FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	Ν					
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#### NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
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	x	in reference in not being furnished with this Office option. (Con NOED 5,707,05(a) )

\*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.

U.S. Patent and Trademark Office PTO-892 (Rev. 01-2001)

Notice of References Cited

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

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SEARCH NOTES		
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Update EAST & NPL Searches	6/8/2008	KCT

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Part of Paper No. : 20080608



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# **BIB DATA SHEET**

#### **CONFIRMATION NO. 7134**

SERIAL NUME 10/619,691		FILING or 3 DATE 07/16/200	· ·		<b>CLASS</b> 375	GR	GROUP ART UNIT 2611			ATTORNEY DOCKET NO. 5550-2-CON2		
		RULE										
David M. k	APPLICANTS David M. Krinsky, Acton, MA; Robert Edmund Pizzano JR., Stoneham, MA;											
** CONTINUING DATA **********************************												
** FOREIGN AP	PLICA	TIONS ********	KCT	*****	* NO							
** <b>IF REQUIRED</b> 07/07/2004	), FOR											
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# 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"/\$.OCLS. 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.OCLS. 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
\$30	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

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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))		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

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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	<pre>("4041395"   "4147985"   "4165493"   "4348644"   "4356458"   "4370622"   "4442407"   "4546313"   "4647871"   "4827219"   "4890062"   "4924191"   "4985686"   "4990866"   "4994757"   "5060294"   "5101172"   "5113414"   "5119040"   "5170496"   "5195045"   "5220276"   "5220276"   "5276912"   "527697"   "5300894"   "5329244"   "5339041"   "5351016"   "5361403"   "5408691"   "5420536"   "5428828"   "5483680"   "5553318"   "5564086"   "5589796"   "5598127"   "5640691"   "5673001"   "5694433"   "5742201"   "5880633"   "5901346"   "5905407"   "5907797"   "6069525"   "6141541"   "6160449"  </pre>	US-PGPUB; USPAT; USOCR	OR		2007/03/26

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		"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

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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"/\$.COLS. 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
\$235	0	"370"/\$.ccls. and (diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:42
5236	1	"375"/\$.ccls. and (diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:45
\$237	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

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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"	US-PGPUB;	OR	OFF	2007/03/27
		"5128619"   "5608643"   "5864602"   "5964891"   "6075821"   "6188717"   "6219378"   "6404774"   "6411678"   "6449307"   "6512789").PN.	USPAT; USOCR			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"	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 16:19
		"20030067995"				10.10
		"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"   <sup>"</sup> 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;	OR	ON	2007/03/28
			USPAT			07:37
S281	29	(diagnostic adj tone)	US-PGPUB;	OR	ON	2007/03/28
		, j , ,	USPAT			07:37
S282	0	"375"/\$.ccls. and	US-PGPUB:	OR	ON	2007/03/28
5202	U	(diagnostic adj tone)	USPAT	Un		07:37
S283	0	"375"/\$.ccls. and	US-PGPUB;	OR	ON	2007/03/28
		(diagnostic near tone)	USPAT			07:37
S284	7	"375"/\$.ccls. and	US-PGPUB;	OR	ON	2007/03/28
		(diagnostic near bits)	USPAT			07:38
S285	0	"375"/\$.ccls. and	US-PGPUB;	OR	ON	2007/03/28
5205	0	(diagnos\$6 near DMT)	USPAT	On		07:38
		, , , , , , , , , , , , , , , , , , ,			1	····· •
S286	0	"375"/\$.ccls. and	US-PGPUB;	OR	ON	2007/03/28
		(diagnos\$6 with DMT)	USPAT	1		07:38
S287	479	"375"/\$.ccls. and (bit	US-PGPUB;	OR	ON	2007/03/28
		with DMT)	USPAT			07:39
S288	207	"375"/\$.ccls. and (bit	US-PGPUB;	OR		2007/03/28
× 00	3201		RUG-FUEUD,	SOL	ON	32001/03/20

\$289	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
\$303	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
\$305	0	(diagnost near tone) and (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:31
\$306	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
\$309	5	diagnos\$5 with (DMT )	US-PGPUB; USPAT	OR	ON	2007/03/28 09:12

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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	
\$338	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; USP <b>A</b> T	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	
\$342	0	"375"/\$.ccls with (diagnostic adj symbol)	US-PGPUB; USPAT	OR	ON	2008/06/09 08:22	
\$343	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	
\$345	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 (D <b>M</b> T adj symbol))	US-PGPUB; USPAT	OR	ON	2008/06/09 08:27

6/9/2008 10:01:15 AM

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PTO/SB/08a (05-07) Approved for use through 09/30/2007. OMB 0651-0031 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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

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# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Application Number		10619691	
Filing Date		2003-07-16	
First Named Inventor Krinsk		<y< td=""></y<>	
Art Unit		2611	
Examiner Name TRAN		I, KHANH C	
Attorney Docket Number		5550-2-CON2	

(Not for submission under 37 CFR 1.99)

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/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	Vritten 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	Signa	ture         /Khanh Tran/ (06/09/2008)         Date Considered         06/09/2008							
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Standard S <sup>4</sup> Kind of do	T.3). <sup>3</sup> I cument	f USPTO Patent Documents at <u>www.USPTO.GOV</u> or MPEP 901.04. <sup>2</sup> Enter office that issued the document, by the two-letter code (WIPO for Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent documer by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>5</sup> Applicant is to place a check mark here anslation is attached.							

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### Doc code: RCEX Doc description: Request for Continued Examination (RCE)

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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	I	
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							
		S	SUBMISSION REG	QUIRED UNDER 37	7 CFR 1.114		
in which they	were filed unless	applicant in		applicant does not wi	nents enclosed with the sh to have any previous		
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X Enclosed							
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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.         Image: State of the Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No 191970							
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X Patent Practitioner Signature							
Applicant Signature							

Doc code: RCEX Doc description: Request for Continued Examination (RCE)

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.

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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.
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- 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.

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## 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<u>instructions</u> that when executed <u>direct a transceiver receives or</u> transmitsto receive or transmit an initiate diagnostic mode message; and

information<u>instructions</u> that when executed transmits<u>transmit</u> 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<u>, and wherein the diagnostic information about the communication channel is</u> <u>frequency domain received idle channel noise information</u>.

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<u>instructions</u> that when executed <u>direct a transceiver to receives</u> or transmits<u>receive or transmit</u> 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

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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: <u>29 Apr 108</u>

By: Jason H. Vick

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

#### PTO/SB/22 (01-08)

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PETITION	FOR EXTENSION OF TIME UNDER 37	CFR 1.136(a)	Docket Number (Optional) 5550 - 2 - CON2				
(Fees	FY 2008 pursuant to the Consolidated Appropriations Act, 200	5 (H.R. 4818).)	Confirmation No.	7134			
Application			Filed 7/16/2003				
l For	EMS AND METHODS FOR ESTABLISHING A	A DIAGNOSTIC TR	ANSMISSION MODE				
	COMMUNICATING OVER THE SAME		Examiner TRAN, K.				
7400140	2611	·					
application.							
The reques	ted extension and fee are as follows (check ti	me period desired a		fee below):			
		<u>Fee</u>	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	\$			
×x	Five months (37 CFR 1.17(a)(5))	\$2230	\$1115	\$			
Applica	ant claims small entity status. See 37 CFR 1.2	7.					
A che	ck in the amount of the fee is enclosed.						
Paym	ent by credit card. Form PTO-2038 is atta	ached.					
The D	irector has already been authorized to ch	arge fees in this a	pplication to a Deposit	Account.			
	irector is hereby authorized to charge any sit Account Number19-1970		be required, or credit a nclosed a duplicate cop				
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I am the	applicant/inventor.						
	assignee of record of the entire in Statement under 37 CFR 3.73						
	xx attorney or agent of record. Regi	., .	•				
	attorney or agent under 37 CFR	1.34.					
	Registration number if acting under 3	37 CFR 1.34					
				29, 2008			
	Signature		Di	ate			
	Jason H. Vick		-	863-9700			
	Typed or printed name		Telephon	e Number			
	ures of all the inventors or assignees of record of the entire quired, see below.	interest or their represent	tative(s) are required. Submit m	ultiple forms if more than one			
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This collection of	of information is required by 37 CFR 1.136(a). The informations an application Confidentiality is governed by 35 U.S.	tion is required to obtain o C. 122 and 37 CFR 1 11 :	r retain a benefit by the public w	hich is to file (and by the nated to take 6 minutes to			

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:	10	619691						
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:	Da	avid M. Krinsky						
Filer:	Ja	son 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
	Tota	al in USE	D (\$)	3040

Electronic Acl	knowledgement 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)

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Payment was successfully received in RAM	\$3040				
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Document Number	Document Description	File Name	File Size(Bytes) /Message Digest	Multi Part /.zip	Pages (if appl.
1	Request for Continued Examination	RCE_TRANS.pdf	721069	no	3
•	(RCE)		12c36c83158f63a23db9564b36ede2ea 47b8989a	110	5
Warnings:					
Information:					
2		AMEND_AND_EOT.pdf	1204750	yes	12
2			73713b6a46c1b228091b906ba7e6ed98 de810d48	yes	12
	Multipa	rt Description/PDF files in	.zip description		
	Document Des	scription	Start	End	
-	Amendment Submitted/Entered	with Filing of CPA/RCE	1	1	
	Claims		2	10	
	Applicant Arguments/Remarks	Made in an Amendment	11	1	1
	Extension of	Time	12		2
Warnings:					
Information:					
2	Fee Merichast (PTO 06)	foo info ndf	8357	20	0
3	Fee Worksheet (PTO-06)	fee-info.pdf	522cbd881356e05e6166522d6d315b31 2cbee5a3	no	2
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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.

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	SEARCH FEE (37 CFR 1.16(k), (i),		N/A		N/A	1 Г	N/A			N/A	
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	Application Number		10619691	
	Filing Date		2003-07-16	
INFORMATION DISCLOSURE	First Named Inventor	Krinsk	sky	
STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Art Unit		2611	
	Examiner Name	TRAN	N, KHANH C	
	Attorney Docket Number		5550-2-CON2	

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

		-					
	1	РСТ	International Search Report dated Oct. 9, 2002 for PCT/US01/41653, 3 pages (Attorney's Ref. No. 5550-2-PCT-3)				
	2	Interr	national 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)							
	national Preliminary Examination Report for International (PCT) Patent Application No. PCT/US01/00418, oleted March 9, 2002, 2 pages (Attorney's Ref. No. 5550-2-PCT)						
	5		pean Search Report for European Patent Application No. EP 06022008 completed January 8, 2007, 8 pages mey's Ref. No. 5550-2-PEP5)				
	6		niner's First Report for Australian Patent Application No. 2004203321, mailed November 16, 2006, 2 pages mey's Ref. No. 5550-2-PAU4)				
If you wis	sh to a	dd ado	ditional non-patent literature document citation information please click the Add button Add				
			EXAMINER SIGNATURE				
Examiner	r Signa	ature	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.						
Standard S <sup>*</sup> <sup>4</sup> Kind of do	T.3). <sup>3</sup> F cument	For Japa by the a	O Patent Documents at <u>www.USPTO.GOV</u> or MPEP 901.04. <sup>2</sup> Enter office that issued the document, by the two-letter code (WIPO anese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>5</sup> Applicant is to place a check mark here on 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 Krinsk		ky	
	Art Unit		2611	
	Examiner Name TRAN		N, KHANH C	
	Attorney Docket Number		5550-2-CON2	

	CERTIFICATION STATEMENT						
Plea	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	ł						
	foreign patent of after making rea any individual de	information contained in the information di ffice in a counterpart foreign application, and sonable inquiry, no item of information conta esignated in 37 CFR 1.56(c) more than thr 37 CFR 1.97(e)(2).	d, to the knowledge of the ained in the information dis	e person signing the certification closure statement was known to			
	See attached ce	rtification statement.					
	Fee set forth in 3	37 CFR 1.17 (p) has been submitted herewith	l.				
X	None						
۸c	ignature of the an	SIGNAT plicant or representative is required in accord		B Please see CER 1.4(d) for the			
	n of the signature.						
Sigr	nature	/Jason H. Vick/	Date (YYYY-MM-DD)	2007-10-25			
Nan	ame/Print Jason H. Vick Registration Number 45285						
pub 1.14 app requ	lic which is to file 1. This collection i lication form to the uire to complete th	rmation is required by 37 CFR 1.97 and 1.98. (and by the USPTO to process) an applicatio is estimated to take 1 hour to complete, inclu e USPTO. Time will vary depending upon the his form and/or suggestions for reducing this b k Office, U.S. Department of Commerce, P.O	n. Confidentiality is goverr ding gathering, preparing a e individual case. Any com burden, should be sent to t	ned by 35 U.S.C. 122 and 37 CFR and submitting the completed aments on the amount of time you he Chief Information Officer, U.S.			

Fatent 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:

- 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.
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- 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.
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- 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.

EFS Web 2.0.1

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	Submitted with Payment	no	
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## File Listing:

Document Number	Document Description	File Name	File Size(Bytes) /Message Digest	Multi Part /.zip	Pages (if appl.)
1	1 Information Disclosure Statement IDS 03.pdf		808426	20	4
	(IDS) Filed	103_03.pdi	261707db1tb5e250255e6e482acade8e 96e34d59	no	4
Warnings:					

Information	:				
for autoloadin Message if yo be made avai	Number Citation or a U.S. Publication N g of data into USPTO systems. You may u are citing U.S. References. If you chos lable within the Image File Wrapper (IFW Foreign Patent Documents or Non Pater	remove the form to add the rec se not to include U.S. Reference /) system. However, no data wil	uired data in order to co s, the image of the form be extracted from this f	orrect the Inf will be proc orm. Any ac	ormational essed and Iditional
2	NPL Documents	NPL Documents 5550-2-PCT-3_Search_Rep ort.pdf		no	3
Warnings:					
Information	:				
3	NPL Documents	5550-2-PCT_Search_Report	156202	no	4
		.pdf	ce80d36e54318f42cd19132342bee0ba 2645a706		
Warnings:					
Information	:				<b></b>
4	NPL Documents	5550-2-PCT_Written_Opinio n.pdf	241613	no	2
			635fc12cf9d6917802d2146cce503dd89 6125fd7		
Warnings:					-
Information	:				
5	NPL Documents	5550-2-PCT IPER.pdf	85503	no	2
	Ni E Documents		dfb67c85e9bdcc84d0df1b969e85eaecf 8ee0d83	10	2
Warnings:					
Information	:				
6	NPL Documents	5550-2-PEP5_European_Se arch_Report_for_EP_06022	696810	no	8
		008_1-8-07.pdf	9ae058a5710f5b8d193a484700c79ac3 032c01db		
Warnings:					
Information		r	· · · · · · · · · · · · · · · · · · ·		
7	NPL Documents	5550-2-PAU4_Examiners_Fi rst_Report_for_AU20042033	131297	no	2
		21_11-16-06.pdf	4ff0b79b6b7cf7cdcb00e51ab03715623 ad52424		
Warnings:					
Information					
		Total Files Size (in bytes)	220	66720	

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.

		Approved for I	PTO/SB/31 (10-07) use through 10/31/2007. OMB 0651-0031
Under the Paperwork Reduction Act of 1995, no persons are required to response	U.S. Patent a ond to a collection of	nd Trademark Offic of information unles	ce; U.S. DEPARTMENT OF COMMERCE ss it displays a valid OMB control number.
NOTICE OF APPEAL FROM THE EXAMINER T THE BOARD OF PATENT APPEALS AND INTERFER	го	Docket Numbe 5550-2	er (Optional)
THE BOARD OF PATENT AT EACO AND INTERTER			
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	In re Applicat	ion of Dav:	id M. Krinsky
"Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313- 1450" [37 CFR 1.8(a)]	Application N 106196	591	Filed 2003-07-16
on	Syste ForDiagno	ms and Meth stic Transm	ods for Establishing a dission Mode and Communicati
Signature	Art Unit	9	Examiner
Typed or printed		2611	TRAN, K.
Applicant hereby appeals to the Board of Patent Appeals and Interference	ces from the last	decision of the e	xaminer.
The fee for this Notice of Appeal is (37 CFR 41.20(b)(1))			\$
Applicant claims small entity status. See 37 CFR 1.27. Therefore,	the fee shown at	ove 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 and I have enclosed a duplicate copy of this sheet.	oplication to a De	posit Account.	
The Director is hereby authorized to charge any fees which may b to Deposit Account No. <u>19-1970</u> . I have enclose	e required, or cre ed a duplicate co	edit any overpayr by of this sheet.	ment
X A petition for an extension of time under 37 CFR 1.136(a) (PTO/S	B/22) is enclosed	4.	
WARNING: Information on this form may become public. Cre be included on this form. Provide credit card information and	edit card information c	ation should not on PTO-2038.	t
I am the		/	
applicant/inventor.		/Jason H. V	Signature
assignee of record of the entire interest.		Jason H. Vi	-
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)			ped or printed name
Image: State of a state of	_	(303) 863-9	700
		Т	elephone number
attorney or agent acting under 37 CFR 1.34.		October 1,	, 2007
Registration number if acting under 37 CFR 1.34.			Date
NOTE: Signatures of all the inventors or assignees of record of the end Submit multiple forms if more than one signature is required, see below	tire interest or the w*.	eir representative	e(s) are required.
√ *Total of <sup>1</sup> forms are submitted.			
$\mathbf{X}$ *Total of 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.

		U.S. Patent and	PTO/SB/22 (10- Approved for use through 07/31/2006. OMB 0651-0 I Trademark Office; U.S. DEPARTMENT OF COMMER			
Under the Paperwork Reduction Act of 1995, no perso PETITION FOR EXTENSION OF TIME UND			f information unless it displays a valid OMB control num Docket Number (Optional)			
FY 2006		5550-2-CON2				
(Fees pursuant to the Consolidated Appropriation	s Act, 2005 (H.) In re Applicat	R. 4818)) ion of David	M. Krinsky			
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	Application N 10619691		Filed 2003-07-16 Is for Establishing a Diagnostic			
Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450 Signature:	Transmission	Mode and Co	mmunicating Over the Same			
Name: Christine Jacquet	Art Unit 2611	]	Examiner TRAN, K.			
This is a request under the provisions of 37 CFR 1.136(a) to example the provision of the second sec	stend the period for	or filing a reply	in the above identified application.			
The requested extension and fee are as follows (check ti additional extensions be required, those extension(s) are	me period desire hereby requeste	ed and enter th ed)	e appropriate fee below): (Should			
	Fee	<u>Small Enti</u>	ty 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	\$ <u>1020</u>			
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 app	lication to Dej	posit Account.			
The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number <u>19-1970</u> . I have enclosed a duplicate copy of this sheet.						
WARNING: Information on this form may become provide credit card information and authorization on	oublic. Credit ca PTO-2038.	rd information	a should not be included on this form.			
I am the applicant/inventor						
assignee of record of the entire interest. S Statement under 37 CFR 3.73(b) is er	ee 37 CFR 3.71 nclosed. (Form	PTO/SB/96).				
attorney or agent of record. Registration	Number: <u>45,285</u>	ī				
attorney or agent under 37 CFR 1.34(a). Registration number if acting under 3	7 CFR 1.34(a) _					
/Jason H. Vick/			October 1, 2007			
Signature			Date			
Jason H. Vick, Reg. No. 45,285			303 863-9700			
Typed or printed name			Telephone Number			
NOTE: Signatures of all the inventors or assignees of record of the or one signature is required, see below.	entire interest or thei	r representative(s	) are required. Submit multiple forms if more than			

Total of one forms are submitted. This collection of information is required by 37 CFR 1.136(a). The information is required to obtain 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.

Electronic Patent Application Fee Transmittal					
Application Number:	10	10619691			
Filing Date:	16	-Jul-2003			
Title of Invention:	Systems and methods for establishing a diagnostic transmission m and communicating over the same			ransmission mode	
First Named Inventor/Applicant Name:	Da	avid 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:				
	Tota	al in USE	) (\$)	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	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_E	295930	VOC	2
I		OT.pdf	fc6a5595eaff716b32e089be9ac7a8be7 1ecc3d7	yes	2
	Multipa	rt Description/PDF files in	.zip description		
	Document De	scription	Start	E	nd
	Notice of App	eal Filed	1		1
	Extension o	f Time	2		2
Warnings:					
Information	:				
2	Fee Worksheet (PTO-06)	fee-info.pdf	8352	no	2
2		lee-inio.pui	9015feb4d5bd7220c2e3653612e00bc6 a317fea3	10	2
Warnings:					
Information	:				
		Total Files Size (in bytes)	: 30	04282	
characteriz similar to a <u>New Applic</u> If a new app 37 CFR 1.53 shown on t <u>National Sta</u> If a timely s of 35 U.S.C application in due cour <u>New Interna</u> If a new international	wledgement Receipt evidences re ed by the applicant, and including Post Card, as described in MPEP <u>ations Under 35 U.S.C. 111</u> blication is being filed and the app 3(b)-(d) and MPEP 506), a Filing Re his Acknowledgement Receipt will age of an International Application ubmission to enter the national st . 371 and other applicable requirer as a national stage submission un se. <u>ational Application Filed with the L</u> ernational application is being file s for an international filing date (s al Application Number and of the I bject to prescriptions concerning r	page counts, where applic 503. lication includes the neces ceipt (37 CFR 1.54) will be establish the filing date of <u>under 35 U.S.C. 371</u> age of an international app nents a Form PCT/DO/EO/S nder 35 U.S.C. 371 will be is <u>ISPTO as a Receiving Offic</u> d and the international app ee PCT Article 11 and MPE nternational Filing Date (Fo	able. It serves as e sary components fo issued in due cours the application. lication is complian 03 indicating accep ssued in addition to e Itication includes the P 1810), a Notification form PCT/RO/105) wil	vidence of or a filing d te and the o tance of th the Filing I e necessary on of the I be issued	receipt late (see date conditions le Receipt,

	ED STATES PATENT A	and Trademark Office	UNITED STATES DEPAR United States Patent and Address: COMMISSIONER F P.O. Box 1450 Alexandria, Virginia 223 www.uspto.gov	Trademark Office OR PATENTS
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 SHERIDAN R	7590 03/30/2007		EXAM	INER
<b>SUITE 1200</b>			TRAN, K	HANH C
1560 BROADV DENVER, CO			ART UNIT	PAPER NUMBER
, <b>, , , , , , , , , , , , , , , , , , </b>			2611	
SHORTENED STATUTOR	Y PERIOD OF RESPONSE	MAIL DATE	DELIVER	Y MODE
3 MO	NTHS	03/30/2007	PAP	ER

## 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.

	Application No.	Applicant(s)
Office Action Summary	10/619,691	KRINSKY ET AL.
ennee Action Gummary	Examiner	Art Unit
	Khanh Tran	2611
The MAILING DATE of this communicat Period for Reply	ion appears on the cover sneet v	with the correspondence address
<ul> <li>A SHORTENED STATUTORY PERIOD FOR WHICHEVER IS LONGER, FROM THE MAIL</li> <li>Extensions of time may be available under the provisions of 37 after SIX (6) MONTHS from the mailing date of this communic</li> <li>If NO period for reply is specified above, the maximum statutor</li> <li>Failure to reply within the set or extended period for reply will, Any reply received by the Office later than three months after the earned patent term adjustment. See 37 CFR 1.704(b).</li> </ul>	ING DATE OF THIS COMMUN CFR 1.136(a). In no event, however, may a ation. y period will apply and will expire SIX (6) MC by statute, cause the application to become A	ICATION. a reply be timely filed NTHS from the mailing date of this communication. ABANDONED (35 U.S.C. § 133).
Status		
1) Responsive to communication(s) filed o	n <u>12 January 2007</u> .	
	This action is non-final.	
3) Since this application is in condition for	allowance except for formal ma	tters, prosecution as to the merits is
closed in accordance with the practice u	inder <i>Ex parte Quayle</i> , 1935 C.	D. 11, 453 O.G. 213.
Disposition of Claims		
4)⊠ Claim(s) <u>44-85</u> is/are pending in the app	plication.	
4a) Of the above claim(s) is/are w		
5) Claim(s) is/are allowed.		
6) Claim(s) <u>44-85</u> 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 Ex	aminor	
10) The drawing(s) filed on $07/16/2003$ is/are		ted to by the Examiner
Applicant may not request that any objection		•
Replacement drawing sheet(s) including the		
11) The oath or declaration is objected to by		
		· · ·
Priority under 35 U.S.C. § 119		
12) Acknowledgment is made of a claim for t	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 doc		
2. Certified copies of the priority doc		•
3. Copies of the certified copies of the	ne priority documents have been	n received in this National Stage
application from the International	Bureau (PCT Rule 17.2(a)).	
* See the attached detailed Office action fo	r a list of the certified copies no	t received.
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I) ⊠ Notice of References Cited (PTO-892) 2) □ Notice of Draftsperson's Patent Drawing Review (PTO-6		Summary (PTO-413) (s)/Mail Date
B) Information Disclosure Statement(s) (PTO/SB/08)	5) 🛄 Notice of	Informal Patent Application
Paper No(s)/Mail Date	, 6) 🗍 Other:	
i. Patent and Trademark Office FOL-326 (Rev. 08-06) C	Office Action Summary	Part of Paper No./Mail Date 20070328

## 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<sub>f</sub>, 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<sub>f</sub>, 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<sub>f</sub>, 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<sub>f</sub>, has direct relationship with the SNR<sub>f</sub>, 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<sub>f</sub>, represent bits of diagnostic message, the bits being mapped to DMT symbol containing subrange of frequencies. Furthermore, the transmit power spectrum density, Q<sub>f</sub>, 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<sub>f</sub>, 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 <u>a signal pulse at a</u> <u>known transmit power spectrum density</u>,  $Q_{f}$ , 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 Tran

Khanh Tran Primary Examiner, AU 2611

Notice of References Cided	Application/Control No. 10/619,691	Applicant(s)/ Reexaminati KRINSKY ET	on
Notice of References Cited	Examiner	Art Unit	
	Khanh Tran	2611	Page 1 of 1

## U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	Α	US-6,633,545	10-2003	Milbrandt, Celite	370/252
*	в	US-6,073,179	06-2000	Liu et al.	709/229
	С	US-			
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## FOREIGN PATENT DOCUMENTS

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#### NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
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\*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.

U.S. Patent and Trademark Office PTO-892 (Rev. 01-2001)

## Notice of References Cited

Part of Paper No. 20070328



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address COMMISSIONER FOR PATENTS Advandria, Voginia 22313-1450 www.uppto.gov

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Bib Data Sheet

## **CONFIRMATION NO. 7134**

SERIAL NUME 10/619,691	BER	FILING OR 371(c) DATE 07/16/2003 RULE	C	<b>CLASS</b> 375	r unit	D	ATTORNEY OCKET NO. 550-2-CON2				
		y, Acton, MA; Pizzano JR., Stonehar	m, MA;								
<ul> <li>** CONTINUING DATA **********************************</li></ul>											
IF REQUIRED, FOREIGN FILING LICENSE GRANTED         *** 07/07/2004         Foreign Priority claimed       yes         35 USC 119 (a-d) conditions       yes         no       Met after         Acknowledged       Examiner's Signature         Initials       Initials											
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	Application/Control No.	Applicant(s)/Patent under Reexamination
	10/619,691	KRINSKY ET AL.
	Examiner	Art Unit
_	Khanh Tran	2611

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# **EAST Search History**

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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
<b>S9</b> .	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
531	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

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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		"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

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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
<b>S69</b>	0	((multi adj user) near2 source) and MIMO	US-PGPUB; USPAT; USOCR	ÖR	ON	2005/09/16 15:55
\$70 <sup>-</sup>	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	US-PGPUB;	OR	ON	2005/09/16 16:14
		adj interference) and (demultiplex\$5) and coder	USPAT; USOCR			2003/03/10 10.11
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
<b>S79</b>	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

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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
S10 0	0	((adaptive adj antenna) and (adapt\$8 adj code adj rate))	US-PGPUB; USPAT	OR	ON	2006/02/27 15:02
S10 1	94	((adaptive adj modulation) and (adaptive adj cod\$5))	US-PGPUB; USPAT	OR	ON	2006/02/27 13:11
S10 2	1	"5383219".pn.	US-PGPUB; USPAT	OR	ON	2006/02/27 13:36
S10 3	50	S87 and (transmit adj power)	US-PGPUB; USPAT	OR	ON	2006/02/27 13:43
S10 4	1	"6693982".pn.	US-PGPUB; USPAT	OR	ON	2006/02/27 14:05
S10 5	5828	channel adj estimat\$5	US-PGPUB; USPAT	OR	ON	2006/02/27 14:05
S10 6	1751	channel adj estimator	US-PGPUB; USPAT	OR	ON	2006/02/27 14:06
S10 7	48	S106 same (channel adj equalizer)	US-PGPUB; USPAT	OR	ON	2006/02/27 14:08
S10 8	3	S107 and (space adj time)	US-PGPUB; USPAT	OR	ON	2006/02/27 14:08
S10 9	7	375/267.ccls. and recod\$5	US-PGPUB; USPAT	OR	ON	2006/02/27 15:07
S11 0	3	("5781845"   "6067324"   "6122260"). PN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/02/27 15:06
S11 1	3	"375"/\$.ccls. and recod\$5 and (MAI)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:08
S11 2	1	"375"/\$.ccls. and reencod\$5 and (MAI)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:10
S11 3	7	reencod\$5 and (MAI)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:08
S11 4	0	"375"/148.ccls. and reencod\$5 and (MAI)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:14
S11 5	0	"375"/148.ccls. and reencod\$5 and (space adj time adj diversity)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:14
S11 6	0	"375"/\$.ccls. and reencod\$5 and (space adj time adj diversity)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:14
S11 7	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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S11 8	0	"375"/\$.ccls. and reencod\$5 and ((space adj time) with code)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:15
S11 9	7	"375"/\$.ccls. and (re adj encod\$5) and ((space adj time) with code)	US-PGPUB; USPAT	OR	ON	2006/02/27 15:15
S12 0	56	375/260.ccls. and Channeliz\$6	US-PGPUB; USPAT	OR	ON	2006/08/10 16:58
S12 1	180	375/267.ccls. and (space adj time adj cod\$8)	US-PGPUB; USPAT	OR	ON	2006/08/11 11:15
S12 2	1	"6366888".pn.	US-PGPUB; USPAT	OR	ON	2006/08/11 11:15
S12 3	3	375/267.ccls. and (non adj interleav\$8)	US-PGPUB; USPAT	OR	ON	2006/08/11 11:17
S12 4	11	375/260.ccls. and (non adj interleav\$8)	US-PGPUB; USPAT	OR	ON	2006/08/11 11:22
S12 5	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
S12 6	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
S12 7	0	"375"/\$.ccls. and ((outer adj cod\$6) same(non adj interleav\$8))	US-PGPUB; USPAT	OR	ON	2006/08/11 11:25
S12 8	3	"375"/267.ccls. and (( cod\$6) same(non adj interleav\$8))	US-PGPUB; USPAT	OR	ON	2006/08/11 11:25
S12 9	2	"375"/267.ccls. and (( transmit\$5) with(non adj interleav\$8))	US-PGPUB; USPAT	OR	ON	2006/08/11 11:27
S13 0	4	"375"/267.ccls. and (( transmit\$5) with(without adj interleav\$8))	US-PGPUB; USPAT	OR	ON	2006/08/11 11:27
S13 1	180	"375"/267.ccls. and (space adj time adj cod\$6)	US-PGPUB; USPAT	OR	ON	2006/08/11 11:28
S13 2	1	"6115427".pn.	US-PGPUB; USPAT	OR	ON	2006/08/16 08:06
S13 3	1	"6693982".pn.	US-PGPUB; USPAT	OR	ON	2006/08/16 08:06
S13 4	3	09/393235	US-PGPUB; USPAT	OR	ON	2006/08/16 13:47
S13 5	353	combin\$3 with serializ\$3	US-PGPUB; USPAT	OR	ON	2006/08/16 13:48
S13 6	3383513	number of transmitter antennas	US-PGPUB; USPAT	OR	ON	2007/03/20 07:30
S13 7	1	10/184054	US-PGPUB; USPAT	OR	ON	2007/03/20 09:21
S13 8	1	10/619691	US-PGPUB; USPAT	OR	ON	2007/03/20 09:37

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		"		00		2007/02/20 00 44
S13 9	1	"6636603".pn.	US-PGPUB; USPAT	OR	ON	2007/03/20 09:41
S14 0	1	"20040202237"	US-PGPUB; USPAT	OR	ON	2007/03/20 15:17
S14 1	1	09/798727	US-PGPUB; USPAT	OR	ON	2007/03/20 15:17
S14 2	1	"6745050".pn.	US-PGPUB; USPAT	OR	ON	2007/03/23 08:55
S14 3		("20020097779"   "4794556"   "4941178"   "5668830"   "6480557"   "RE31943").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:55
S14 4	695	CDMA same (multi adj user)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:55
S14 5	374	"375"/\$.ccls. and (CDMA same (multi adj user))	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:56
S14 6	287	"375"/\$.ccls. and (CDMA with (multi adj user))	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:56
S14 7	0	"375"/\$.ccls. and (CDMA with (multi adj user)) and (interference adj cancel\$&)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:57
S14 8	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
S14 9	8	("4134071"   "4744093"   "5136612"   "5164959"   "5361219"   "5363403"   "5481533"   "5790590").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 08:58
S15 0	14	("5956333").URPN.	USPAT	OR	OFF	2007/03/23 09:01
S15 1	1	09/326222.app.	US-PGPUB; USPAT; DERWENT; IBM_TDB	OR	OFF	2007/03/23 09:01
S15 2	11	("4124818"   "4992798"   "5418814"   "5467368"   "5566165"   "5596600"   "5724378"   "5956333"   "6032026"   "6088383"   "6229857").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:03
S15 3	11	"375"/\$.ccls. and (multi adj user adj demodul\$8)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 11:53
S15 4	0	"375"/\$.ccls. and (multi adj user ) and remodult\$6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:09

S15 5	23	"375"/\$.ccls. and (multi adj user ) and remodulat\$6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:05
S15 6	0	"370"/\$.ccls. and (multi adj user ) and remodult\$6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:09
S15 7	0	"455"/\$.ccls. and (multi adj user ) and remodult\$6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:10
S15 8	0	"455"/\$.ccls. and ( user ) and remodult\$6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:10
S15 9	237	"455"/\$.ccls. and ( user ) and remodulat\$6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:10
S16 0	.10	"455"/\$.ccls. and ( multiuser ) and remodulat\$6	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:11
S16 1	30	( multiuser ) and remodulat\$6 and CDMA	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:14
S16 2	873	( multiuser ) and CDMA	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:14
S16 3	523	"375"/\$.ccls. and ( multiuser ) and CDMA	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:14
S16 4	299	"375"/\$.ccls. and ((multiuser ) same CDMA)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/23 09:14
S16 5	1	"5956333".pn.	US-PGPUB; USPAT	OR	ON	2007/03/26 09:23
S16 6	1	"5644592".pn.	US-PGPUB; USPAT	OR	ON	2007/03/26 09:30
S16 7	1	10/184054	US-PGPUB; USPAT	OR	ON	2007/03/26 10:06
S16 8	1	"6115427".pn.	US-PGPUB; USPAT	OR	ON	2007/03/26 10:28
S16 9	49	375/267.ccls. and (multiuser)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:32
S17 0	6	375/260.ccls. and (multiuser same diversity)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:33
S17 1	2	375/295.ccls. and (multiuser same diversity)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:34
S17 2	8	375/130.ccls. and (multiuser same diversity)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:38

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S17 3	1	375/299.ccls. and (multiuser same diversity)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:35
S17 4	16	375/299.ccls. and (multiuser)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:35
S17 5	41	375/130.ccls. and (multiuser)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:38
S17 6	13	375/130.ccls. and (multiuser and PN)	US-PGPUB; USPAT	OR	∕ON	2007/03/26 10:40
S17 7	355	375/299.ccls.	US-PGPUB; USPAT	OR	ON	2007/03/26 10:40
S17 8	167	375/299.ccls. and user	US-PGPUB; USPAT	OR	ON	2007/03/26 10:40
S17 9	10	375/299.ccls. and (user same PN)	US-PGPUB; USPAT	OR	ON	2007/03/26 10:53
S18 0	708	"375"/\$.ccls. and (multi adj user) and CDMA	US-PGPUB; USPAT	OR	ON	2007/03/26 10:54
S18 1	294	"375"/\$.ccls. and (multi adj user) and CDMA and diversity	US-PGPUB; USPAT	OR	ON	2007/03/26 10:54
S18 2	19	"375"/\$.ccls. and ((multi adj user) same CDMA same diversity)	US-PGPUB; USPAT	OR .	ON	2007/03/26 10:59
S18 3	14	"455"/\$.ccls. and ((multi adj user) same CDMA same diversity)	US-PGPUB; USPAT	OR	ON .	2007/03/26 11:03
S18 4	134	"375"/267.ccls. and ((user) same CDMA )	US-PGPUB; USPAT	OR	ON	2007/03/26 11:18
S18 5	0	"375"/267.ccls. and (variable near3 rate) same (number adj antenna)	US-PGPUB; USPAT	OR	ON	2007/03/26 11:19
S18 6	. 9	"375"/267.ccls. and (variable near3 rate) and (number adj antenna)	US-PGPUB; USPAT	OR	ON	2007/03/26 11:19
S18 7	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
S18 8	1	"6349216".pn.	US-PGPUB; USPAT	OR	ON	2007/03/26 11:35

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S18 9	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" "553318"   "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
S19 0	1	"6947491".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 14:03
S19 1	188	(code adj rate) and (increas\$5 with antenna)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 14:04
S19 2	6	(code adj rate) same (increas\$5 with antenna)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:23
S19 3	243	375/267.ccls. and (close loop adj power adj control)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:23
S19 4	1986913	375/267.ccls. and multiuser (close loop adj power adj control)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:24
S19 5	7	375/267.ccls. and multiuser and (close loop adj power adj control)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:24
S19 6	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
S19 7	-1	"6115406".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:25
S19 8	6	("4901307"   "5652764"   "5886987"   "5952968"   "5982327"   "5991332"). PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/26 15:31
S19 9	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

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620	26		UCDAT	00	055	2007/02/26 15:47
S20 0	26	("5886987").URPN.	USPAT	OR	OFF	2007/03/26 15:47
S20 1	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
S20 2	5	"375"/267.CCLS. and (MIMO and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:06
S20 3	7	"375"/260.CCLS. and (MIMO and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:07
S20 4	30	"375"/\$.CCLS. and (MIMO and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:08
S20 5	18	"370"/\$.CCLS. and (MIMO and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:09
S20 6	7	"455"/\$.CCLS. and (MIMO and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:09
S20 7	10	"455"/\$.CCLS. and (OFDM and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:12
S20 8	39	"370"/\$.CCLS. and (OFDM and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 07:10
S20 9	39	"375"/\$.CCLS. and (OFDM and (MAI))	US-PGPUB; USPAT	OR	ON	2007/03/27 08:04
S21 0	1	"6115427".pn.	US-PGPUB; USPAT	OR	ON	2007/03/27 08:05
S21 1	81	(code adj rate) same (number near antenna)	US-PGPUB; USPAT	OR	ON	2007/03/27 08:20
S21 2	1	"6560295".pn.	US-PGPUB; USPAT	OR	ON	2007/03/27 08:52
S21 3	387	(space adj time) same CDMA	US-PGPUB; USPAT	OR	ON	2007/03/27 08:53
S21 4	68	375/267.ccls. and ((space adj time) same CDMA)	US-PGPUB; USPAT	OR	ON	2007/03/27 09:15
S21 5	2	375/267.ccls. and (compar\$8 with uplink with downlink)	US-PGPUB; USPAT	OR	ON	2007/03/27 09:16
S21 6	1	375/222.ccls. and (compar\$8 with uplink with downlink)	US-PGPUB; USPAT	OR	ON	2007/03/27 09:21
S21 7	0	375/222.ccls. and ((compar\$8 with uplink with downlink) same interference)	US-PGPUB; USPAT	OR	ON	2007/03/27 09:21
S21 8	9	"375"/\$.ccls. and ((compar\$8 with uplink with downlink) same interference)	US-PGPUB; USPAT	OR	ON	2007/03/27 09:22

S21 9	0	"375"/222.ccls. and (diagnostic adj bit)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 11:54
S22 0	0	"375"/222.ccls. and (diagnostic adj tone)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 11:54
S22 1	0	"370"/\$.ccls. and (diagnostic adj tone)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 13:14
S22 2	19	"370"/\$.ccls. and (diagnostic with tone)	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 13:17
S22 3	0	375/222.ccls. and (diagnostic adj tone)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:19
S22 4	0	375/222.ccls. and (diagnostic with tone)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:19
S22 5	22	375/222.ccls. and (diagnostic with bit)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:26
S22 6	8	("5889856"   "6137839"   "6263016"   "6374288"   "6400759"   "6442195"   "6477595"   "6594306").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 13:22
S22 7	0	375/222.ccls. and (diagnostic with DMT )	US-PGPUB; USPAT	OR	ON	2007/03/27 13:43
S22 8	0	"375"/\$.ccls. and (diagnostic with DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:26
S22 9	0	"370"/\$.ccls. and (diagnostic with DMT )	US-PGPUB; USPAT	OR	ON	2007/03/27 13:26
S23 0	0	"370"/\$.ccls. and (diagnostic same DMT )	US-PGPUB; USPAT	OR	ON	2007/03/27 13:27
S23 1	1	"375"/\$.ccls. and (diagnostic same DMT )	US-PGPUB; USPAT	OR	ON	2007/03/27 13:39
S23 2	113	"375"/\$.ccls. and (diagnostic same message)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:39
S23 3	4	"375"/\$.ccls. and (diagnostic same message) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:41
S23 4	6.	"370"/\$.ccls. and (diagnostic same message) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:42
S23 5	0	"370"/\$.ccls. and (diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:42
S23 6	1	"375"/\$.ccls. and (diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:45
S23 7	15	(diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:43
S23 8	1	375/222.ccls. and (diagnostic adj message)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:43

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S23 9	0	375/260.ccls. and (diagnostic adj message) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:44
S24 0	0	375/260.ccls. and (diagnostic adj message)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:44
S24 1	21	375/260.ccls. and (diagnostic)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:44
S24 2	5	375/260.ccls. and (diagnostic ) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:45
S24 3	5	375/260.ccls. and (diagnostic ) and OFDM	US-PGPUB; USPAT	OR	ON	2007/03/27 13:45
S24 4	1	"379"/\$.ccls. and (diagnostic same DMT)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:45
S24 5	5	"379"/\$.ccls. and (diagnostic same bins)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:46
S24 6	3	"375"/\$.ccls. and (diagnostic same bins)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:46
S24 7	12	"370"/\$.ccls. and (diagnostic same bins)	US-PGPUB; USPAT	OR	ON	2007/03/27 13:47
S24 8	3	"370"/\$.ccls. and (bit with diagnostic ) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:48
S24 9	7	"375"/\$.ccls. and (bit with diagnostic ) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:50
S25 0	0	"702"/\$.ccls. and (bit with diagnostic ) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:50
S25 1	0	"370"/249.ccls. and (bit with diagnostic ) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:52
S25 2	0	"370"/249.ccls. and ( diagnostic ) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/27 13:52
S25 3	65	"370"/249.ccls. and ( diagnostic )	US-PGPUB; USPAT	OR	ON	2007/03/27 13:52
S25 4	1	"370"/249.ccls. and ( diagnostic adj message )	US-PGPUB; USPAT	OR	ON	2007/03/27 13:52
S25 5	1	"370"/249.ccls. and ( initiat\$5 near2 diagnostic )	US-PGPUB; USPAT	OR	ON	2007/03/27 14:37
S25 6	0	dianostic same (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/27 14:33
S25 7	0	diagnostic same (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/27 14:37
S25 8	0	"375"/\$.ccls. and (diagnostic same (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2007/03/27 14:37
S25 9	9	"375"/\$.ccls. and (diagnostic and (DMT adj symbol))	US-PGPUB; USPAT	OR	ON	2007/03/27 14:53
S26 0	1	"375"/\$.ccls. and (diagnostic same DMT )	US-PGPUB; USPAT	OR	ON	2007/03/27 14:58

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S26 1	19	"375"/\$.ccls. and (bit near2 diagnostic )	US-PGPUB; USPAT	OR	ON	2007/03/27 15:00
S26 2	1	"375"/\$.ccls. and (map\$5 with (bit near2 diagnostic) )	US-PGPUB; USPAT	OR	ON	2007/03/27 15:00
S26 3	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
S26 4	0	map\$7 with diagnostic with DMT	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 15:08
S26 5	0	map\$7 with diagnostic with DMT	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:09
S26 6	0	map\$7 with (diagnostic adj bit) with DMT	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:09
S26 7	1	375/260.ccls. and DMT and diagnostic	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:13
S26 8	13	375/222.ccls. and DMT and diagnostic	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:10
S26 9	0	375/260.ccls. and (diagnostic adj bit)	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:13
S27 0	1	"375"/\$.ccls. and (diagnostic adj bit)	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:13
S27 1	1	"379"/\$.ccls. and (diagnostic adj bit)	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:14
S27 2	69	(diagnostic adj bit)	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:15
S27 3	0	(diagnostic adj bit) and DMT	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:14
S27 4	0	(diagnostic adj bit) and multicarrier	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:14
S27 5	0	(diagnostic adj meassage) and (DMT adj symbol)	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 15:16

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S27 6	1	(diagnostic adj message) and (DMT adj symbol)	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 16:15
S27 7	4	10/127164	US-PGPUB; USPAT; IBM_TDB	OR	OFF	2007/03/27 16:15
S27 8	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
S27 9	1	"5930678".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2007/03/27 16:19
S28 0	0	(diagnostic adj DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:37
S28 1	29	(diagnostic adj tone)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:37
S28 2	0	"375"/\$.ccls. and (diagnostic adj tone)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:37
S28 3	0	"375"/\$.ccls. and (diagnostic near tone)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:37
S28 4	7	"375"/\$.ccls. and (diagnostic near bits)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:38
S28 5	0	"375"/\$.ccls. and (diagnos\$6 near DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:38
S28 6	0	"375"/\$.ccls. and (diagnos\$6 with DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:38
S28 7	479	"375"/\$.ccls. and (bit with DMT)	US-PGPUB; USPAT	OR .	ON	2007/03/28 07:39
S28 8	207	"375"/\$.ccls. and (bit near3 DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:39
S28 9	13	"375"/\$.ccls. and (bit near3 DMT) and diagnost\$5	US-PGPUB; USPAT	OR	ON	2007/03/28 07:47
S29 0	1	"375"/\$.ccls. and ( DMT same diagnost\$5)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:47

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S29 1	40	"375"/\$.ccls. and ( DMT and diagnost\$5)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:49
S29 2	43	"375"/222.ccls. and ( diagnos\$5 near3 modem)	US-PGPUB; USPAT	OR	ON	2007/03/28 07:50
S29 3	10	"375"/222.ccls. and ( diagnos\$5 near3 modem) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/28 07:56
S29 4	0	"370"/484.ccls. and ( diagnos\$5 near3 modem) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/28 07:52
S29 5	0	"370"/484.ccls. and ( diagnos\$5 ) and DMT	US-PGPUB; USPAT	OR	ON	2007/03/28 07:52
S29 6	1	"370"/484.ccls. and ( diagnos\$5 )	US-PGPUB; USPAT	OR	ON	2007/03/28 07:52
S29 7	16	"370"/480.ccls. and ( diagnos\$5 )	US-PGPUB; USPAT	OR	ON	2007/03/28 07:52
S29 8	11	"375"/222.ccls. and ( diagnos\$5 adj mode)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:08
S29 9	1	"6658052".pn.	US-PGPUB; USPAT	OR	ON	2007/03/28 08:26
S30 0	96171	(one adj bit)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:27
S30 1	5	(one adj bit) with (DMT adj symbol)	US-PGPUB; USPAT	OR ·	ON	2007/03/28 08:28
S30 2	197	(bit) with (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:28
S30 3	27	(bit) with (DMT adj symbol) and (diagnos\$7)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:30
S30 4	. 0	(bit near test\$5) with (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:31
S30 5	0	(diagnost near tone) and (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:31
S30 6	0	(diagnos\$5 near tone) and (DMT adj symbol)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:31
S30 7	0	(diagnos\$5 near tone) and (DMT )	US-PGPUB; USPAT	OR	ON	2007/03/28 08:31
S30 8	0	(diagnos\$5 near carrier) and (DMT)	US-PGPUB; USPAT	OR	ON	2007/03/28 08:36
S30 9	5	diagnos\$5 with (DMT )	US-PGPUB; USPAT	OR	ON	2007/03/28 09:12
S31 0	106	(Pulse adj width adj modulat\$6) same (FSK)	US-PGPUB; USPAT	OR	ON	2007/03/28 10:04
S31 1	1	"6633545".pn.	US-PGPUB; USPAT	OR	ON	2007/03/28 10:48
S31 2	1	10/619691	US-PGPUB; USPAT	OR	ON	2007/03/28 10:48

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#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:	)	
David M. KRINSKY	)	G
Application No. 10/619,691	)	Е
Filed: July 16, 2003	)	
For: SYSTEMS AND METHODS ESTABLISHING A DIAGNOSTIC TRANSMISSION MODE AND COMMUNICATING OVER THE SAME	) ) )	

Group Art Unit: 2611

Examiner: TRAN, Khanh C.

#### 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.

Application No. 10/619,691 Docket No. 5550-2-CON2 Page 2

#### 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.

Application No. 10/619,691 Docket No. 5550-2-CON2 Page 11

#### **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 SHERIDAN ROSS P.C.

SUITE 1200 1560 BROADWAY DENVER, COLORADO 80202 TELEPHONE: 303-863-9700 FAX: 303-863-0223

Electronic Patent	App	olication Fe	e Transn	nittal			
Application Number:	10	619691					
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:	Da	avid M. Krinsky					
Filer:	Ja	son Vick/Christine	Jacquet				
Attorney Docket Number:	08	1513-334					
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:				
	Tota	al in USE	) (\$)	1000

Electronic Acl	knowledgement 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 ch	harge 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
	Multipa	rt Description/PDF files in	.zip description		
	Document De	scription	Start	End	
	Amendment - After No	n-Final Rejection	1		1
	Claims		2	1	0
	Applicant Arguments/Remarks	Made in an Amendment	11	1	1
Warnings:					
Information:			· · · · · · · · · · · · · · · · · · ·		
2	Fee Worksheet (PTO-06)	fee-info.pdf	8207	no	2
Warnings:					
Information:					
		Total Files Size (in bytes)	): 8	97950	
characterized similar to a F <u>New Applica</u> If a new appl 37 CFR 1.53( shown on thi <u>National Stac</u> If a timely su	Vledgement Receipt evidences red d by the applicant, and including Post Card, as described in MPEP tions Under 35 U.S.C. 111 ication is being filed and the app b)-(d) and MPEP 506), a Filing Re is Acknowledgement Receipt will ge of an International Application bmission to enter the national sta 371 and other applicable requirent as a national stage submission ur	page counts, where applie 503. lication includes the neces ceipt (37 CFR 1.54) will be establish the filing date o <u>under 35 U.S.C. 371</u> age of an international app nents a Form PCT/DO/EO/	cable. It serves as e ssary components fo issued in due cours f the application. Dlication is compliar 903 indicating accep	vidence of or a filing d se and the o at with the c otance of th	receipt ate (see date conditions

۳7	ATENT APPL	ICATION F Substitute			N RECORD		r Docket Number 19,691		ing Date 16/2003	To be Maile
	A	PPLICATION	AS FILE (Column		Column 2)	SMALI		OR		HER THAN
	FOR		NUMBER FII	_ED NU	MBER 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),		N/A		N/A	N/A			N/A	
	EXAMINATION FE	E	N/A		N/A	N/A			N/A	
(37 CFR 1.16(o), (p), or (q)) TOTAL CLAIMS (37 CFR 1.16(i))		01 (q))	mir	nus 20 = *		x \$ =		OR	x \$ =	
٩D	EPENDENT CLAIM CFR 1.16(h))	1S	m	inus 3 = *		X\$ =			X\$ =	
	APPLICATION SIZE (37 CFR 1.16(s))	E FEE is \$ add 35	ets of pap 250 (\$125 litional 50 U.S.C. 41(	ation and drawin er, the applicatic for small entity) sheets or fraction a)(1)(G) and 37	n size fee due for each n thereof. See					
lf f	MULTIPLE DEPEN					TOTAL			TOTAL	
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	01/12/07	(Column 1) CLAIMS REMAINING AFTER AMENDMEN		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE (\$)	additional Fee (\$)		SMA RATE (\$)	ALL ENTITY ADDITIONAI FEE (\$)
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	01/12/07 Total (37 CFR 1.18(i)) Independent (37 CFR 1.18(h))	(Column 1) CLAIMS REMAINING AFTER AMENDMENT * 42 * 14	Minus Minus	(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE (\$)	additional Fee (\$)		SMA RATE (\$)	ALL ENTITY ADDITIONA FEE (\$)
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The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

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, 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.

			UNITED STATES DEPAR United States Patent and Address: COMMISSIONER F P.O. Box 1450 Alexandria, Virginia 223 www.uspto.gov	Trademark Office OR PATENTS
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 75	590 10/31/2006		EXAM	INER
SHERIDAN F	ROSS P C		TRAN, KI	HANH C
SUITE 1200 1560 BROADV	VAY		ART UNIT	PAPER NUMBER
DENVER, CO			2611	
		·	DATE MAILED: 10/31/200	6

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

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		Application No.	Applicant(s)
		10/619,691	KRINSKY ET AL.
Office Action Su	nmary	Examiner	Art Unit
		Khanh Tran	2611
The MAILING DATE of the Period for Reply	nis communication ap	ppears on the cover sheet	with the correspondence address
A SHORTENED STATUTORY WHICHEVER IS LONGER, FR - Extensions of time may be available und after SIX (6) MONTHS from the mailing of	COM THE MAILING [ er the provisions of 37 CFR 1 late of this communication. the maximum statutory period period for reply will, by statu n three months after the maili	DATE OF THIS COMMUN 136(a). In no event, however, may will apply and will expire SIX (6) MC te, cause the application to become	a reply be timely filed DNTHS from the mailing date of this communication. ABANDONED (35 U.S.C. § 133).
Status	•		
1) Responsive to communi	cation(s) filed on 16.	July 2003.	,
2a) This action is <b>FINAL</b> .		is action is non-final.	
3) Since this application is i	,		atters, prosecution as to the merits is
closed in accordance wit	h the practice under	Ex parte Quayle, 1935 C	D. 11, 453 O.G. 213.
Disposition of Claims			
<ul> <li>4)  Claim(s) <u>1-43</u> is/are pendent 4a) Of the above claim(s)</li> <li>5) Claim(s)</li></ul>	is/are withdra owed. cted. jected to.	awn from consideration.	
Application Papers		·	
9) The specification is object	ted to by the Examin	er.	
10)⊠ The drawing(s) filed on <u>1</u>			•
		e drawing(s) be held in abey	
		-	ng(s) is objected to. See 37 CFR 1.121(d). ed Office Action or form PTO-152.
Priority under 35 U.S.C. § 119			
12) Acknowledgment is made	-	n priority under 35 U.S.C.	§ 119(a)-(d) or (f).
a) All b) Some * c) 1. Certified copies of		its have been received.	
		its have been received in	Application No
-	· ·		n received in this National Stage
	• •	au (PCT Rule 17.2(a)).	
* See the attached detailed		• • • •	ot received.
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Attachment(s)		_	
<ol> <li>Notice of References Cited (PTO-89)</li> <li>Notice of Draftsperson's Patent Drave</li> </ol>			/ Summary (PTO-413) b(s)/Mail Date
<ol> <li>Notice of Drattsperson's Patent Drav</li> <li>Information Disclosure Statement(s) Paper No(s)/Mail Date</li> </ol>			f Informal Patent Application

Application/Control Number: 10/619,691 Art Unit: 2611

#### 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

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#### Application/Control Number: 10/619,691 Art Unit: 2611

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.

Page 6

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 ormore sub-

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.

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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 "Modern 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

Application/Control No. 10/819.601           *         A         US-6.         Control Not	<u> </u>					Application/C	ontrol No	Applicant(a)/Dat	ont Lindor
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Sheet 1

Con	nplete it Known	
Application Number	10/619,691	
Filing Date	July 16, 2003	
First Named Inventor	KRINSKY, DAVID M.	
Art Unit	2631	
Examiner Name		
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Attorney Docket Number	T3653-8765US02	

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<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard St.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the region of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document WIPO Standard St. 16. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.97 and 1.98. This 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 2 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.

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

# **CONFIRMATION NO. 7134**

SERIAL NUMB 10/619,691	RULE							ATTORNEY DOCKET NO. 081513-334		
		y, Acton, MA; Pizzano JR., Stonehar	n, MA;					-		
This applic: 08/10/2000 and claims ¥C⊂T ** FOREIGN APP	ation bene LICA	fit of 60/174,865 01/07	01/08/20 7/2000 Y	ES O	3,052 w	vhich cla	ims ben	efit of	60/224,308	
Foreign Priority claimed yes no 35 USC 119 (a-d) conditions yes no Met after met Verified and Acknowledged ADDRESS										
62574	62574									
	TTLE Systems and methods for establishing a diagnostic transmission mode and communicating over the same									
	All Fees									
	□ 1.16 Fees ( Filing )									
FILING FEE       FEES: Authority has been given in Paper         No.									essing Ext. of	
1668	No	for following			<b>□</b> 1.1	8 Fees (	Issue	•)		
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Application/Control No.	Applicant(s)/Patent under Reexamination
10/619,691	KRINSKY ET AL.
Examiner	Art Unit
Khanh Tran	2611

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Class	Subclass	Date	Examiner		
375	222,225 227,220	10/27/2006	кст		
370	252,282				
379	22.02				
	22.04				
	27.01				
	27.03				

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SEARCH NOTES (INCLUDING SEARCH STRATEGY)		
· ·	DATE	EXMR
Search EAST	10/27/2006	кст
Inventor Name Searches		

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Part of Paper No. 20061027