AO 120 (Rev. 08/10)

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

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

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

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
6:15-cv-00045	1/13/2015	Eastern District of Texas, Tyler Division

PLAINTIFF	DEFENDANT
ADAPTIX, INC.	CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS,

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	8,934,375	1/13/2015	ADAPTIX, INC.
2			
3			
4			
5			

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
1		
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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

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Copy 2—Upon filing document adding patent(s), mail this copy to Director **Copy 4—Case file copy**

AO 120 (Rev. 08/10)

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

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

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

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
6:15-cv-00043	1/13/2015	Eastern District of Texas, Tyler Division

PLAINTIFF	DEFENDANT
ADAPTIX, INC.	AT&T, INC. and AT&T MOBILITY, INC.

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	8,934,375	1/13/2015	ADAPTIX, INC.
2			
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5			

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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DECISION/JUDGEMENT

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AO 120 (Rev. 08/10)

TO:	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
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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 Eastern District of Texas, Tyler Division on the following

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DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
6:15-cv-00044	1/13/2015	Eastern District of Texas, Tyler Division

PLAINTIFF	DEFENDANT
ADAPTIX, INC.	SPRINT SPECTRUM, L.P.

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	8,934,375	1/13/2015	ADAPTIX, INC.
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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	
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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/294,106	01/13/2015	8934375	176.0003-06000	9020

22882 7590 12/23/2014

MARTIN & FERRARO, LLP
1557 LAKE O'PINES STREET, NE
HARTVILLE, OH 44632

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 0 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 Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

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

Xiaodong Li, Bellevue, WA;
ADAPTIX, INC., Plano, TX, Assignee (with 37 CFR 1.172 Interest);
Hui Liu, Clyde Hill, WA;
Kemin Li, Bellevue, WA;
Wenzhong Zhang, Bellevue, WA;

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document,
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~~anse(s) applied~~ ~~document;~~ ~~H.E.~~ ~~1/7/2014~~

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/294,106	06/02/2014	Xiaodong Li	176.0003-06000	9020

22882 7590 12/15/2014
MARTIN & FERRARO, LLP
1557 LAKE O'PINES STREET, NE
HARTVILLE, OH 44632

EXAMINER
ZEWDU, MELESS NMN

ART UNIT	PAPER NUMBER
2643	

MAIL DATE	DELIVERY MODE
12/15/2014	PAPER

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

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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
14/294,106	02 June, 2014	LI ET AL.	176.0003-06000

MARTIN & FERRARO, LLP
1557 LAKE O'PINES STREET, NE
HARTVILLE, OH 44632

EXAMINER	
MELESS ZEWDU	
ART UNIT	PAPER
2643	20141212

DATE MAILED:

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

Commissioner for Patents

The references listed in the IDS submitted on 12/04/2014 have been considered and signed by examiner. The signed IDS document has been attached to this paper.

Attachment: signed IDS 12/4/2014.	/MELESS ZEWDU/ Primary Examiner, Art Unit 2643

PTO-90C (Rev.04-03)

Substitute for FORM PTO-1449	Attorney Docket Number 176.0003-06000	Customer No. 22882	
INFORMATION DISCLOSURE CITATION IN AN APPLICATION	Applicant Xiaodong Li et al.	Application Number 14/294,106	
(Use several sheets if necessary) Sheet 1 of 1	Filing Date June 2, 2014	Group Art Unit 2643	Examiner M. N. Zewdu

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
IPR 6	6,072,988	6/2000	Minegishi			

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION (YES/NO)
	CA 2254643 A1	7/1999	Canada			N/A

OTHER DOCUMENTS ***(Including Author, Title, Date, Pertinent Pages, Etc.)***

Lits. 38-41 and 43-46; IPRs 5-6	Adaptix, Inc. v. Huawei Tech. Co. Ltd., et al., Memorandum Opinion and Order, Civil Action Nos. 6:13-cv-438, -439, -440, -441, -443, -444, -445, -446, E.D. Tex., September 19, 2014, 24 pgs.
Lits. 54 and 56-57; IPRs 5-6	Adaptix, Inc. v. BlackBerry Ltd. et al., Joint Motion for Dismissal, Civil Action Nos. 5:14-cv-01380, -01386, -01387-PSG, N.D. Cal., October 24, 2014, 5 pgs.
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IPR 5	Kyocera Corporation v. Adaptix, Inc., Petition for Inter Partes Review of U.S. Patent No. 6,947,748, with Exhibits, IPR2015-00319, P.T.A.B., November 26, 2014, 386 pgs.
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IPRs 5-6	Chuang et al., "A Pilot Based Dynamic Channel Assignment Scheme for Wireless Access TDMA/FDMA Systems," Universal Personal Communications 1993, Personal Communications: Gateway to the 21st Century Conference Record., 2nd Int'l Conference on (Vol:2), ISBN 0-7803-1396-8, Pages 706-712 vol.2, October 12, 1993, 7 pgs.

EXAMINER /Meless Zewdu/	DATE CONSIDERED 12/12/2014

EXAMINER: Initial if citation 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 the applicant.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/294,106	06/02/2014	Xiaodong Li	176.0003-06000	9020

7590 12/05/2014

MARTIN & FERRARO, LLP
1557 LAKE O'PINES STREET, NE
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EXAMINER	
ZEWDU, MELESS NMN	
ART UNIT	PAPER NUMBER
2643	
MAIL DATE	DELIVERY MODE
12/05/2014	PAPER

Letter Withdrawing a Notice Requiring Inventor's Oath or Declaration

The Notice Requiring Inventor's Oath or Declaration mailed on 12/2/14 was sent in error, and is hereby withdrawn. The time period set forth in the Notice of Allowance and Fee(s) Due to file a reply and pay the required fees continues to run from the mailing date of the Notice of Allowance and Fee(s) Due. Any time period set forth in the Notice of Allowability continues to run from the mailing date of the Notice of Allowability.

Questions relating to this Notice should be directed to the Application Assistance Unit at 571-272-4200.

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(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/294,106	06/02/2014	Xiaodong Li	176.0003-06000	9020

TITLE OF INVENTION: OFDMA WITH ADAPTIVE SUBCARRIER-CLUSTER CONFIGURATION AND SELECTIVE LOADING

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$960	$0	$0	$960	03/02/2015

EXAMINER	ART UNIT	CLASS-SUBCLASS
ZEWDU, MELESS NMN	2643	370-252000

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

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

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(A) NAME OF ASSIGNEE: Adaptix, Inc.

(B) RESIDENCE: (CITY and STATE OR COUNTRY): Plano, Texas

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

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Authorized Signature /Alfred Y. Chu/ Date December 4, 2014

Typed or printed name Alfred Y. Chu Registration No. 62,317

Electronic Patent Application Fee Transmittal

Application Number:	14294106
Filing Date:	02-Jun-2014
Title of Invention:	OFDMA WITH ADAPTIVE SUBCARRIER-CLUSTER CONFIGURATION AND SELECTIVE LOADING
First Named Inventor/Applicant Name:	Xiaodong Li
Filer:	Alfred Young Chu/Chloe Hong
Attorney Docket Number:	176.0003-06000

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:				
Utility Appl Issue Fee	1501	1	960	960
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
			Total in USD ($)	**960**

Electronic Acknowledgement Receipt

EFS ID:	20872681
Application Number:	14294106
International Application Number:	
Confirmation Number:	9020
Title of Invention:	OFDMA WITH ADAPTIVE SUBCARRIER-CLUSTER CONFIGURATION AND SELECTIVE LOADING
First Named Inventor/Applicant Name:	Xiaodong Li
Customer Number:	22882
Filer:	Alfred Young Chu/Chloe Hong
Filer Authorized By:	Alfred Young Chu
Attorney Docket Number:	176.0003-06000
Receipt Date:	04-DEC-2014
Filing Date:	02-JUN-2014
Time Stamp:	22:04:18
Application Type:	Utility under 35 USC 111(a)

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Payment Type	Deposit Account
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Warnings:					
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INFORMATION DISCLOSURE CITATION IN AN APPLICATION	Applicant Xiaodong Li et al.	Application Number 14/294,106	
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EXAMINER	DATE CONSIDERED

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(22) 30.11.1998

(30) 98300051.4 EP 06.01.1998

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(72) ten BRINK, Stephan (DE).

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(54) RESEAU TELECOMMUNICATION MOBILE CELLULAIRE
(54) MOBILE CELLULAR TELECOMMUNICATION NETWORK

(57)

A mobile cellular telecommunication network is disclosed having a plurality of cells between which are defined reuse regions each served by a plurality of directional antennas each at respective base stations located around the reuse region boundary. Means are provided for allocating all uplink channels at all antennas in all reuse regions. Further means are provided for determining boundaries of microcells within the reuse regions, a plurality, equal to or greater than the plurality of antennas, of microcells being served by each antenna in the reuse region. Further means is provided for allocating to each microcell a group of uplink channels in an orthogonal reuse pattern within the reuse region. Means for ascribing a position to mobile terminals within each reuse region is provided. Yet further means is provided for allocating uplink channels for use by a mobile terminal from the group allocated to the microcell which contains its ascribed position. Since all channels are reused at all antennas, all channels are reusable several times in all cells, greatly increasing the number of mobile terminals which may operate without reducing cell size or requiring additional base stations.

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(12) (19) (CA) **Demande-Application**

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(22) 1998/11/30
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(71) LUCENT TECHNOLOGIES INC., US

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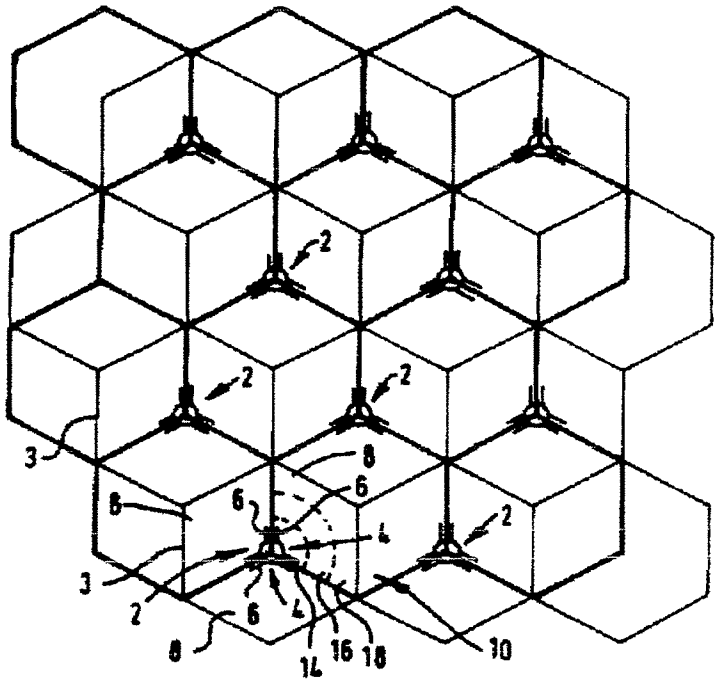
(30) 1998/01/06 (98300051.4) EP

(54) **RESEAU TELECOMMUNICATION MOBILE CELLULAIRE**
(54) **MOBILE CELLULAR TELECOMMUNICATION NETWORK**



(57) A mobile cellular telecommunication network is disclosed having a plurality of cells between which are defined reuse regions each served by a plurality of directional antennas each at respective base stations located around the reuse region boundary. Means are provided for allocating all uplink channels at all antennas in all reuse regions. Further means are provided for determining boundaries of microcells within the reuse regions, a plurality, equal to or greater than the plurality of antennas, of microcells being served by each antenna in the reuse region. Further means is provided for allocating to each microcell a group of uplink channels in an orthogonal reuse pattern within the reuse region. Means for ascribing a position to mobile terminals within each reuse region is provided. Yet further means is provided for allocating uplink channels for use by a mobile terminal from the group allocated to the microcell which contains its ascribed position. Since all channels are reused at all antennas, all channels are reusable several times in all cells, greatly increasing the number of mobile terminals which may operate without reducing cell size or requiring additional base stations.

ABSTRACT

A mobile cellular telecommunication network is disclosed having a plurality of cells between which are defined reuse regions each served by a plurality of directional antennas each at respective base stations located around the reuse region boundary. Means are provided for allocating all uplink channels at all antennas in all reuse regions. Further means are provided for determining boundaries of microcells within the reuse regions, a plurality, equal to or greater than the plurality of antennas, of microcells being served by each antenna in the reuse region. Further means is provided for allocating to each microcell a group of uplink channels in an orthogonal reuse pattern within the reuse region. Means for ascribing a position to mobile terminals within each reuse region is provided. Yet further means is provided for allocating uplink channels for use by a mobile terminal from the group allocated to the microcell which contains its ascribed position.

Since all channels are reused at all antennas, all channels are reusable several times in all cells, greatly increasing the number of mobile terminals which may operate without reducing cell size or requiring additional base stations.

Figure 1.

MOBILE CELLULAR TELECOMMUNICATION NETWORR

This invention relates to mobile cellular telecommunication networks.

There are different systems for allocating channels for uplink communications. All strive to maintain orthogonality between mobile terminals in the same cell. Conventionally, the channels allocated to one cell are not reused in adjacent cells so as to reduce interference.

Against this background, there is provided a mobile cellular telecommunication network, comprising a plurality of cells between which are defined reuse regions each served by a plurality of directional antennas each at respective base stations located around the reuse region boundary; means for allocating all uplink channels at all antennas in all reuse regions; means for determining boundaries of microcells within the reuse regions, a plurality, equal to or greater than the plurality of antennas, of microcells being served by each antenna in the reuse region; means for allocating to each microcell a group of uplink channels in an orthogonal reuse pattern within the reuse region; means for ascribing a position to mobile terminals within each reuse region; and means for allocating uplink channels for use by a mobile terminal from the group allocated to the microcell which contains its ascribed position.

Since all channels are reused at all antennas, all channels are reusable several times in all cells, greatly increasing the number of mobile terminals which may operate without reducing cell size or requiring additional base stations.

Preferably, an equal number of channels is allocated to each microcell.

In order to ascribe positions to the mobile terminals, each mobile terminal is preferably adapted to determine power levels of at least the three strongest downlink signals from respective base station antennas and to communicate the power levels and antenna identities to the base station having the strongest downlink signal; the base station including means for computing a virtual position of the mobile terminal apparent from the power levels. The virtual position may not correspond with the geographic position of the mobile terminal. Indeed, it will only do so when there is no shadow fading.

The mobile terminal is preferably adapted to determine the power levels of pilot signals on the down link.

The boundaries of the microcells are preferably determined dynamically such that each microcell within a reuse region carries approximately the same amount of traffic. To that end, for each antenna a database is preferably maintained with the ascribed position of all mobile terminals in the reuse region.

One embodiment of the invention will now be described, by way of example, with reference to the accompanying drawings, in which:

Figure 1 is a schematic plan of part of a cellular mobile communications network

embodying the invention and showing hexagonal base station cells and reuse regions;

Figure 2 is a schematic plan of one of the cells of Figure 1 showing micro cells therein;

Figure 3 is a schematic plan similar to that of Figure 2, showing a different arrangement of microcells;

Figure 4 is a plan similar to that of Figure 3 but showing how the microcells can be arranged to obtain equal usage in each;

Figure 5 is a schematic plan of a square cell showing microcells therein.

Figure 6 is a chart showing a channel allocation pattern which may be used in the network of Figure 1 or 5;

Figures 7a is a chart showing a channel allocation pattern alternative to that of Figure 6;

Figure 7b is a chart showing another alternative channel allocation pattern;

Figure 8 is a chart showing another alternative channel allocation pattern; and

Figure 9 is a flow chart showing how channels are allocated in the network of Figure 1 or Figure 4.

Referring to the drawings, base stations 2 each serve a respective hexagonal base station cell 3 bounded by thin lines in Figure 1. Each base station comprises three receive stations 4. Each receive station has a 120^0 directional antenna 6. The three antennas 6 are directed at respective receive cells 8 each in an individual 120^0 sector within the base station cell 3.

An area 10 served by three receive stations 4, thus containing three receive cells 8, constitutes a hexagonal reuse region and is bounded by thick lines in Figure 1. A reuse region 10 is illustrated, to a larger scale in Figure 2. A reuse region is defined by the fixed directional antenna pattern of the receive station.

All uplink channels used by the network are available for allocation at all receive stations 4 for their respective receive cells 8. Inside each receive cell, uplink channels are allocated according to the position of the mobile terminals one of which is illustrated at 12. In the example illustrated in Figure 2 each receive cell is divided into three microcells 14, 16 and 18 each progressively further from the respective base station. The total set of uplink channels is divided into three blocks indicated by numerals I, II and III in Figure 2. As will be seen, all three blocks are allocated at each receive station 4 and are allocated to the respective microcells 14, 16 and 18 in an orthogonal reuse pattern which, if used in all reuse regions, ensures that adjacent microcells do not share the same blocks of channels either within a reuse region 10 or between adjacent reuse regions.

Another reuse pattern is illustrated in Figure 3. Here the total set of channels is divided into channel blocks I to VI. The receive cells are divided into microcells according to distance from the receive station and laterally into left and right sectors thus defining microcells 14L, 16L, 18L, 14R, 16R and 18R. Again the reuse pattern illustrated ensures orthogonality between adjacent microcells whether within one reuse region to or between adjacent reuse regions. The antennas 6 cover an entire receive cell. They do not provide directional reception divided into left and right sectors.

The position of a mobile terminal 12 is assessed from the power of pilot signals transmitted by all base stations on the downlink. The mobile terminal 12 identifies at least the three pilot signals received with the most power and the base station from which they each is transmitted. Among these the mobile terminal identifies the most powerful pilot signal and its base station. The mobile terminal 12 transmits the power levels and station identities to the base station from which the most powerful pilot signal was received on a call setup channel. The base station then calculates the virtual or apparent position of the mobile station by determining the virtual or apparent distance from each by comparing the power levels of the received pilot signal. The virtual or apparent position may correspond to the geographic position, but only in the case where there is no shadow fading.

The base station then determines in which microcell the virtual position of the mobile terminal is and allocates a channel from those available in that microcell.

As shown in Figure 4, the receive cells and the microcells do not have to be regular or equal. Indeed, it is preferable that the microcells are dynamically defined expanding and contracting so that within one reuse region, each microcell carries the same amount of traffic. To that end a database of the virtual positions of mobile terminals is maintained for each reuse region.

The invention is applicable to cells of any possible shape. An arrangement of microcells in a rectangular cell is shown in Figure 5.

The invention is generally applicable to different types of cellular mobile telecommunications systems in particular those maintaining an orthogonal multiple user uplink communication and interfer diversity.

One example is a multicarrier system using a contiguous set of sub-carriers per user. As shown in Figure 6, sets of subcarriers are hopped slowly in successive time periods T with orthogonal frequency hopping patterns between users (U1 to U4) in the same receive cell 8. The multicarrier system could apply OFDM modulation (Orthogonal Frequency Division Multiplex). The mobile terminals are synchronized such that their delay difference at the base station .is within the guard time of the OFDM symbol.

A narrow band TDMA alternative (like GSM) is possible in which only one sub-carrier is allocated per user. The sub-carriers are frequency hopped, the hopping patterns being orthogonal among the users in the same receive cell. OFDM modulation is not applied. The mobile terminals are synchronized so that their delay difference at the base station is within the guard time of the TDMA burst.

In another example, a non-contiguous set of sub-carriers, illustrated in Figure 7a, is allocated per user (U1 and U2 are shown) so that the set of sub-carriers of users within the same receive cell are disjoint. The set of sub-carriers is referred to as a sub-carrier code.

The sub-carriers could be slowly frequency hopped as illustrated in Figure 7b.

In the arrangement for a code divisional multiple access spread spectrum system illustrated in Figure 8, all mobile terminals use the same

frequency band all the time if active. Within a receive cell orthgonality is provided by orthogonal spreading codes and tight synchronization of the mobile terminals, or by multi-user detection without either synchronization or orthogonal spreading codes.

CLAIMS

1. A mobile cellular telecommunication network, comprising a plurality of cells between which are defined reuse regions each served by a plurality of directional antennas each at respective base stations located around the reuse region boundary; means for allocating all uplink channels at all antennas in all reuse regions; means for determining boundaries of microcells within the reuse regions, a plurality, equal to or greater than the plurality of antennas, of microcells being served by each antenna in the reuse region; means for allocating to each microcell a group of uplink channels in an orthogonal reuse pattern within the reuse region; means for ascribing a position to mobile terminals within each reuse region; and means for allocating uplink channels for use by a mobile terminal from the group allocated to the microcell which contains its ascribed position.

2. A network as claimed in claim 1, wherein an equal number of channels is allocated to each microcell.

3. A network as claimed in claim 1 or 2, wherein each mobile terminal is adapted to determine power levels of at least the three strongest downlink signals from respective base station antennas and to communicate the power levels and antenna identities to the base station having the strongest downlink signal; said base station including means for computing a virtual position of the mobile terminal apparent from the power levels.

4. A network as claimed in claim 3, wherein the mobile terminal is adapted to determine the power levels of pilot signals on the down link.

5. A network as claimed in any preceding claim, wherein the boundaries of the microcells are determined such that each microcell within a reuse region carries approximately the same amount of traffic.

6. A network as claimed in claim 5, wherein for each antenna a database is maintained with the ascribed position of all mobile terminals in the reuse region.

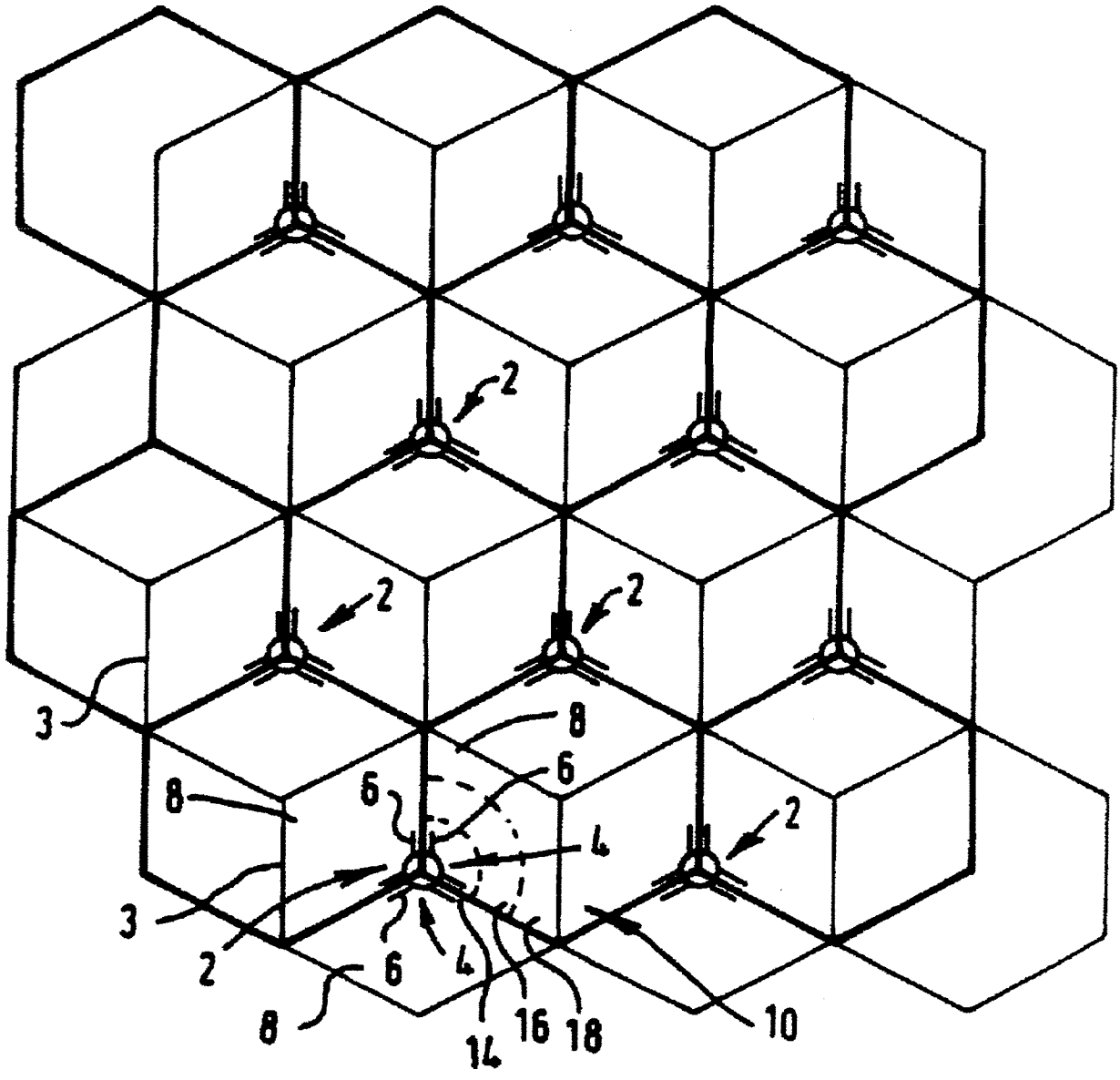


FIG. 1

FIG. 2

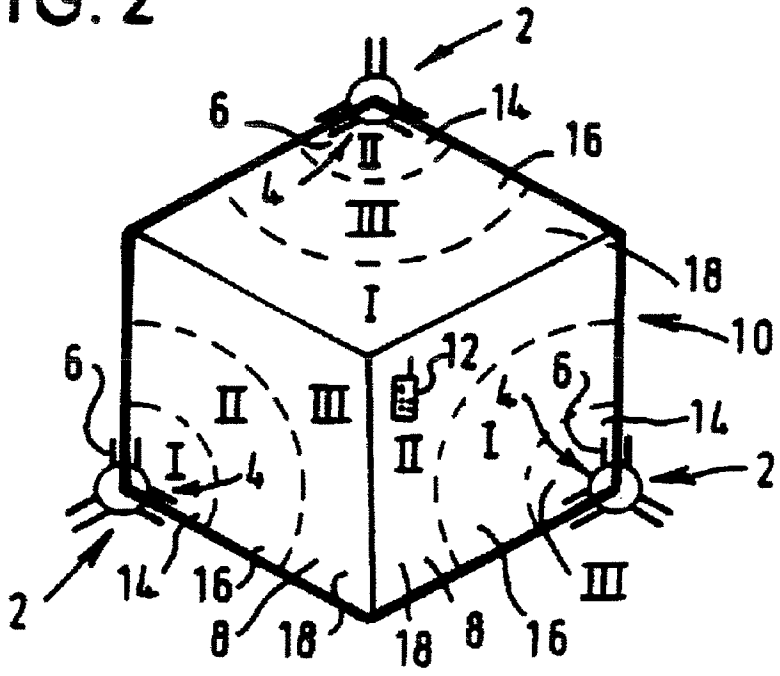

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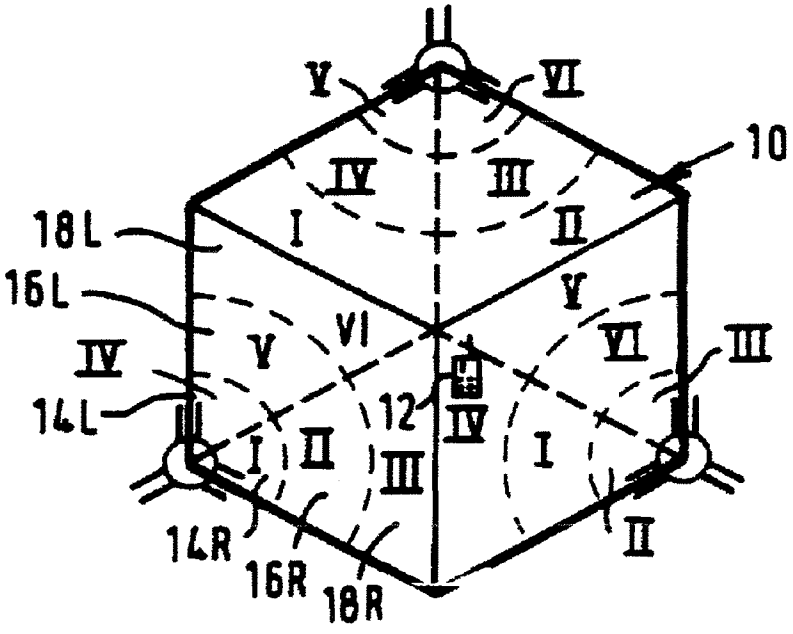
FIG. 3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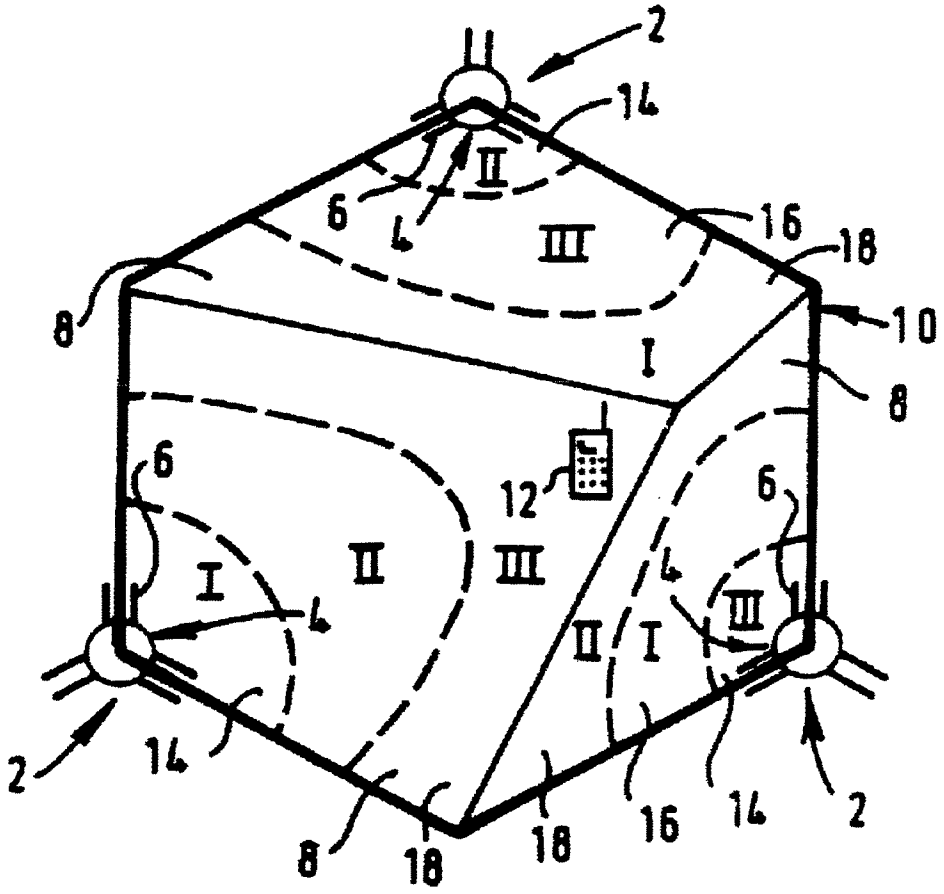
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FIG. 4

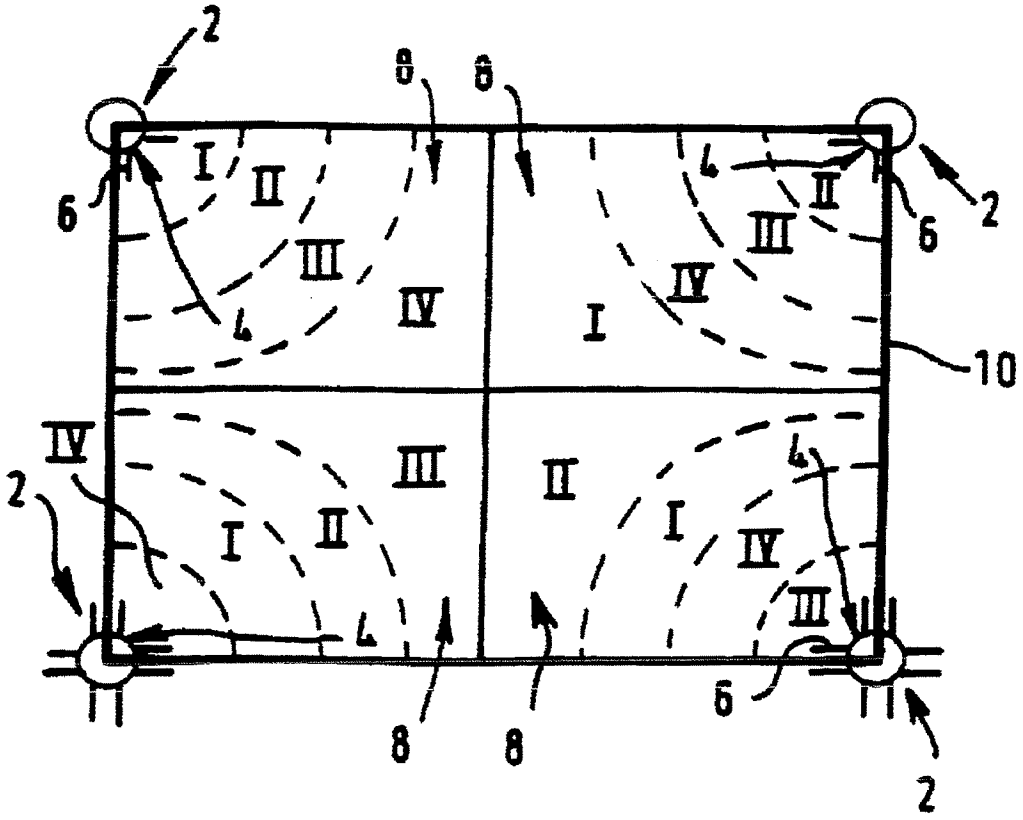
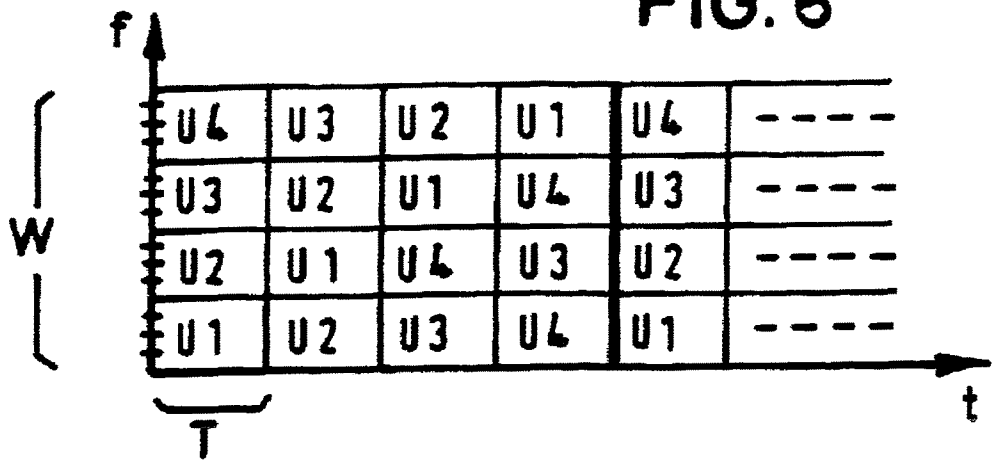


FIG. 5

FIG. 6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U3 U2 U1 U4 U3 ----
U2 U1 U4 U3 U2 ----
U1 U2 U3 U4 U1 ----
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FIG. 8

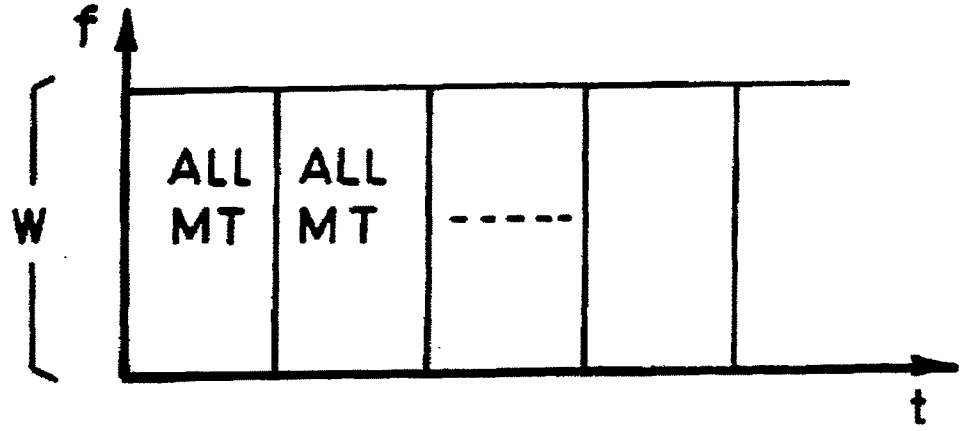
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FIG.7a

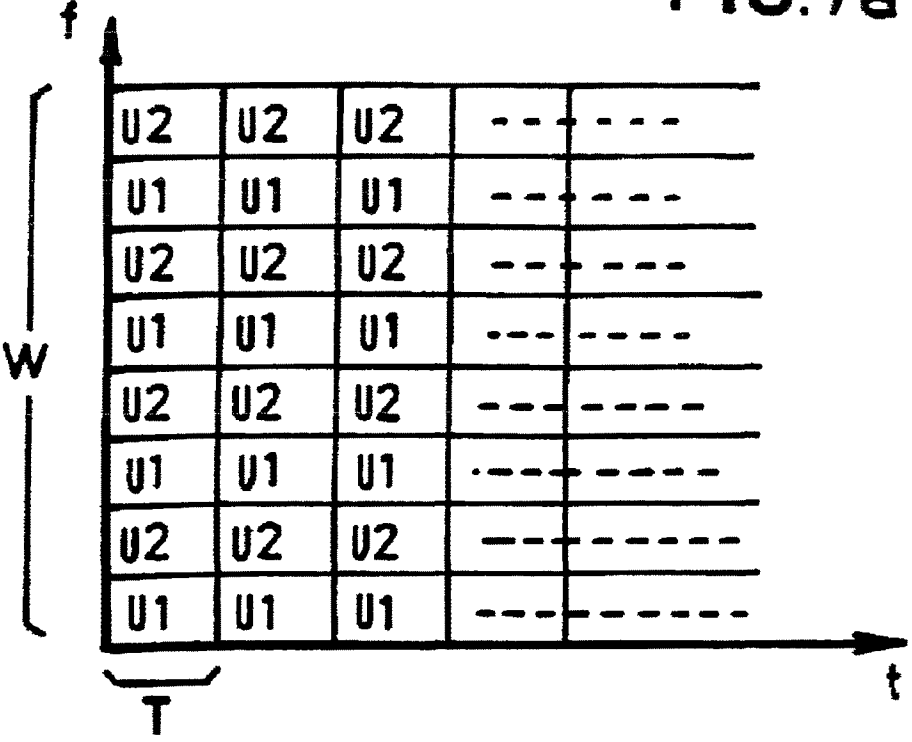
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FIG.7b

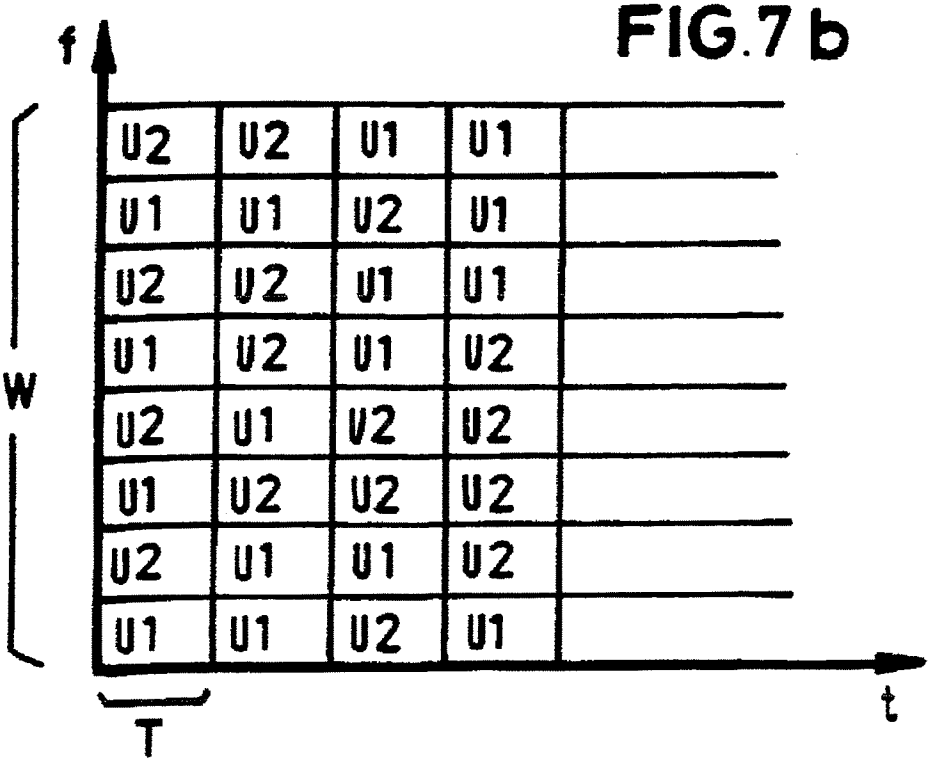
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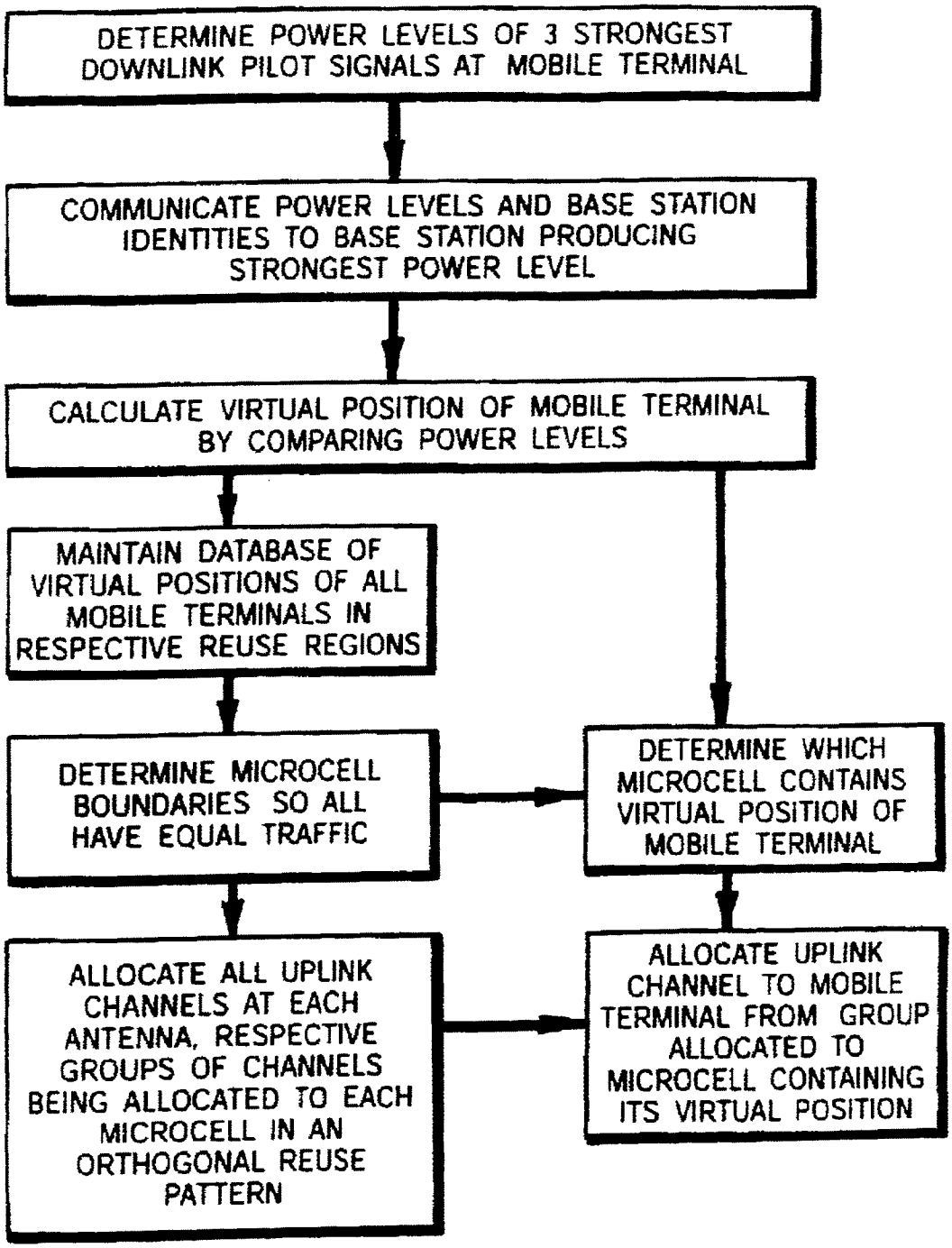
FIG.9


DETERMINE POWER LEVELS OF 3 STRONGEST DOWNLINK PILOT SIGNALS AT MOBILE TERMINAL
COMMUNICATE POWER LEVELS AND BASE STATION IDENTITIES TO BASE STATION PRODUCING STRONGEST POWER LEVEL
CALCULATE VIRTUAL POSITION OF MOBILE TERMINAL BY COMPARING POWER LEVELS
MAINTAIN DATABASE OF VIRTUAL POSITIONS OF ALL MOBILE TERMINALS IN RESPECTIVE REUSE REGIONS
DETERMINE MICROCELL BOUNDARIES SO ALL HAVE EQUAL TRAFFIC
DETERMINE WHICH MICROCELL CONTAINS VIRTUAL POSITION OF MOBILE TERMINAL
ALLOCATE ALL UPLINK CHANNELS AT EACH ANTENNA, RESPECTIVE GROUPS OF CHANNELS BEING ALLOCATED TO EACH MICROCELL IN AN ORTHOGONAL REUSE PATTERN
ALLOCATE UPLINK CHANNEL TO MOBILE TERMINAL FROM GROUP ALLOCATED TO MICROCELL CONTAINING ITS VIRTUAL POSITION

Electronic Patent Application Fee Transmittal

Application Number:	14294106
Filing Date:	02-Jun-2014
Title of Invention:	OFDMA WITH ADAPTIVE SUBCARRIER-CLUSTER CONFIGURATION AND SELECTIVE LOADING
First Named Inventor/Applicant Name:	Xiaodong Li
Filer:	Alfred Young Chu/Chloe Hong
Attorney Docket Number:	176.0003-06000

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:	20872672
Application Number:	14294106
International Application Number:	
Confirmation Number:	9020
Title of Invention:	OFDMA WITH ADAPTIVE SUBCARRIER-CLUSTER CONFIGURATION AND SELECTIVE LOADING
First Named Inventor/Applicant Name:	Xiaodong Li
Customer Number:	22882
Filer:	Alfred Young Chu/Chloe Hong
Filer Authorized By:	Alfred Young Chu
Attorney Docket Number:	176.0003-06000
Receipt Date:	04-DEC-2014
Filing Date:	02-JUN-2014
Time Stamp:	22:00:57
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	6800
Deposit Account	501068
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees) Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	IDS.pdf	122700 c59b6e460ffaba6ca4b9cceca7e2566beca86f96	no	6
Warnings:					
Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	SB08.pdf	122523 0240406584ca065ad3ca231b051698432b68777f	no	1
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
3	Foreign Reference	CA2254643A1.pdf	466272 2f67e8421e6f64a8af912728c010ad6d7a9c48e8	no	19
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4	Non Patent Literature	613cv438_439_440_441_443_444_445_446_Memorandum_Opinion_and_Order_Sep_19_2014_24pgs.pdf	250806 dbe7c3384984bbc342aa9dc4fddbd18555e097c3	no	24
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5	Non Patent Literature	514cv01380_01386_01387_Joint_Motion_for_Dismissal_Oct_24_2014_5pgs.pdf	191087 cbbdf3fb4f077b11fca4397b11a21b9c5691b0024	no	5
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6	Non Patent Literature	514cv01380_01386_01387_Order_Granting_Joint_Motion_for_Dismissal_Oct_24_2014_2pgs.pdf	257040 a61f5b2e70bfb2090668e0afdb8068362085842e	no	2
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7	Non Patent Literature	IPR2015-00319_Petition_wExhibits_Nov_26_2014_386pgs.pdf	11995579 96b8d70d06e960578db5575400d5294c0a6108e7	no	386
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8	Non Patent Literature	IPR2015-00319_Declaration_of_Nicholas_Bambos_Nov_26_2014_60pgs.pdf	406330 e4602a0fddaf224c0fa335d2a470d3f616285a52	no	60
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9	Non Patent Literature	IPR2015-00318_Petition_wExhibits_Nov_26_2014_440pgs.pdf	15957786 833b6afea2a90266ff7d73081b6c41261d26fbfd	no	440
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11	Non Patent Literature	Chuang_A_Pilot_Based_Dynamic_Channel_Assignment_Scheme_Oct_12_1993_7pgs.pdf	888857 7717247f5d7888f29cca42c39641088b6a009ebd	no	7
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12	Fee Worksheet (SB06)	fee-info.pdf	30666 4aee7695c0fcb01daf941e52f7555e165f7c712f	no	2
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Information:					
		Total Files Size (in bytes):	31283346		

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 Application of:	)	Confirmation No.: 9020
Xiaodong Li et al.	)	
Serial No.: 14/294,106	)	Group Art Unit: 2643
Filed: June 2, 2014	)	Examiner: Meless Nmn Zewdu
For: OFDMA WITH ADAPTIVE SUBCARRIER-CLUSTER CONFIGURATION AND SELECTIVE LOADING	)	

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

Sir:

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. § 1.97(d)

Pursuant to 37 C.F.R. §§ 1.56 and 1.97(d), Applicant brings to the attention of the Examiner the documents listed on the attached Form PTO/SB/08. This Information Disclosure Statement is being filed after a Notice of Allowance but on or before payment of the issue fee and is accompanied by the required fee of $180.00 (to be charged to Deposit Account No. 50-1068) and a certification as specified under § 1.97(e).

The present application is a continuation of U.S. Application No. 13/230,625, filed September 12, 2011 (Publication No. 2012/0069755), which is pending; which is a continuation of U.S. Application No. 12/748,781, filed March 29, 2010, now U.S. Patent No. 8,036,199; which is a continuation of U.S. Application No. 11/931,926, filed October 31, 2007, now U.S. Patent No. 7,715,358; which is a continuation of U.S. Application No. 11/199,586, filed August 8, 2005, now U.S. Patent No. 7,454,212 ("'212 patent"); which is a continuation of U.S. Application No. 09/738,086, filed December 15, 2000, now U.S. Patent No. 6,947,748 ("'748 patent"); upon which Applicant relies for the benefits provided in 35 U.S.C. § 120.

Applicant brings to the Examiner's attention Application Nos. 09/898,163, filed July 2, 2001, now U.S. Patent No. 6,751,444; 09/692,681, filed October 18, 2000, now U.S. Patent No. 6,870,808 ("'808 patent"); 09/837,337, filed April 17, 2001, now U.S. Patent No. 6,904,283 ("'283 patent"); 09/685,977, filed October 10, 2000, now U.S. Patent No. 7,072,315 ("'315 patent"); 09/837,701, filed April 17, 2001, now U.S. Patent No. 7,146,172 ("'172 patent"); 11/085,826, filed March 21, 2005, now U.S. Patent No. 7,355,962; 11/592,084, filed November 2, 2006, now U.S. Patent No. 7,379,742 ("'742 patent"); 11/931,759, filed October 31, 2007, now U.S. Patent No. 7,489,934 ("'934 patent"); 11/925,229, filed October 26, 2007, now U.S. Patent No. 7,573,850 ("'850 patent"); 11/007,064, filed December 7, 2004, now U.S. Patent No. 7,573,851 ("'851 patent"); 11/931,385, filed October 31, 2007, now U.S. Patent No. 7,650,152; 12/470,922, filed May 22, 2009, now U.S. Patent No. 7,933,244; 10/534,200, filed January 18, 2006, now U.S. Patent No. 8,005,479; 12/399,624, filed March 6, 2009, now U.S. Patent No. 8,738,020; 13/053,091, filed March 21, 2011, now U.S. Patent No. 8,743,717; 13/731,825, filed December 31, 2012, now U.S. Patent No. 8,743,729; 13/801,846, filed March 13, 2013, now U.S. Patent No. 8,750,238; 13/756,957, filed February 1, 2013, now U.S. Patent No. 8,760,992; 13/801,788, filed March 13, 2013, now U.S. Patent No. 8,767,702; 12/498,924, filed July 7, 2009, now U.S. Patent No. 8,797,970; 13/731,832, filed December 31, 2012, now U.S. Patent No. 8,891,414; 13/053,111, filed March 21, 2011 (Publication No. 2011/0170446), which is abandoned; 13/053,127, filed March 21, 2011 (Publication No. 2011/0222495), which is abandoned; 13/186,221, filed July 19, 2011 (Publication No. 2011/0312367), which is abandoned; 14/286,780 (Publication No. 2014/0269572), filed May 23, 2014, which is pending; 14/286,884 (Publication No. 2014/0269573), filed May 23, 2014, which is pending; 14/294,117 (Publication No. 2014/0269609), filed June 2, 2014, which is pending; 14/332,123 (Publication No. 2014/0328276), filed July 15, 2014, which is pending; and 14/491,904, filed September 19, 2014, which is pending.

Applicant also brings to the attention of the Examiner the file history (the Office Actions and responses) of each of the above-referenced patents and applications. While the individual Office Actions and responses are not attached hereto, they are available in each of the file wrappers in the Patent Office, through PAIR, or will be

provided by Applicant at the Examiner's request.

Copies of the listed non-U.S. patent documents are attached. Applicant respectfully requests that the Examiner consider the listed documents and indicate that they were considered by making appropriate notations on the attached form.

Based on reasonable inquiry, each document listed in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing date of this Information Disclosure Statement; or no document listed in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and no document listed in this Information Disclosure Statement was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing date of this Information Disclosure Statement.

The '742 patent (which is a continuation of the '172 patent), the '934 patent (which is a continuation of the '212 patent), as well as the '283, '315, '172, '748, and '212 patents were the subject of litigation in the United States District Court for the Eastern District of Texas, Civil Action No. 6:08-cv-00460, hereinafter referred to as Litigation 1. Litigation 1 was dismissed without prejudice pursuant to stipulation of dismissal.

The '212 and '748 patents are the subject of several litigations in the United States District Court for the Eastern District of Texas, Civil Action Nos. 6:12-cv-00020, 6:12-cv-00120, 6:12-cv-00017, 6:13-cv-00438, 6:13-cv-00439, 6:13-cv-00440, 6:13-cv-00441, 6:13-cv-00443, 6:13-cv-00444, 6:13-cv-00445, 6:13-cv-00446, 6:13-cv-00585, 6:13-cv-00778, and 6:13-cv-00922, hereinafter referred to as Litigations 3, 5, 11, 38-41, 43-48, and 51, respectively.

The '212 and '748 patents are also the subject of several litigations in the United States District Court for the Northern District of California, Civil Action Nos. 5:13-cv-02023, 5:14-cv-02359, and 5:14-cv-02360, hereinafter referred to as Litigations 28, 61, and 62, respectively.

The '212 and '748 patents were the subject of several litigations in the United States District Court for the Eastern District of Texas, Civil Action Nos. 6:12-cv-00121, 6:12-cv-00124, 6:12-cv-00125, 6:12-cv-00019, 6:13-cv-00432, 6:13-cv-00433, 6:13-cv-

00434, 6:13-cv-00435, 6:13-cv-00436, 6:13-cv-00437, 6:13-cv-00442, 6:13-cv-00853, and 6:13-cv-00854, hereinafter referred to as Litigations 6, 9, 10, 12, 32-37, 42, 49, and 50, respectively, which have been transferred to the United States District Court for the Northern District of California, now Civil Action Nos. 5:13-cv-01844, 5:13-cv-01776, 5:13-cv-01777, 5:13-cv-01778, 5:14-cv-01379, 5:14-cv-03112, 5:14-cv-01380, 5:14-cv-01386, 5:14-cv-01387, 5:14-cv-01259, 5:14-cv-01385, 5:14-cv-02894, and 5:14-cv-02895, respectively, hereinafter referred to as Litigations 27, 24-26, 53, 65, 54, 56-57, 52, 55, 63, and 64, respectively.

The '212 and '748 patents were the subject of several litigations in the United States District Court for the Eastern District of Texas, Civil Action Nos. 6:12-cv-00016, 6:13-cv-00028, 6:13-cv-00296, and 6:13-cv-00424, hereinafter referred to as Litigations 2, 16, 30, and 31, respectively.

The '212 and '748 patents were also the subject of several litigations in the United States District Court for the Northern District of California, Civil Action Nos. 3:13-cv-04468, 3:13-cv-04469, and 5:13-cv-01774, hereinafter referred to as Litigations 21-23, respectively.

The '808, '283, '315, '172, and '851 patents are the subject of several litigations in the United States District Court for the Eastern District of Texas, Civil Action Nos. 6:12-cv-00022, 6:12-cv-00122, 6:12-cv-00123, 6:12-cv-00021, 6:12-cv-00318, and 6:12-cv-00369, hereinafter referred to as Litigations 4, 7, 8, 13, 14, and 15, respectively. Litigations 13 and 14 have been voluntarily dismissed without prejudice.

The '283, '315, '172, and '851 patents are the subject of litigation in the United States District Court for the Eastern District of Texas, Civil Action No. 6:13-cv-00049, hereinafter referred to as Litigation 17.

The '808 patent is the subject of litigation in the United States District Court for the Eastern District of Texas, Civil Action No. 6:13-cv-00050, hereinafter referred to as Litigation 18.

The '808 patent is also the subject of several litigations in the United States District Court for the District of Columbia, Civil Action Nos. 1:13-mc-00497 and 1:13-mc-00498, hereinafter referred to as Litigations 19 and 20, respectively.

The '850 patent was the subject of litigation in the United States District Court for the Eastern District of Texas, Civil Action No. 6:09-cv-00562, hereinafter referred to as Litigation 29.

The '172, '283, and '808 patents are the subject of litigations in the United States District Court for the Eastern District of Texas, Civil Action Nos. 6:14-cv-00501, 6:14-cv-00502, and 6:14-cv-00503, hereinafter referred to as Litigations 58-60, respectively.

The '808 patent is also the subject of an investigation pursuant to Section 337 of Tariff Act 1930, as amended, before the U.S. International Trade Commission, Investigation No. 337-TA-871, hereinafter referred to as "ITC 1."

The '748 patent is the subject of the *Inter Partes* Reviews before the Patent Trial and Appeal Board, Case Nos. IPR2014-01406, IPR2014-01524, and IPR2015-00319, hereinafter referred to as "IPR 1," "IPR 3," and "IPR 5," respectively.

The '212 patent is the subject of the *Inter Partes* Reviews before the Patent Trial and Appeal Board, Case Nos. IPR2014-01408, IPR2014-01525, and IPR2015-00318, hereinafter referred to as "IPR 2," "IPR 4," and "IPR 6," respectively.

Any references associated with Litigations 1-65, ITC 1, and IPRs 1-6 are identified by the designation "Lit. 1-65," "ITC 1," and "IPRs 1-6."

Applicant hereby respectfully requests the Examiner to advise Applicant of any additional types of litigation documents beyond those already provided that the Examiner may desire in association with the present application.

This submission does not represent that a search has been made or that no better art exists and does not constitute an admission that each or all of the listed documents are material or constitute "prior art." If the Examiner applies any of the documents as prior art against any claims in the application and Applicant determines that the cited documents do not constitute "prior art" under United States law, Applicant reserves the right to present to the office the relevant facts and law regarding the appropriate status of such documents.

Applicant further reserves the right to take appropriate action to establish the patentability of the disclosed invention over the listed documents, should one or more of the documents be applied against the claims of the present application.

If there is any fee due in connection with the filing of this Statement, please charge the fee to our Deposit Account No. 50-1068.

Respectfully submitted,

MARTIN & FERRARO, LLP

Date: December 4, 2014

By: /Alfred Y. Chu/
Alfred Y. Chu
Registration No. 62,317

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Facsimile: (330) 877-2030

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22882 7590 12/02/2014
MARTIN & FERRARO, LLP
1557 LAKE O'PINES STREET, NE
HARTVILLE, OH 44632

EXAMINER
ZEWDU, MELESS NMN

ART UNIT	PAPER NUMBER
2643	

DATE MAILED: 12/02/2014

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/294,106	06/02/2014	Xiaodong Li	176.0003-06000	9020

TITLE OF INVENTION: OFDMA WITH ADAPTIVE SUBCARRIER-CLUSTER CONFIGURATION AND SELECTIVE LOADING

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$960	$0	$0	$960	03/02/2015

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

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

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

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

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

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

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

22882 7590 12/02/2014
MARTIN & FERRARO, LLP
1557 LAKE O'PINES STREET, NE
HARTVILLE, OH 44632

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

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

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/294,106	06/02/2014	Xiaodong Li	176.0003-06000	9020

TITLE OF INVENTION: OFDMA WITH ADAPTIVE SUBCARRIER-CLUSTER CONFIGURATION AND SELECTIVE LOADING

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$960	$0	$0	$960	03/02/2015

EXAMINER	ART UNIT	CLASS-SUBCLASS
ZEWDU, MELESS NMN	2643	370-252000

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

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

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

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

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

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

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

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

5. **Change in Entity Status** (from status indicated above)
- ☐ Applicant certifying micro entity status. See 37 CFR 1.29
  NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
  NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
- ☐ Applicant changing to regular undiscounted fee status.
  NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/294,106	06/02/2014	Xiaodong Li	176.0003-06000	9020

22882 7590 12/02/2014

MARTIN & FERRARO, LLP
1557 LAKE O'PINES STREET, NE
HARTVILLE, OH 44632

EXAMINER	
ZEWDU, MELESS NMN	

ART UNIT	PAPER NUMBER
2643	

DATE MAILED: 12/02/2014

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

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

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.

Notice Requiring Inventor's Oath or Declaration	Application No. 14/294,106	Applicant(s) Xiaodong Li	
	Examiner ZEWDU, MELESS NMN	Art Unit 2643	

This notice is an attachment to the Notice of Allowability (PTOL-37), or the Notice of Allowability For A Design Application (PTOL-37D).

An inventor's oath or declaration in compliance with 37 CFR 1.63 or 1.64 executed by or with respect to each inventor has not yet been submitted.

An oath or declaration in compliance with 37 CFR 1.63, or a substitute statement in compliance with 37 CFR 1.64, executed by or with respect to each inventor (for any inventor for which a compliant oath, declaration, or substitute statement has not yet been submitted) MUST be filed no later than the date on which the issue fee is paid. See 35 U.S.C. 115(f). Failure to timely comply will result in ABANDONMENT of this application.

A properly executed inventor's oath to declaration has not been received for the following inventor(s):

If applicant previously filed one or more oaths, declarations, or substitute statements, applicant may have received an informational notice regarding deficiencies therein.

The following deficiencies are noted:

INFORMAL ACTION PROBLEMS

A new inventor's oath or declaration that identifies this application (e.g., by Application Number and filing date) is required. The inventor's oath or declaration does not comply with 37 CFR 1.63 in that it:

- does not state that the above-identified application was made or authorized to be made by the person executing the oath or declaration: **Xiaodong Li**, **Hui Liu**, **Kemin Li**, and **Wenzhong Zhang**.

Questions relating to this Notice should be directed to the Application Assistance Unit at 571-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

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

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

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

Notice of Allowability	Application No. 14/294,106	Applicant(s) LI ET AL.	
	Examiner MELESS ZEWDU	Art Unit 2643	AIA (First Inventor to File) Status No

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

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

1. ☒ This communication is responsive to *11/13/2014*.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on_____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are *1-32*. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov .
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some *c) ☐ None of the:
   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

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

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

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

/MELESS ZEWDU/
Primary Examiner, Art Unit 2643

DETAILED ACTION

Notice of Pre-AIA or AIA Status

The present application is being examined under the pre-AIA first to invent provisions.

The request for a continued prosecution application (CPA) under 37 CFR 1.53(d) filed on [1] is acknowledged. 37 CFR 1.53(d)(1) was amended to provide that the CPA must be for a design patent and the prior application of the CPA must be a design application that is complete as defined by 37 CFR 1.51(b). See *Elimination of Continued Prosecution Application Practice as to Utility and Plant Patent* Applications, final rule, 68 *Fed. Reg.* 32376 (May 30, 2003), 1271 *Off. Gaz. Pat. Office* 143 (June 24, 2003). Since a CPA of this application is not permitted under 37 CFR 1.53(d)(1), the improper request for a CPA is being treated as a request for continued examination of this application under 37 CFR 1.114.

1. This action is in response to the communication filed on 11/13/2014.
2. Claims 1-32 are pending in this action.
3. Claims 1-32 are allowed.

Allowable Subject Matter

Claims 1-32 are allowed.

The following is an examiner's statement of reasons for allowance: the reason for allowance is clear from the prosecution history.

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

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MELESS ZEWDU whose telephone number is (571)272-7873. The examiner can normally be reached on 8:30 am to 5:00 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hu Jinsong can be reached on (571) 272-3965. 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.

Any inquiry of a general nature relating to the status or proceeding of this application should be directed to the receptionist whose telephone number is (%71) 272-2600.

/MELESS ZEWDU/
Primary Examiner, Art Unit 2643
11/29/2014

Substitute for FORM PTO-1449	Attorney Docket Number 176.0003-06000	Customer No. 22882	
INFORMATION DISCLOSURE CITATION IN AN APPLICATION	Applicant Xiaodong Li et al.	Application Number 14/294,106	
(Use several sheets if necessary) Sheet 1 of 2	Filing Date June 2, 2014	Group Art Unit 2643	Examiner M. N. Zewdu

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
IPRs 3-4	6,215,827	4/2001	Balachandran et al.			
IPRs 1-4	6,567,374	5/2003	Bohnke et al.			
Lits. 38-41 and 43-46	6,801,513	10/2004	Gibbons et al.			
Lits. 38-41 and 43-46	6,801,775	10/2004	Gibbons et al.			
Lits. 38-41 and 43-46	7,720,468	5/2010	Hong et al.			
	2014/0328276	11/2014	Xing et al.			

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION (YES/NO)

OTHER DOCUMENTS ***(Including Author, Title, Date, Pertinent Pages, Etc.)***

Lit. 34; IPR 2	Adaptix, Inc. v. BlackBerry Ltd. et al., Plaintiff's Disclosure of Asserted Claims and Infringement Contentions, with Exhibit A, Civil Action No. 6:13-cv-434, February 19, 2014, 108 pgs.
Lit. 34; IPR 1	Adaptix, Inc. v. BlackBerry Ltd. et al., Plaintiff's Disclosure of Asserted Claims and Infringement Contentions, with Exhibit B, Civil Action No. 6:13-cv-434, February 19, 2014, 160 pgs.
Lit. 42; IPR 4	Adaptix, Inc. v. Sony Mobile Communications, Inc. et al., Plaintiff's Disclosure of Asserted Claims and Infringement Contentions, with Exhibit A, Civil Action No. 6:13-cv-442, February 19, 2014, 107 pgs.
Lit. 42; IPR 3	Adaptix, Inc. v. Sony Mobile Communications, Inc. et al., Plaintiff's Disclosure of Asserted Claims and Infringement Contentions, with Exhibit B, Civil Action No. 6:13-cv-442, February 19, 2014, 159 pgs.
IPR 1	Blackberry Corporation v. Adaptix, Inc., Petition for *Inter Partes* Review of U.S. Patent No. 6,947,748, with Exhibits, IPR2014-01406, P.T.A.B., August 28, 2014, 1422 pgs.
IPR 1	Blackberry Corporation v. Adaptix, Inc., Declaration of Zygmunt J. Haas, Ph.D. Under 37 C.F.R. § 1.68 regarding U.S. Patent No. 6,947,748, IPR2014-01406, P.T.A.B., August 26, 2014, 95 pgs.
IPR 2	Blackberry Corporation v. Adaptix, Inc., Petition for *Inter Partes* Review of U.S. Patent No. 7,454,212, with Exhibits, IPR2014-01408, P.T.A.B., August 28, 2014, 1264 pgs.
IPR 2	Blackberry Corporation v. Adaptix, Inc., Declaration of Zygmunt J. Haas, Ph.D. Under 37 C.F.R. § 1.68 regarding U.S. Patent No. 7,454,212, IPR2014-01408, P.T.A.B., August 26, 2014, 123 pgs.
IPR 3	Sony Mobile Communications (USA) Inc. v. Adaptix, Inc., Petition for *Inter Partes* Review of U.S. Patent No. 6,947,748, with Exhibits, IPR2014-01524, P.T.A.B., September 19, 2014, 1535 pgs.
IPR 3	Sony Mobile Communications (USA) Inc. v. Adaptix, Inc., Declaration of Professor Robert Akl, D.Sc., IPR2014-01524, P.T.A.B., September 19, 2014, 107 pgs.
IPR 3	Sony Mobile Communications (USA) Inc. v. Adaptix, Inc., (Corrected Exhibit 1009), Declaration of Professor Robert Akl, D.Sc., IPR2014-01524, P.T.A.B., September 19, 2014, 107 pgs.
IPR 3	Sony Mobile Communications (USA) Inc. v. Adaptix, Inc., Replacement Petition for *Inter Partes* Review of U.S. Patent No. 6,947,748, IPR2014-01524, P.T.A.B., September 19, 2014, 65 pgs.
IPR 3	Sony Mobile Communications (USA) Inc. v. Adaptix, Inc., Corrected Petition for *Inter Partes* Review of U.S. Patent No. 6,947,748, with Corrected Exhibit 1009, IPR2014-01524, P.T.A.B., October 3, 2014, 173 pgs.
IPR 4	Sony Mobile Communications (USA) Inc. v. Adaptix, Inc., Petition for *Inter Partes* Review of U.S. Patent No. 7,454,212, with Exhibits, IPR2014-01525, P.T.A.B., September 19, 2014, 1225 pgs.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.Z

IPR 4	Sony Mobile Communications (USA) Inc. v. Adaptix, Inc., Declaration of Professor Robert Akl, D.Sc., IPR2014-01525, P.T.A.B., September 19, 2014, 100 pgs.
IPR 4	Sony Mobile Communications (USA) Inc. v. Adaptix, Inc., Corrected Petition for *Inter Partes* Review of U.S. Patent No. 7,454,212, IPR2014-01525, P.T.A.B., October 3, 2014, 67 pgs.
JP Lit. 5	Adaptix Inc. v. ZTE Japan, Japanese Litigation Case No. 19919 regarding corresponding Japanese Patent No. 4201595, Plaintiff's (Adaptix) Invalidity Contention Brief, October 10, 2014, 22 pgs.
JP Lit. 5	Adaptix Inc. v. ZTE Japan, Japanese Litigation Case No. 19919 regarding corresponding Japanese Patent No. 4201595, Defendant's (ZTE) Invalidity Contention Brief, October 10, 2014, 65 pgs.
JP Lits. 7-8	Adaptix Inc. v. LG Electronics, Japanese Litigation Case Nos. 23278 and 10769 regarding corresponding Japanese Patent Nos. 4201595 and 5119070, Plaintiff's (Adaptix) Response to Defendant's Invalidity Contention Brief, September 12, 2014, 26 pgs.
JP Lit. 7	Adaptix Inc. v. LG Electronics, Japanese Litigation Case No. 23278 regarding corresponding Japanese Patent No. 4201595, Defendant's (LG) Invalidity Contention Brief, October 31, 2014, 13 pgs.
JP Lit. 7	Adaptix Inc. v. LG Electronics, Japanese Litigation Case No. 23278 regarding corresponding Japanese Patent No. 4201595 , List of Prior Art Documents cited in the Defendant's (LG) Invalidity Contention Brief, October 31, 2014, 2 pgs.
JP Lit. 8	Adaptix Inc. v. LG Electronics, Japanese Litigation Case No. 10769 regarding corresponding Japanese Patent Nos. 4201595 and 5119070, Plaintiff's (Adaptix) Rebuttal to Defendant's (LG) Invalidity Contention Brief, September 12, 2014, 57 pgs.
JP Lit. 11	Adaptix Inc. v. Apple Japan, Japanese Litigation Case No. 12198 regarding corresponding Japanese Patent Nos. 4201595 and 5119070, Plaintiff's (Adaptix) Infringement Contention and Claim Construction Brief, October 20, 2014, 69 pgs.
JP Trial 6	ZTE Japan v. Adaptix Inc., Japanese Invalidation Trial No. 2014-800008 regarding corresponding Japanese Patent No. 4201595, Adaptix's Summary of Written Statement for Oral Presentation, September 16, 2014, 60 pgs.
JP Trial 6	ZTE Japan v. Adaptix Inc., Japanese Invalidation Trial No. 2014-800008 regarding corresponding Japanese Patent No. 4201595, ZTE's Summary of Written Statement for Oral Presentation, September 16, 2014, 60 pgs.
JP Trial 8	Huawei v. Adaptix, Inc., Japanese Invalidation Trial No. 2014-800092 regarding corresponding Japanese Patent No. 4201595, Adaptix's Written Reply, September 18, 2014, 30 pgs.
IPRs 3-4	Chuang and Sollenberger, "Spectrum Resource Allocation for Wireless Packet Access with Application to Advanced Cellular Internet Service," IEEE Journal on Selected Areas in Communications, Vol. 16, No. 6, Pages 820-829, August 1998, 10 pgs.
IPRs 1-2	ETSI ETS 300 744, "Digital Video Broadcasting (DVB); Framing structure, channel coding and modulation for digital Terrestrial television (DVB-T), March 1997, 48 pages.
IPRs 3-4	ETSI SMG meeting No. 24, Concept Group Beta, "OFDMA (Orthogonal Frequency Division Multiplex Access) System Description Performance Evaluation," Tdoc/SMG 896/97, Madrid, Spain, December 15th-19th 1997, 71 pgs.
IPRs 3-4	Excerpts from IEEE Communications Magazine, Vol. 38 No. 7, including "CDMA/HDR: A Bandwidth-Efficient High-Speed Wireless Data Service for Nomadic Users" by Paul Bender et al. and "Beyond 3G: Wideband Wireless Data Access Based on OFDM and Dynamic Packet Assignment" by Chuang and Sollenberger, July 2000, 22 pages.
JP Lit. 7	Saito, "Digital Modulation Techniques for Wireless Communications," The Institute of Electronics, Information and Communications Engineers (IEICE), in Japanese, February 10, 1996, 10 pgs.
JP Lit. 7	Sagara, "Kimura-Sagara German-Japanese Dictionary," Pages 1638-1639, Hakuyusha Corporation, February 1, 1984, 2 pgs.
IPRs 3-4	Takamura et al., "Field Trial Results of a Band Hopping OFDM System," Sony Corporation, Shingawa-ku, Tokyo, Japan, IEEE Vehicular Technology Conference, September 1999, 6 pgs.

EXAMINER /Meless Zewdu/	**DATE CONSIDERED** 11/29/2014

EXAMINER: Initial if citation 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 the applicant.

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14294106	LI ET AL.
	Examiner	Art Unit
	MELESS ZEWDU	2643

CPC					
Symbol				Type	Version
H04W		74	/ 04	F	2013-01-01
H04L		1	/ 0009	I	2013-01-01
H04L		1	/ 0025	I	2013-01-01
H04L		1	/ 0026	I	2013-01-01
H04L		1	/ 0079	I	2013-01-01
H04L		1	/ 04	I	2013-01-01
H04L		5	/ 0007	I	2013-01-01
H04L		5	/ 0037	I	2013-01-01
H04L		5	/ 0046	I	2013-01-01
H04L		5	/ 0048	I	2013-01-01
H04L		5	/ 006	I	2013-01-01
H04L		5	/ 0064	I	2013-01-01
H04L		5	/ 0073	I	2013-01-01
H04L		5	/ 0082	I	2013-01-01
H04L		5	/ 0094	I	2013-01-01
H04L		5	/ 023	I	2013-01-01
H04L		25	/ 0228	I	2013-01-01
H04L		27	/ 2602	I	2013-01-01
H04W		72	/ 085	I	2013-01-01
H04W		72	/ 04	I	2013-01-01
H04W		72	/ 0453	I	2013-01-01
H04J		11	/ 003	I	2013-01-01
H04J		11	/ 005	I	2013-01-01
H04W		24	/ 08	I	2013-01-01
H04L		1	/ 0003	A	2013-01-01
H04L		5	/ 0042	A	2013-01-01
H04L		25	/ 0226	A	2013-01-01
H04W		72	/ 0406	A	2013-01-01

CPC Combination Sets

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	32	
/MELESS ZEWDU/ Primary Examiner, Art Unit 2643	11/29/2014	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1B

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14294106	LI ET AL.
	Examiner	Art Unit
	MELESS ZEWDU	2643

Symbol	Type	Set	Ranking	Version

NONE (Assistant Examiner)	(Date)	Total Claims Allowed: 32	
/MELESS ZEWDU/ Primary Examiner, Art Unit 2643 (Primary Examiner)	11/29/2014 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 1B

U.S. Patent and Trademark Office

Part of Paper No. 20141129

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14294106	LI ET AL.
	Examiner	Art Unit
	MELESS ZEWDU	2643

US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS
370	252

CROSS REFERENCE(S)					
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				
370	328	329	341	344	
455	425	509	452.1		

INTERNATIONAL CLASSIFICATION					
CLAIMED					NON-CLAIMED
H	0	4	W	4 / 00 (2009.01.01)	
H	0	4	B	7 / 208 (2006.01.01)	
H	0	4	W	24 / 00 (2009.01.01)	
H	0	4	B	7 / 00 (2006.01.01)	
H	0	4	W	72 / 00 (2009.01.01)	

NONE		Total Claims Allowed: 32	
(Assistant Examiner)	(Date)		
/MELESS ZEWDU/ Primary Examiner, Art Unit 2643	11/29/2014	O.G. Print Claim(s) 1	O.G. Print Figure 1B
(Primary Examiner)	(Date)		

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14294106	LI ET AL.
	Examiner	Art Unit
	MELESS ZEWDU	2643

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

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	1	18	17												
2	2	19	18												
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4	4	21	20												
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8	8	25	24												
9	9	26	25												
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11	11	28	27												
12	12	29	28												
13	13	30	29												
14	14	31	30												
15	15	16	31												
17	16	32	32												

NONE (Assistant Examiner)	(Date)	Total Claims Allowed: 32	
/MELESS ZEWDU/ Primary Examiner, Art Unit 2643 (Primary Examiner)	11/29/2014 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 1B

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L3	1031161	(("370"/("252", 328-330, "338", "341", 343-345, "431", 436-437, 464-465, "468", 480-482, "537").ccls.) or ("455"/("67.11", 101-104, "420", "423", "425", "434", 450-451, "452.1-452.2", "509", "550.1", "556.2", "561").ccls.))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/11/29 13:01
L4	357	((Xiaodong) near2 (Li)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2014/11/29 13:01
L5	531	((Hui) near2 (Liu)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2014/11/29 13:01
L6	86	((Kemin) near2 (Li)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2014/11/29 13:01
L7	113	((Wenzhong) near2 (Zhang)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2014/11/29 13:01
L8	903	l4 or l5 or l6 or l7	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/11/29 13:02
L13	231	ADAPTIX.AS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/11/29 13:04
L14	13	BROADSTORM.AS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/11/29 13:05
L15	31	KAON.AS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/11/29 13:05
L16	265	l13 or l14 or l15	US-PGPUB; USPAT; USOCR;	OR	ON	2014/11/29 13:05

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
L17	80	("6473467" | "7933244" | "8743717" | "20140269573" | "6567374" | "6904283" | "8760992" | "6405043" | "6526281" | "6947748" | "7355962" | "8406700" | "8767702" | "20140269572" | "6928120" | "6985432" | "6952454" | "20140328276" | "6801513" | "20070147536" | "7454212" | "7573850" | "8750238" | "6801775" | "8743729" | "6347091" | "20140269609" | "6215827" | "7720468" | "6795424" | "6009087" | "6560209").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/11/29 13:07
L18	2291	(((feedback or report$3 or send$3 or transmi$5 or provid$3) near20 ((measur$5 or estimat$3) near20 (subcarrier or sub-carrier or subchannel or sub-channel or OFDM or OFDMA))) and ((initial$3 or first) near12 (assign$5 or allocat$3)) and ((group or cluster or set or plural$3 or multiple) near8 (channel or resource or subcarrier or sub-carrier or subchannel or sub-channel)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/11/29 13:12
L19	816	(((feedback or report$3 or send$3 or transmi$5 or provid$3) near20 ((measur$5 or estimat$3) near20 (subcarrier or sub-carrier or subchannel or sub-channel or OFDM or OFDMA))) and ((initial$3 or first) near12 (assign$5 or allocat$3)) and ((group or cluster or set or plural$3 or multiple) near8 (channel or resource or subcarrier or sub-carrier or subchannel or sub-channel)) and ((additional or second$4) near20 ((allocat$3 or assign$5) near10 (subcarrier or sub-carrier or subchannel or sub-channel))))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/11/29 13:16
L20	132	(((feedback or report$3 or send$3 or transmi$5 or provid$3) near20 ((measur$5 or estimat$3) near20 (subcarrier or sub-carrier or subchannel or sub-channel or OFDM or OFDMA))) and ((initial$3 or first) near12 (assign$5 or allocat$3)) and ((group or cluster or set or plural$3 or multiple) near10 (channel or resource or subcarrier or sub-carrier or subchannel or sub-channel)) and ((second$3 or new or updat$3) near12 (report$3 or feedback)) and ((additional or second$4) near20 ((allocat$3 or assign$5) near10 (subcarrier or sub-carrier or subchannel or sub-channel))))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/11/29 13:20
L21	55	l3 and l20	US-PGPUB; USPAT;	OR	ON	2014/11/29 13:35

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
L22	45	l8 and l20	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/11/29 13:35
L23	42	l16 and l20	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/11/29 13:36
L24	12	l17 and l20	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/11/29 13:36
L25	83	l21 or l22 or l23 or l24	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/11/29 13:37
L26	11	(((feedback or report$3 or send$3 or transmi$5 or provid$3) near20 ((measur$5 or estimat$3) near20 (subcarrier or sub-carrier or subchannel or sub-channel or OFDM or OFDMA))) and ((initial$3 or first) near12 (assign$5 or allocat$3)) and ((group or cluster or set or plural$3 or multiple) near10 (channel or resource or subcarrier or sub-carrier or subchannel or sub-channel)) and ((second$3 or new or updat$3) near12 (report$3 or feedback)) and ((additional or second$4) near20 ((allocat$3 or assign$5) near10 (subcarrier or sub-carrier or subchannel or sub-channel)))).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/11/29 13:37
L27	0	((("370"/("252", "328", "329", "341", "344").ccls.) or ("455"/("425", "509", "452.1").ccls.)) and ((feedback or report$3 or send$3 or transmi$5 or provid$3) near20 ((measur$5 or estimat$3) near20 (subcarrier or sub-carrier or subchannel or sub-channel or OFDM or OFDMA))) and ((initial$3 or first) near12 (assign$5 or allocat$3)) and ((group or cluster or set or plural$3 or multiple) near10 (channel or resource or subcarrier or sub-carrier or	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/11/29 13:44

		subchannel or sub-channel)) and ((second$3 or new or updat$3) near12 (report$3 or feedback)) and ((additional or second$4) near20 ((allocat$3 or assign$5) near10 (subcarrier or sub-carrier or subchannel or sub-channel)))).clm.				

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L28	0	((("370"/("252", "328", "329", "341", "344").ccls.) or ("455"/("425", "509", "452.1").ccls.)) and ((feedback or report$3 or send$3 or transmi$5 or provid$3) near20 ((measur$5 or estimat$3) near20 (subcarrier or sub-carrier or subchannel or sub-channel or OFDM or OFDMA))) and ((initial$3 or first) near12 (assign$5 or allocat$3)) and ((group or cluster or set or plural$3 or multiple) near10 (channel or resource or subcarrier or sub-carrier or subchannel or sub-channel)) and ((second$3 or new or updat$3) near12 (report$3 or feedback)) and ((additional or second$4) near20 ((allocat$3 or assign$5) near10 (subcarrier or sub-carrier or subchannel or sub-channel)))).clm.	US-PGPUB; USPAT; UPAD	OR	ON	2014/11/29 13:45

11/29/2014 1:46:18 PM

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	556044	H04B17/00, H04B1/00, H04B15/00, H04B7/00, H04M3/00, H04W24/00, H04W4/00, H04W72/00, H04B1/38, H04B1/10, G08C15/00, H04J1/00, H04B7/208, H04B7/212, H04J3/24, H04J3/06	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/11/29 14:55
L2	94	(((feedback or report$3 or send$3 or transmi$5 or provid$3) near20 ((measur$5 or estimat$3) near20(subcarrier or sub-carrier or subchannel or sub-channel or OFDM or OFDMA))) and ((initial$3 or first) near12 (assign$5 or allocat$3)) and ((group or cluster or set or plural$3 or multiple) near10 (channel or resource or subcarrier or sub-carrier or subchannel or subchannel)) and ((second$3 or new or updat$3) near12 (report$3 or feedback)) and ((additional or second$4) near20 ((allocat$3 or assign$5) near10 (subcarrier or subcarrier or subchannel or subchannel))))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/11/29 14:58
L3	34	l1 and l2	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/11/29 14:59
L4	34	3 AND ((H04W72/085 OR H04W72/0453 OR H04W72/04 OR H04W72/0406 OR H04W24/08 OR H04W74/04 OR H04W72/048 OR H04W52/16 OR H04W52/247 OR H04W52/346 OR H04W52/42 OR H04W24/00 OR H04W16/02 OR H04W24/10 OR H04W72/0413 OR H04W24/04 OR H04W28/0263 OR H04W28/04 OR H04W28/18 OR H04W28/20 OR H04W48/16 OR H04W64/006 OR H04W72/00 OR H04W72/02 OR H04W72/042 OR H04W72/046 OR H04W72/08 OR H04W72/082 OR H04W72/1231 OR H04W72/1284 OR H04W84/02 OR H04W84/047 OR H04W84/12 OR H04W88/04 OR H04B17/0067 OR H04B17/0077 OR H04B7/0452 OR H04B7/0613 OR H04B7/15542 OR H04B7/2606).CPC. OR (370/329 OR 370/343 OR 370/344 OR 370/252 OR 370/328 OR 370/341 OR	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/11/29 15:04

		370/208 OR 370/338 OR 370/203 OR 370/210 OR 370/230 OR 370/236 OR 370/278 OR 370/279 OR 370/282 OR 370/319 OR 370/320 OR 370/332 OR 370/335 OR 370/233 OR 370/280 OR 370/315 OR 370/330 OR 370/334 OR 370/340 OR 370/348 OR 370/438 OR 370/480 OR 455/450 OR 455/452.2 OR 455/69 OR 455/452.1 OR 455/509 OR 455/522 OR 455/448 OR 455/115.1 OR 455/447 OR 455/464 OR 455/550.1 OR 455/556.2 OR 455/561 OR 455/67.13 OR 455/11.1 OR 455/226.1 OR 455/226.2 OR 455/422.1 OR 455/45 OR 455/453 OR 455/507 OR 455/67.11 OR 455/7 OR 455/9).CCLS. OR (H04W4/00 OR H04W72/00 OR H04W24/00 OR H04W72/04 OR H04W40/00 OR H04B7/208 OR H04B7/00 OR H04B17/00 OR H04B7/204 OR H04B1/38 OR H04M1/00 OR H04M1/38).IPCR.)				
L7	34	l2 and l4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/11/29 15:06

EAST Search History (Interference)

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11/29/2014 3:06:38 PM

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14294106	LI ET AL.
	Examiner	Art Unit
	MELESS ZEWDU	2643

CPC- SEARCHED

Symbol	Date	Examiner
H04B17/00, H04B1/00, H04B15/00, H04B7/00, H04M3/00, H04W24/00, H04W4/00, H04W72/00, H04B1/38, H04B1/10, G08C15/00, H04J1/00, H04B7/208, H04B7/212, H04J3/24, H04J3/06	7/2/2014	M.Z.

CPC COMBINATION SETS - SEARCHED

Symbol	Date	Examiner

US CLASSIFICATION SEARCHED

Class	Subclass	Date	Examiner
455	420, 423-425, 434, 450-451, 452.1-452.2, 453, 509-510, 512-514, 516-517, 522, 524-525, 61-62, 63.1, 67.11, 67.13, 68-69, 702-703, 70-71, 550.1, 556.2, 560-561).ccls.) or (370/(252, 328-329, 338, 341, 343-344, 347, 349-350, 447	6/25/2014	M.Z.
370	252, 328-330, 338, 341, 343-345, 431, 436-437, 464-465, 468, 480-482, 537	8/7/2014	M.Z.
455	67.11, 101-104, 420, 423, 425, 434, 450-451, 452.1-452.2, 509, 550.1, 556.2, 561	8/7/2014	M.Z.
	The above search fields (class-subclasses) have been updated (please see the attached search history printout)	12/6/2014	M.Z.

SEARCH NOTES

Search Notes	Date	Examiner
Searched in EAST: US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT & IBM_TDB	6/25/2014	M.Z.
Searchedby: Assignee; Inventors; Keywords; Class-subclasses and CPC symbols (for more detail, please refer to the attached search history printout)	6/25/2014	M>Z.
The above databases and class-subclasses have been updated (pease see attached search history printout)>	8/7/2014	M.Z.

	/MELESS ZEWDU/ Primary Examiner, Art Unit 2643

SEARCH NOTES

Search Notes	Date	Examiner
Search has been updated in the above databases (please seee attached search history printout)	11/29/2014	M.Z.

INTERFERENCE SEARCH

US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
370	252, 328, 329, 341, 344	8/7/2014	M.Z.
455	425, 509, 452.2	8/14/2014	M.Z.
	Interference search has been updated in the above class-subclasses (please refer to the attached searc h history printout).	11/29/2014	M.Z.

	/MELESS ZEWDU/ Primary Examiner, Art Unit 2643

REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL
(Submitted Only via EFS-Web)

Application Number	14/294,106	Filing Date	2014-06-02	Docket Number (if applicable)	176.0003-06000	Art Unit	2643
First Named Inventor	Xiaodong Li			Examiner Name	Meless Nmn Zewdu		

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV

SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s entered, applicant must request non-entry of such amendment(s).

☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____

☐ Other _____

☒ Enclosed

☒ Amendment/Reply

☒ Information Disclosure Statement (IDS)

☐ Affidavit(s)/ Declaration(s)

☒ Other
Certification and Request for Prioritized Examination (Track One Request)

MISCELLANEOUS

☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____
(Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

☐ Other _____

FEES

The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.

☒ The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No 501068

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☒ Patent Practitioner Signature

☐ Applicant Signature

Signature of Registered U.S. Patent Practitioner			
Signature	/Alfred Y. Chu/	Date (YYYY-MM-DD)	2014-11-13
Name	Alfred Y. Chu	Registration Number	62317

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 t 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 i estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Tim will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions fc reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

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

Privacy Act Statement

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

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

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

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.

PTO/SB/30EFS (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL
(Submitted Only via EFS-Web)

Application Number	14/294,106	Filing Date	2014-06-02	Docket Number (if applicable)	176.0003-06000	Art Unit	2643
First Named Inventor	Xiaodong Li			Examiner Name	Meless Nmn Zewdu		

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV

SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s entered, applicant must request non-entry of such amendment(s).

☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____

☐ Other _____

☒ Enclosed

☒ Amendment/Reply

☒ Information Disclosure Statement (IDS)

☐ Affidavit(s)/ Declaration(s)

☒ Other Certification and Request for Prioritized Examination (Track One Request)

MISCELLANEOUS

☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____ (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

☐ Other _____

FEES

☒ **The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.**
The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No 501068

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☒ Patent Practitioner Signature

☐ Applicant Signature

PTO/SB/30EFS (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
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Signature of Registered U.S. Patent Practitioner			
Signature	/Alfred Y. Chu/	Date (YYYY-MM-DD)	2014-11-13
Name	Alfred Y. Chu	Registration Number	62317

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 t 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 i estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Tim will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions fc reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

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

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the informatior 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 records.

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.

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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.

Substitute for FORM PTO-1449	Attorney Docket Number 176.0003-06000	Customer No. 22882	
INFORMATION DISCLOSURE CITATION IN AN APPLICATION	Applicant Xiaodong Li et al.	Application Number 14/294,106	
(Use several sheets if necessary) Sheet 1 of 2	Filing Date June 2, 2014	Group Art Unit 2643	Examiner M. N. Zewdu

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
IPRs 3-4	6,215,827	4/2001	Balachandran et al.			
IPRs 1-4	6,567,374	5/2003	Bohnke et al.			
Lits. 38-41 and 43-46	6,801,513	10/2004	Gibbons et al.			
Lits. 38-41 and 43-46	6,801,775	10/2004	Gibbons et al.			
Lits. 38-41 and 43-46	7,720,468	5/2010	Hong et al.			
	2014/0328276	11/2014	Xing et al.			

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION (YES/NO)

OTHER DOCUMENTS ***(Including Author, Title, Date, Pertinent Pages, Etc.)***

Lit. 34; IPR 2	Adaptix, Inc. v. BlackBerry Ltd. et al., Plaintiff's Disclosure of Asserted Claims and Infringement Contentions, with Exhibit A, Civil Action No. 6:13-cv-434, February 19, 2014, 108 pgs.
Lit. 34; IPR 1	Adaptix, Inc. v. BlackBerry Ltd. et al., Plaintiff's Disclosure of Asserted Claims and Infringement Contentions, with Exhibit B, Civil Action No. 6:13-cv-434, February 19, 2014, 160 pgs.
Lit. 42; IPR 4	Adaptix, Inc. v. Sony Mobile Communications, Inc. et al., Plaintiff's Disclosure of Asserted Claims and Infringement Contentions, with Exhibit A, Civil Action No. 6:13-cv-442, February 19, 2014, 107 pgs.
Lit. 42; IPR 3	Adaptix, Inc. v. Sony Mobile Communications, Inc. et al., Plaintiff's Disclosure of Asserted Claims and Infringement Contentions, with Exhibit B, Civil Action No. 6:13-cv-442, February 19, 2014, 159 pgs.
IPR 1	Blackberry Corporation v. Adaptix, Inc., Petition for *Inter Partes* Review of U.S. Patent No. 6,947,748, with Exhibits, IPR2014-01406, P.T.A.B., August 28, 2014, 1422 pgs.
IPR 1	Blackberry Corporation v. Adaptix, Inc., Declaration of Zygmunt J. Haas, Ph.D. Under 37 C.F.R. § 1.68 regarding U.S. Patent No. 6,947,748, IPR2014-01406, P.T.A.B., August 26, 2014, 95 pgs.
IPR 2	Blackberry Corporation v. Adaptix, Inc., Petition for *Inter Partes* Review of U.S. Patent No. 7,454,212, with Exhibits, IPR2014-01408, P.T.A.B., August 28, 2014, 1264 pgs.
IPR 2	Blackberry Corporation v. Adaptix, Inc., Declaration of Zygmunt J. Haas, Ph.D. Under 37 C.F.R. § 1.68 regarding U.S. Patent No. 7,454,212, IPR2014-01408, P.T.A.B., August 26, 2014, 123 pgs.
IPR 3	Sony Mobile Communications (USA) Inc. v. Adaptix, Inc., Petition for *Inter Partes* Review of U.S. Patent No. 6,947,748, with Exhibits, IPR2014-01524, P.T.A.B., September 19, 2014, 1535 pgs.
IPR 3	Sony Mobile Communications (USA) Inc. v. Adaptix, Inc., Declaration of Professor Robert Akl, D.Sc., IPR2014-01524, P.T.A.B., September 19, 2014, 107 pgs.
IPR 3	Sony Mobile Communications (USA) Inc. v. Adaptix, Inc., (Corrected Exhibit 1009), Declaration of Professor Robert Akl, D.Sc., IPR2014-01524, P.T.A.B., September 19, 2014, 107 pgs.
IPR 3	Sony Mobile Communications (USA) Inc. v. Adaptix, Inc., Replacement Petition for *Inter Partes* Review of U.S. Patent No. 6,947,748, IPR2014-01524, P.T.A.B., September 19, 2014, 65 pgs.
IPR 3	Sony Mobile Communications (USA) Inc. v. Adaptix, Inc., Corrected Petition for *Inter Partes* Review of U.S. Patent No. 6,947,748, with Corrected Exhibit 1009, IPR2014-01524, P.T.A.B., October 3, 2014, 173 pgs.
IPR 4	Sony Mobile Communications (USA) Inc. v. Adaptix, Inc., Petition for *Inter Partes* Review of U.S. Patent No. 7,454,212, with Exhibits, IPR2014-01525, P.T.A.B., September 19, 2014, 1225 pgs.

IPR 4	Sony Mobile Communications (USA) Inc. v. Adaptix, Inc., Declaration of Professor Robert Akl, D.Sc., IPR2014-01525, P.T.A.B., September 19, 2014, 100 pgs.
IPR 4	Sony Mobile Communications (USA) Inc. v. Adaptix, Inc., Corrected Petition for *Inter Partes* Review of U.S. Patent No. 7,454,212, IPR2014-01525, P.T.A.B., October 3, 2014, 67 pgs.
JP Lit. 5	Adaptix Inc. v. ZTE Japan, Japanese Litigation Case No. 19919 regarding corresponding Japanese Patent No. 4201595, Plaintiff's (Adaptix) Invalidity Contention Brief, October 10, 2014, 22 pgs.
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JP Trial 6	ZTE Japan v. Adaptix Inc., Japanese Invalidation Trial No. 2014-800008 regarding corresponding Japanese Patent No. 4201595, Adaptix's Summary of Written Statement for Oral Presentation, September 16, 2014, 60 pgs.
JP Trial 6	ZTE Japan v. Adaptix Inc., Japanese Invalidation Trial No. 2014-800008 regarding corresponding Japanese Patent No. 4201595, ZTE's Summary of Written Statement for Oral Presentation, September 16, 2014, 60 pgs.
JP Trial 8	Huawei v. Adaptix, Inc., Japanese Invalidation Trial No. 2014-800092 regarding corresponding Japanese Patent No. 4201595, Adaptix's Written Reply, September 18, 2014, 30 pgs.
IPRs 3-4	Chuang and Sollenberger, "Spectrum Resource Allocation for Wireless Packet Access with Application to Advanced Cellular Internet Service," IEEE Journal on Selected Areas in Communications, Vol. 16, No. 6, Pages 820-829, August 1998, 10 pgs.
IPRs 1-2	ETSI ETS 300 744, "Digital Video Broadcasting (DVB); Framing structure, channel coding and modulation for digital Terrestrial television (DVB-T), March 1997, 48 pages.
IPRs 3-4	ETSI SMG meeting No. 24, Concept Group Beta, "OFDMA (Orthogonal Frequency Division Multiplex Access) System Description Performance Evaluation," Tdoc/SMG 896/97, Madrid, Spain, December 15th-19th 1997, 71 pgs.
IPRs 3-4	Excerpts from IEEE Communications Magazine, Vol. 38 No. 7, including "CDMA/HDR: A Bandwidth-Efficient High-Speed Wireless Data Service for Nomadic Users" by Paul Bender et al. and "Beyond 3G: Wideband Wireless Data Access Based on OFDM and Dynamic Packet Assignment" by Chuang and Sollenberger, July 2000, 22 pages.
JP Lit. 7	Saito, "Digital Modulation Techniques for Wireless Communications," The Institute of Electronics, Information and Communications Engineers (IEICE), in Japanese, February 10, 1996, 10 pgs.
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IPRs 3-4	Takamura et al., "Field Trial Results of a Band Hopping OFDM System," Sony Corporation, Shingawa-ku, Tokyo, Japan, IEEE Vehicular Technology Conference, September 1999, 6 pgs.

EXAMINER	DATE CONSIDERED

EXAMINER: Initial if citation 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 the applicant.

Electronic Patent Application Fee Transmittal

Application Number:	14294106
Filing Date:	02-Jun-2014
Title of Invention:	OFDMA WITH ADAPTIVE SUBCARRIER-CLUSTER CONFIGURATION AND SELECTIVE LOADING
First Named Inventor/Applicant Name:	Xiaodong Li
Filer:	Alfred Young Chu/Chloe Hong
Attorney Docket Number:	176.0003-06000

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Request for Prioritized Examination	1817	1	4000	4000
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($)
Miscellaneous:				
Request for Continued Examination	1801	1	1200	1200
		Total in USD ($)		**5200**

Electronic Acknowledgement Receipt

EFS ID:	20694816
Application Number:	14294106
International Application Number:	
Confirmation Number:	9020
Title of Invention:	OFDMA WITH ADAPTIVE SUBCARRIER-CLUSTER CONFIGURATION AND SELECTIVE LOADING
First Named Inventor/Applicant Name:	Xiaodong Li
Customer Number:	22882
Filer:	Alfred Young Chu/Chloe Hong
Filer Authorized By:	Alfred Young Chu
Attorney Docket Number:	176.0003-06000
Receipt Date:	13-NOV-2014
Filing Date:	02-JUN-2014
Time Stamp:	22:26:25
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$5200
RAM confirmation Number	9513
Deposit Account	501068
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	Transmittal.pdf	58639 3a6c79357fd9964286fa4f64c8226fe7ae144775	no	1
Warnings:					
Information:					
2	Request for Continued Examination (RCE)	RCE.pdf	697664 0218995e83d694f127ecb8e1b7bc37a8d3dc3394	no	3
Warnings:					
Information:					
3	TrackOne Request	Track1_Request.pdf	114044 d0749d1014bef1ac0afe7289b0f34613b0d3be99	no	2
Warnings:					
Information:					
4		Amendment.pdf	177578 0022f9621cdd6a6030aed006955a3c3f29ea8fb1	yes	12

Multipart Description/PDF files in .zip description

Document Description	Start	End
Amendment Submitted/Entered with Filing of CPA/RCE	1	1
Claims	2	7
Applicant Arguments/Remarks Made in an Amendment	8	12

Warnings:					
Information:					
5	Transmittal Letter	IDS.pdf	124676 2331a666f69fb97bef0856159b4950d26b1a09f3	no	6
Warnings:					
Information:					
6	Information Disclosure Statement (IDS) Form (SB08)	SB08.pdf	113015 0a9167008fd42ff12d6ec139f711e117b0b08bdb	no	2
Warnings:					
Information:					

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7	Non Patent Literature	613cv434_Plaintiffs_Disclosure_of_Asserted_Claims_wExh_A_Feb_19_2014_108pgs.pdf	1831261 01774f4cf734c91ce472eb4ef46e76c989ba3c8f	no	108
Warnings:					
Information:					
8	Non Patent Literature	613cv434_Plaintiffs_Disclosure_of_Asserted_Claims_wExh_B_Feb_2_2014_160pgs.pdf	2441915 4818fbfec549261e43fd824a1dc0486da2e7b619	no	160
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Information:					
9	Non Patent Literature	613cv442_Plaintiffs_Disclosure_of_Asserted_Claims_wExh_A_Feb_19_2014_107pgs.pdf	1404980 641a8cfe4240acea87a0c2ac06150469da54395a	no	107
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Information:					
10	Non Patent Literature	613cv442_Plaintiffs_Disclosure_of_Asserted_Claims_wExh_B_Feb_19_2014_159pgs.pdf	1372091 c5a320f3c18d06de6536182c3c16fa88d45a0e64	no	159
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Information:					
11	Non Patent Literature	IPR2014-01406_Petition_wExhibits_Aug_28_2014_1422pgs_Part1of2.pdf	17751086 3129187bd93c8fe4fccbe02cbddff780c026ca96	no	800
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Information:					
12	Non Patent Literature	IPR2014-01406_Petition_wExhibits_Aug_28_2014_1422pgs_Part2of2.pdf	15880945 21e7ec4f94b06c1c66df4dfa44f1835a055bfe70	no	622
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Information:					
13	Non Patent Literature	IPR2014-01406_Declaration_of_Zygmunt_Haas_Aug_26_2014_95pgs.pdf	1016849 9eb8e1fd22d492ba892ae9da7c6f2d7b6b13f9b6	no	95
Warnings:					
Information:					
14	Non Patent Literature	IPR2014-01408_Petition_wExhibits_Aug_28_2014_1264pgs_Part1of2.pdf	14543524 710d6b1f12b0beb1b6409a378e0c00c8e0acbd5c	no	700
Warnings:					
Information:					
15	Non Patent Literature	IPR2014-01408_Petition_wExhibits_Aug_28_2014_1264pgs_Part2of2.pdf	14832049 bdb9429cdfe664f7ce430f0c3a99f73d6461e8d4	no	564
Warnings:					
Information:					

16	Non Patent Literature	IPR2014-01408_Declaration_of_Zygmunt_Haas_Aug_26_2014_123pgs.pdf	1423830 e7fb2a3e0d9e68400f265c04f5ad57eadb81f1a1	no	123
Warnings:					
Information:					
17	Non Patent Literature	IPR2014-01524_Petition_wExhibits_Sep_19_2014_1535pgs_Part1of5.pdf	23441453 6d5d60efd0e5fb49ac4d4f7f677298820a71a05	no	226
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Information:					
18	Non Patent Literature	IPR2014-01524_Petition_wExhibits_Sep_19_2014_1535pgs_Part2of5.pdf	24904683 63b6fa1d8e7a4f7f6a306f2a732952122d82247d	no	151
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Information:					
19	Non Patent Literature	IPR2014-01524_Petition_wExhibits_Sep_19_2014_1535pgs_Part3of5.pdf	23821335 49298ea932471adaeb77fd4438455f5609dd4312	no	250
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Information:					
20	Non Patent Literature	IPR2014-01524_Petition_wExhibits_Sep_19_2014_1535pgs_Part4of5.pdf	24754510 fac30ca3a8908941b32ba68c50497ef52d558216	no	824
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Information:					
21	Non Patent Literature	IPR2014-01524_Petition_wExhibits_Sep_19_2014_1535pgs_Part5of5.pdf	6074389 d294e1971ce1e9c61ebc0608d76b7ae07cdf9ef2	no	84
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Information:					
22	Non Patent Literature	IPR2014-01524_Declaration_of_Professor_Robert_Akl_Sep_19_2014_107pgs.pdf	3002204 20d6707f3b40c1d2223a84fc31f2eb361928d84c	no	107
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Information:					
23	Non Patent Literature	IPR2014-01524_CORRECTED_Exh_1009_Dec_of_Professor_Robert_Akl_Sep_19_2014_107pgs.pdf	999295 d4ea130e39ff8fcb76841fe104c6d727c380dfc1	no	107
Warnings:					
Information:					
24	Non Patent Literature	IPR2014-01524_Replacement_Petition_Sep_19_2014_65pgs.pdf	466469 75ad0bac5cfb47e93601cb6c71d717e58bd3f531	no	65
Warnings:					
Information:					

25	Non Patent Literature	IPR2014-01524_Corrected_Petition_wCorrected_Exh_Oct_3_2014_173pgs.pdf	1238037 e0828c26cf4fdbd6c4f150092239e0cfcd80d7bf	no	173
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Information:					
26	Non Patent Literature	IPR2014-01525_Petition_wExhibits_Sep_19_2014_1225pgs_Part1of4.pdf	23868165 8895199aa27f75715a1cd0ba4020e51da84f4d1c	no	204
Warnings:					
Information:					
27	Non Patent Literature	IPR2014-01525_Petition_wExhibits_Sep_19_2014_1225pgs_Part2of4.pdf	24786089 6a05de216817697dff9de61fd3320b79117fda71	no	159
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Information:					
28	Non Patent Literature	IPR2014-01525_Petition_wExhibits_Sep_19_2014_1225pgs_Part3of4.pdf	24827397 87932ee6883cab96eca9d80d52ec87b834fca1a4	no	469
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Information:					
29	Non Patent Literature	IPR2014-01525_Petition_wExhibits_Sep_19_2014_1225pgs_Part4of4.pdf	15256447 907fc8704aae3334a964b1af5495224f1eda79f7	no	393
Warnings:					
Information:					
30	Non Patent Literature	IPR2014-01525_Declaration_of_Professor_Robert_Akl_Sep_19_2014_100pgs.pdf	993525 b49b2284097c3fbb9574344a12760200434a001e	no	100
Warnings:					
Information:					
31	Non Patent Literature	IPR2014-01525_Corrected_Petition_Oct_3_2014_67pgs.pdf	377725 e119889cca6d7fd4ce143f453f65fca150569329	no	67
Warnings:					
Information:					
32	Non Patent Literature	JP_Lit_19919_Plaintiffs_Invalidity_Contention_Brief_Oct_10_2014_22pgs.pdf	347625 7464bdd8b7b25ff4e4342348b80549aa2bc28885	no	22
Warnings:					
Information:					
33	Non Patent Literature	JP_Lit_19919_Defendants_Invalidity_Contention_Brief_Oct_10_2014_65pgs.pdf	3106687 988b6fda3d0e854c2a1137929476059b4de3c14	no	65
Warnings:					
Information:					

34	Non Patent Literature	JP_Lit_23278_JP_Lit_10769_Plaintiffs_Response_to_Invalidity_Contention_Sep_12_2014_26pgs.pdf	444129 1c66b0d99650c1dd3561184ecee650d12e71c3cb	no	26
Warnings:					
Information:					
35	Non Patent Literature	JP_Lit_23278_Defendants_LG_Invalidity_Contention_Brief_Oct_31_2014_13pgs.pdf	1848328 dd9d9afdbe61ba062377190ecf926f5006eb396a	no	13
Warnings:					
Information:					
36	Non Patent Literature	JP_Lit_23278_List_of_Prior_Art_Docs_in_Def_Invalidity_Contention_Brief_Oct_31_2014_2pgs.pdf	176376 376091228dcb202ca5b63ce559aebb8a6fd5c890	no	2
Warnings:					
Information:					
37	Non Patent Literature	JP_Lit_10769_Plaintiffs_Rebuttal_to_Invalidity_Contention_Sep_12_2014_57pgs.pdf	940891 a6affdc9703a0b942c0176289dcc2f382afe6578	no	57
Warnings:					
Information:					
38	Non Patent Literature	JP_Lit_12198_Plaintiffs_Adaptix_Infringement_and_Claim_Construction_Brief_Oct_20_2014_69pgs.pdf	1468520 59748e28f5f06e66239793128f63a09d1dd9a593	no	69
Warnings:					
Information:					
39	Non Patent Literature	JP_Trial_2014-800008_Adaptix_Summary_of_Written_Statement_Sep_16_2014_60pgs.pdf	3253727 c343c7b80929c342dfcf5619a287a3695de94b5c	no	60
Warnings:					
Information:					
40	Non Patent Literature	JP_Trial_2014-800008_ZTE_Summary_of_Written_Statement_Sep_16_2014_60pgs.pdf	4499340 e11e2df2d30762099ecf86ac45221cab4bf2055b	no	60
Warnings:					
Information:					
41	Non Patent Literature	JP_Trial_2014-800092_Adaptix_Written_Reply_Sep_18_2014_30pgs.pdf	1579590 4459208e2ae6a58304fc880f4c47067d07b3ce61	no	30
Warnings:					
Information:					
42	Non Patent Literature	Chuang_Spectrum_Resource_Allocation_for_Wireless_Packet_Aug_1998_10pgs.pdf	372523 822867e2ab58c9642a72572fdc8dfca68a81e280	no	10
Warnings:					
Information:					

43	Non Patent Literature	ETSI_ETS_300_744_Digital_Video_Broadcasting_March_1997_48pgs.pdf	2329513 2cee94cae80c6a8593914d61f1816062087f416a	no	48
Warnings:					
Information:					
44	Non Patent Literature	ETSI_SMG_24_Tdoc_896-97_OFDMA_System_Description_Dec_15_1997_71pgs.pdf	3006309 5983e0c8293ea3edcb63636658354e4c23a7eeb9	no	71
Warnings:					
Information:					
45	Non Patent Literature	Excerpts_from_IEEE_Communications_Magazine_July_2000_22pgs.pdf	733098 4c9819b1fbe5062beb278bb638efbdc8cb934d4c	no	22
Warnings:					
Information:					
46	Non Patent Literature	Saito_Digital_Modulation_Techniques_IEICE_Feb_10_1996_10pgs.pdf	1536338 00f7b166367d2b9e7c563483754888b7147549096	no	10
Warnings:					
Information:					
47	Non Patent Literature	Sagara_Kimura-Sagara_German-Japanese_Dictionary_Pages_1638-1639_Feb_1_1984_2pgs.pdf	506540 22c1a1c294b8a7c333f8c91e96c918c2b203ff3c	no	2
Warnings:					
Information:					
48	Non Patent Literature	Takamura_Field_Trial_Results_of_a_Band_Hopping_Sep_1999_6pgs.pdf	529268 dc1c20611711ffb53f40084fe13f225ce1b62471	no	6
Warnings:					
Information:					
49	Fee Worksheet (SB06)	fee-info.pdf	32268 fb4b1fe7af10da8e1b55f00474dc3c5cf2b43e6c	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	299306939		

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 application of: Xiaodong Li et al. Serial No: 14/294,106 Filed: June 2, 2014 For: OFDMA WITH ADAPTIVE SUBCARRIER-CLUSTER CONFIGURATION AND SELECTIVE LOADING	Confirmation No.: 9020 Art Unit: 2643 Examiner: Meless Nmn Zewdu

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

Dear Sir:

Further to the Notice of Allowance dated August 14, 2014, transmitted herewith is a Request for Continued Examination (RCE), Information Disclosure Statement (IDS), and an Amendment in the above-identified application.

- ☐ No additional fee is required.
- ☒ A Certification and Request for Prioritized Examination (TRACK 1 Request) (Form PTO/SB/424) is enclosed.
- ☐ Applicant hereby requests a __-month extension of time to respond to the above office action.
- ☐ A Terminal Disclaimer is enclosed.
- ☒ An Information Disclosure Statement (IDS) Under 37 C.F.R. § 1.97(b) with Form PTO/SB/08 is enclosed (☒ with references).
- ☒ The total amount of $5,200 to cover the TRACK 1 Request ($4,000) and RCE ($1,200) fees is to be charged to Deposit Account No. 50-1068.
- ☒ The Commissioner is hereby authorized to charge any deficiencies of fees associated with this communication or credit any overpayment to Deposit Account No. 50-1068.
  - ☒ Any filing fees under 37 C.F.R. § 1.16 for the presentation of extra claims
  - ☒ Any patent application processing fees under 37 C.F.R. § 1.17

Respectfully submitted,

MARTIN & FERRARO, LLP

Date: November 13, 2014

By: /Alfred Y. Chu/
Alfred Y. Chu
Registration No. 62,317

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Doc Code: TRACK1.REQ
Document Description: TrackOne Request

PTO/AIA/424 (04-14)

CERTIFICATION AND REQUEST FOR PRIORITIZED EXAMINATION UNDER 37 CFR 1.102(e) (Page 1 of 1)

First Named Inventor:	Xiaodong Li	Nonprovisional Application Number (if known):	14/294,106
Title of Invention:	OFDMA WITH ADAPTIVE SUBCARRIER-CLUSTER CONFIGURATION AND SELECTIVE LOADING		

APPLICANT HEREBY CERTIFIES THE FOLLOWING AND REQUESTS PRIORITIZED EXAMINATION FOR THE ABOVE-IDENTIFIED APPLICATION.

1. The processing fee set forth in 37 CFR 1.17(i)(1) and the prioritized examination fee set forth in 37 CFR 1.17(c) have been filed with the request. The publication fee requirement is met because that fee, set forth in 37 CFR 1.18(d), is currently $0. The basic filing fee, search fee, and examination fee are filed with the request or have been already been paid. I understand that any required excess claims fees or application size fee must be paid for the application.

2. I understand that the application may not contain, or be amended to contain, more than four independent claims, more than thirty total claims, or any multiple dependent claims, and that any request for an extension of time will cause an outstanding Track I request to be dismissed.

3. The applicable box is checked below:

I. ☐ Original Application (Track One) - Prioritized Examination under § 1.102(e)(1)

i. (a) The application is an original nonprovisional utility application filed under 35 U.S.C. 111(a). This certification and request is being filed with the utility application via EFS-Web.

---OR---

(b) The application is an original nonprovisional plant application filed under 35 U.S.C. 111(a). This certification and request is being filed with the plant application in paper.

ii. An executed inventor's oath or declaration under 37 CFR 1.63 or 37 CFR 1.64 for each inventor, **or** the application data sheet meeting the conditions specified in 37 CFR 1.53(f)(3)(i) is filed with the application.

II. ☑ Request for Continued Examination - Prioritized Examination under § 1.102(e)(2)

i. A request for continued examination has been filed with, or prior to, this form.
ii. If the application is a utility application, this certification and request is being filed via EFS-Web.
iii. The application is an original nonprovisional utility application filed under 35 U.S.C. 111(a), or is a national stage entry under 35 U.S.C. 371.
iv. This certification and request is being filed prior to the mailing of a first Office action responsive to the request for continued examination.
v. No prior request for continued examination has been granted prioritized examination status under 37 CFR 1.102(e)(2).

Signature /Alfred Y. Chu/	Date November 13, 2014
Name (Print/Typed) Alfred Y. Chu	Practitioner Registration Number 62,317

Note: *This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. Submit multiple forms if more than one signature is required.**

☑ *Total of 1 forms are submitted.

Privacy Act Statement

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

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

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
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 inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	Confirmation No.: 9020
Xiaodong Li et al.	)	
Serial No.: 14/294,106	)	Group Art Unit: 2643
Filed: June 2, 2014	)	Examiner: Meless Nmn Zewdu
For: OFDMA WITH ADAPTIVE SUBCARRIER-CLUSTER CONFIGURATION AND SELECTIVE LOADING	)	

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

Sir:

AMENDMENT

Prior to the further examination of the above-identified application, please amend the application as follows:

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

Remarks begin on page 8 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. (currently amended) A method for a wireless system employing orthogonal frequency division multiple access (OFDMA), the method comprising:

measuring, at a first time by a subscriber unit, a first channel information for a ~~first~~ plurality of subcarriers based on a first plurality of pilot symbols received from a base station;

providing, by the subscriber unit, a first feedback information relating to a plurality of feedback clusters based on at least the measuring of the first channel information for the ~~first~~ plurality of subcarriers based on the first plurality of pilot symbols, each feedback cluster of the plurality of feedback clusters being ~~a plurality of~~at least two subcarriers, the first feedback information relating to the plurality of feedback clusters based on the first plurality of pilot symbols includes an index corresponding to a first modulation and coding rate associated with each feedback cluster of the plurality of feedback clusters;

receiving, by the subscriber unit, a first allocation of OFDMA subcarriers based on at least the providing of the first feedback information selected by the base station for use by the subscriber unit, the first allocation of OFDMA subcarriers including an indication of a modulation and coding rate associated with the first allocation of OFDMA subcarriers;

measuring, at a second time by the subscriber unit, a second channel information for ~~a second~~the plurality of subcarriers based on a second plurality of pilot symbols received from the base station;

providing, by the subscriber unit, a second feedback information relating to the plurality of feedback clusters based on at least the measuring of the second channel information for the ~~second~~ plurality of subcarriers based on the second plurality of pilot symbols, the second feedback information relating to the plurality of

feedback clusters based on the second plurality of pilot symbols includes an index corresponding to a second modulation and coding rate associated with each feedback cluster of the plurality of feedback clusters; and

receiving, by the subscriber unit, a second allocation of OFDMA subcarriers based on at least the providing of the second feedback information selected by the base station for use by the subscriber unit, the second allocation of OFDMA subcarriers including an indication of a modulation and coding rate associated with the second allocation of OFDMA subcarriers, the second allocation of OFDMA subcarriers being different from the first allocation of OFDMA subcarriers, the first and second allocations of OFDMA subcarriers being received by the subscriber unit at two different times.

2. (original) The method of claim 1, wherein the plurality of feedback clusters at the second time is different than the plurality of feedback clusters at the first time.

3. (original) The method of claim 1, wherein at least one subcarrier of the first allocation of OFDMA subcarriers is non-contiguous with other subcarriers of the first allocation of OFDMA subcarriers.

4. (original) The method of claim 3, wherein the first allocation of OFDMA subcarriers includes a cluster identifier that identifies a first plurality of subcarriers in a first time slot and a second plurality of subcarriers in a second time slot, at least two subcarriers of the first plurality of subcarriers and of the second plurality of subcarriers being disjoint.

5. (original) The method of claim 4, wherein at least one subcarrier of the first plurality of subcarriers in the first time slot is different than all of the subcarriers of the second plurality of subcarriers in the second time slot.

6. (original) The method of claim 1, wherein the receiving of the first allocation of OFDMA subcarriers is receiving a first allocation of at least one diversity cluster.

7. (original) The method of claim 6, wherein the at least one diversity cluster includes two or more subcarriers spread farther apart than a coherence bandwidth of a respective channel.

8. (original) The method of claim 1, wherein the receiving of the first allocation of OFDMA subcarriers is receiving a first allocation of at least one coherence cluster.

9. (original) The method of claim 1, wherein the receiving of the first allocation of OFDMA subcarriers includes receiving a first allocation of at least one group of clusters selected by the base station for use by the subscriber unit.

10. (original) The method of claim 9, wherein at least one cluster of the first allocation of the at least one group of clusters is disjoint from at least one other cluster of the first allocation of the at least one group of clusters to obtain frequency diversity.

11. (original) The method of claim 10, wherein disjoint clusters of the first allocation of the at least one group of clusters are spread farther apart than a coherence bandwidth of a respective channel.

12. (original) The method of claim 9, wherein the receiving of the first allocation of the at least one group of clusters includes consecutive clusters.

13. (original) The method of claim 9, wherein the receiving of the first allocation of the at least one group of clusters includes an indication of space between each cluster of the first allocation of the at least one group of clusters.

14. (original) The method of claim 9, wherein the receiving of the first allocation of the at least one group of clusters includes receiving a group identifier that identifies one group of the first allocation of the at least one group of clusters.

15. (currently amended) The method of claim 1, wherein the measuring of the first channel information for the ~~first~~ plurality of subcarriers based on the first plurality of pilot symbols includes measuring channel information for all available clusters allocable by the base station.

16. (currently amended) A subscriber unit in a wireless system employing orthogonal frequency division multiple access (OFDMA), the subscriber unit comprising:

a processor configured to:

measure, at a first time, a first channel information for a ~~first~~ plurality of subcarriers based on a first plurality of pilot symbols received from a base station;

provide a first feedback information relating to a plurality of feedback clusters based on at least the measurement of the first channel information for the ~~first~~ plurality of subcarriers based on the first plurality of pilot symbols, each feedback cluster of the plurality of feedback clusters being ~~a plurality of~~at least two subcarriers, the first feedback information relating to the plurality of feedback clusters based on the first plurality of pilot symbols includes an index corresponding to a first modulation and coding rate associated with each feedback cluster of the plurality of feedback clusters;

receive a first allocation of OFDMA subcarriers based on at least the first feedback information and selected by the base station for use by the subscriber unit, the first allocation of OFDMA subcarriers including an indication of a modulation and coding rate associated with the first allocation of OFDMA subcarriers;

measure, at a second time, a second channel information for a ~~second~~the plurality of subcarriers based on a second plurality of pilot symbols received from the base station;

provide a second feedback information relating to the plurality of feedback clusters based on at least the measurement of the second channel information for the ~~second~~ plurality of subcarriers based on the second plurality of pilot symbols, the second feedback information relating to the plurality of feedback clusters based on the second plurality of pilot symbols includes an index corresponding to a second modulation and coding rate associated with each feedback cluster of the plurality of feedback clusters; and

receive a second allocation of OFDMA subcarriers based on at least the second feedback information and selected by the base station for use by the subscriber unit, the second allocation of OFDMA subcarriers including an indication of a modulation and coding rate associated with the second allocation of OFDMA subcarriers, the second allocation of OFDMA subcarriers being different from the first allocation of OFDMA subcarriers, the

first and second allocations of OFDMA subcarriers being received by the subscriber unit at two different times.

17. (original) The subscriber unit of claim 16, wherein the plurality of feedback clusters at the second time is different than the plurality of feedback clusters at the first time.

18. (original) The subscriber unit of claim 16, wherein at least one subcarrier of the first allocation of OFDMA subcarriers is non-contiguous with other subcarriers of the first allocation of OFDMA subcarriers.

19. (original) The subscriber unit of claim 18, wherein the first allocation of OFDMA subcarriers includes a cluster identifier that identifies a first plurality of subcarriers in a first time slot and a second plurality of subcarriers in a second time slot, at least two subcarriers of the first plurality of subcarriers and of the second plurality of subcarriers being disjoint.

20. (original) The subscriber unit of claim 19, wherein at least one subcarrier of the first plurality of subcarriers in the first time slot is different than all of the subcarriers of the second plurality of subcarriers in the second time slot.

21. (original) The subscriber unit of claim 16, wherein receipt of the first allocation of OFDMA subcarriers is receipt of a first allocation of at least one diversity cluster.

22. (original) The subscriber unit of claim 21, wherein the at least one diversity cluster includes two or more subcarriers spread farther apart than a coherence bandwidth of a respective channel.

23. (original) The subscriber unit of claim 16, wherein receipt of the first allocation of OFDMA subcarriers is receipt of a first allocation of at least one coherence cluster.

24. (original) The subscriber unit of claim 16, wherein receipt of the first allocation of OFDMA subcarriers includes receipt of a first allocation of at least one group of clusters selected by the base station for use by the subscriber unit.

25. (original) The subscriber unit of claim 24, wherein at least one cluster of the first allocation of the at least one group of clusters is disjoint from at least one other cluster of the first allocation of the at least one group of clusters to obtain frequency diversity.

26. (original) The subscriber unit of claim 25, wherein disjoint clusters of the first allocation of the at least one group of clusters are spread farther apart than a coherence bandwidth of a respective channel.

27. (original) The subscriber unit of claim 24, wherein receipt of the first allocation of the at least one group of clusters includes consecutive clusters.

28. (original) The subscriber unit of claim 24, wherein receipt of the first allocation of the at least one group of clusters includes an indication of space between each cluster of the first allocation of the at least one group of clusters.

29. (original) The subscriber unit of claim 24, wherein receipt of the first allocation of the at least one group of clusters includes receipt of a group identifier that identifies one group of the first allocation of the at least one group of clusters.

30. (currently amended) The subscriber unit of claim 16, wherein the measurement of the first channel information for the ~~first~~ plurality of subcarriers based on the first plurality of pilot symbols includes measurement of channel information for all available clusters allocable by the base station.

31. (previously presented) The method of claim 1, wherein the providing of the first feedback information includes providing the first feedback information relating to all of the plurality of feedback clusters.

32. (previously presented) The subscriber unit of claim 16, wherein the processor is further configured to provide the first feedback information relating to all of the plurality of feedback clusters.

REMARKS

This Amendment is being filed concurrently with a Track 1 Request for Continued Examination.

Applicant amended claims 1, 15, 16, and 30 (including independent claims 1 and 16) to further define Applicant's invention.

In the Office Action dated June 27, 2014 (at page 4, lines 6-14), the Examiner rejected independent claims 1 and 16 under 35 U.S.C. § 112 (pre-AIA), first paragraph, as not complying with the enablement requirement (the "112 rejection"). At issue was the second measuring recitation, "measuring, at a second time by the subscriber unit, channel information for the first plurality of subcarriers based on a second plurality of pilot symbols received from the base station" (emphasis added), in then pending independent claim 1, and the similar recitation in then pending independent claim 16, (hereafter collectively the "original claimed subject matter"). The Office Action (at page 4, lines 7-13) stated that:

> The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. On lines 18-20, claim 1 recites "measuring, at a second time by the subscriber unit, channel in (sic) channel information for the first plurality of subcarriers based on a second plurality of pilot symbols received from the base station". Claim 16 also includes such a recitation (see lines 19-21).

On July 3, 2014, Applicant's representative discussed the 112 rejection with the Examiner and demonstrated that the second measuring recitations of then pending independent claims 1 and 16 were indeed fully supported and enabled in the specification. Applicant's representative pointed to paragraph [0049] of the specification to provide support and enablement for the original claimed subject matter of then pending independent claims 1 and 16. The Examiner disagreed and maintained the 112 rejection, but stated that amending "the first plurality of subcarriers" to "a second plurality of subcarriers" in the second measuring recitations of then pending independent claims 1 and 16 would overcome the 112 rejection.

On July 10, 2014, in order to expedite prosecution of the application to overcome the 112 rejection, Applicant amended the second measuring recitations of independent claims

1 and 16 to recite measuring at a second time "a second channel information for a second plurality of subcarriers based on a second plurality of pilot symbols." (emphasis added). Thus, Applicant addressed the 112 rejection by changing "the first plurality of subcarriers" to "a second plurality of subcarriers" in the second measuring recitations of independent claims 1 and 16 to expedite prosecution of the application.

After receipt of the Notice of Allowance mailed August 14, 2014, and in preparation for payment of the issue fee, Applicant reviewed the allowed claims and desires to reiterate for clarification purposes that the basis for the 112 rejection in the Office Action dated June 27, 2014 is still improper. Applicant respectfully submits that the specification fully supports and enables the original claimed subject matter of independent claims 1 and 16 prior to Amendment on July 10, 2014. Applicant's subsequent amendment of independent claims 1 and 16 on July 10, 2014 to overcome the 112 rejection was to expedite prosecution of the application by accepting the Examiner's suggested claim amendment to overcome the 112 rejection. It is respectfully submitted that Applicant is entitled to independent claims 1 and 16 prior to Amendment of July 10, 2014 directed to the original claimed subject matter and is desirous of making the prosecution file history unequivocal that the original claimed subject matter is fully described in the specification in such a way as to satisfy the enablement requirement of 35 U.S.C. § 112 (pre-AIA), first paragraph. Applicant sets forth below in detail the specific paragraphs and figures of the application that fully support and enable the original claimed subject matter of independent claims 1 and 16.

On November 12, 2014, Applicant's representative discussed the Office Action dated June 27, 2014 and the claim amendments in this Amendment ("the current claim amendments") with the Examiner. Applicant's representative proposed amending independent claims 1 and 16 to recite measuring, at a second time, "a second channel information for the plurality of subcarriers based on a second plurality of pilot symbols" (emphasis added), rather than measuring, at a second time, "a second channel information for a second plurality of subcarriers based on a second plurality of pilot symbols" (emphasis added), to be consistent with the scope of the original claimed subject matter. Applicant's representative stated that the current claim amendments are fully supported and enabled by the specification in such a way as to satisfy the enablement requirement of 35 U.S.C. §

112 (pre-AIA), first paragraph. Thereafter, the Examiner acknowledged Applicant's position and stated that he would consider the current claim amendments, but would require an additional search of any relevant art.

Consistent with the scope of the original claimed subject matter, Applicant has amended independent claim 1 to recite "measuring, at a second time by the subscriber unit, a second channel information for the plurality of subcarriers based on a second plurality of pilot symbols" (emphasis added); and amended independent claim 16 to recite "measure, at a second time, a second channel information for the plurality of subcarriers based on a second plurality of pilot symbols" (emphasis added).

Applicant respectfully directs the Examiner's attention to Fig. 2 of the present application, which is provided below.

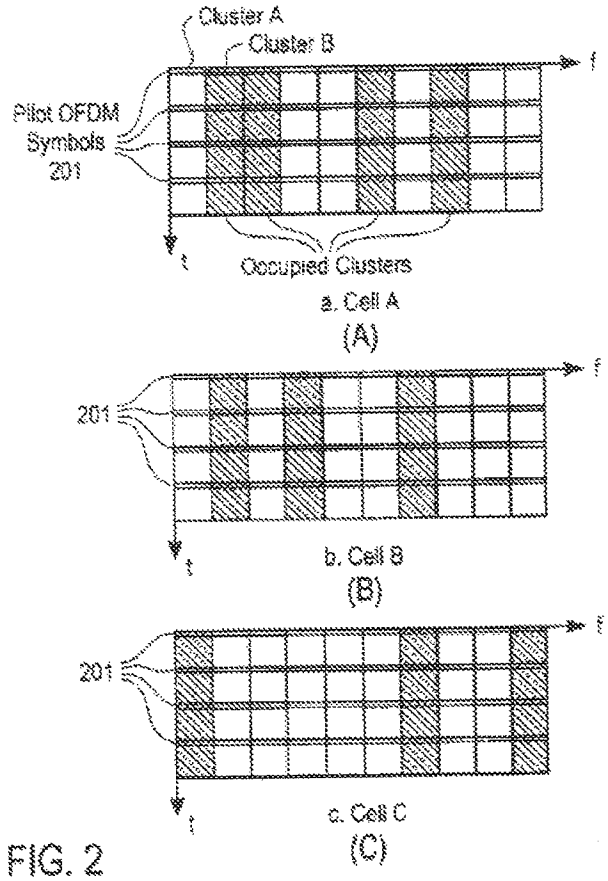

FIG. 2

Diagram (A) of Fig. 2 of the present application illustrates four (4) different pilot OFDM symbols at four (4) different time periods. Paragraph [0054] of the present

application states "[a]fter each pilot period, there are a predetermined number of data periods followed by another set of pilot symbols. In one embodiment, there are four data periods used to transmit data after each pilot." Paragraph [0055] of the present application states "[a] subscriber estimates the SINR for each cluster from the pilot symbols." Though each pilot OFDM symbol may be different at each subsequent time, the subscriber measures channel information for the same plurality of subcarriers. For example, if the subscriber is measuring channel information for at least the unoccupied clusters (not shaded in) in Diagram (A) of Fig. 2, the subscriber measures channel information for subcarriers 1, 4, 5, 7, 9, and 10. At each of the four time periods and after each respective pilot OFDM symbol, the subscriber measures channel information for subcarriers 1, 4, 5, 7, 9, and 10, the same plurality of subcarriers. As such, Applicant respectfully submits that "measuring, at a second time by the subscriber unit, a second channel information for the plurality of subcarriers based on a second plurality of pilot symbols" (emphasis added), as recited in independent claim 1, and that "measure, at a second time, a second channel information for the plurality of subcarriers based on a second plurality of pilot symbols" (emphasis added), as recited in independent claim 16, are fully described in the specification in such a way as to satisfy the enablement requirement of 35 U.S.C. § 112 (pre-AIA), first paragraph.

Furthermore, as stated in paragraph [0107] of the present application:

> The channel/interference variation detector measures the channel (SINR) variation from time to time for each cluster. For example, in one embodiment, the channel/interference detector measures the power difference between pilot symbols for each cluster and averages the difference over a moving window (e.g., 4 time slots). (emphasis added).

As such, the same plurality of subcarriers is being measured for channel information between different pilot symbols. Therefore, Applicant respectfully submits that "measuring, at a second time by the subscriber unit, a second channel information for the plurality of subcarriers based on a second plurality of pilot symbols" (emphasis added), as recited in independent claim 1, and that "measure, at a second time, a second channel information

for the plurality of subcarriers based on a second plurality of pilot symbols" (emphasis added), as recited in independent claim 16, are fully described in the specification in such a way as to satisfy the enablement requirement of 35 U.S.C. § 112 (pre-AIA), first paragraph.

Applicant submits that amended independent claims 1 and 16 are patentable and that dependent claims 2-15 and 17-32, dependent from amended independent claims 1 or 16, or claims dependent therefrom, are patentable at least due to their dependency from an allowable independent claim.

Entry and consideration of this Amendment prior to the further examination of the above-identified application is respectfully requested. Issuance of a timely Notice of Allowance of the claims is earnestly solicited.

If there are any fees due in connection with the filing of this Amendment, please charge the fee to our Deposit Account No. 50-1068.

Respectfully submitted,

MARTIN & FERRARO, LLP

Date: November 13, 2014

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	Confirmation No.: 9020
Xiaodong Li et al.	)	
Serial No.: 14/294,106	)	Group Art Unit: 2643
Filed: June 2, 2014	)	Examiner: Meless Nmn Zewdu
For: OFDMA WITH ADAPTIVE SUBCARRIER-CLUSTER CONFIGURATION AND SELECTIVE LOADING	)	

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

Sir:

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. § 1.97(b)

Pursuant to 37 C.F.R. §§ 1.56 and 1.97(b), Applicant brings to the attention of the Examiner the documents listed on the attached Form PTO/SB/08. This Information Disclosure Statement is being filed concurrently with a Request for Continued Examination for the above-referenced application.

The present application is a continuation of U.S. Application No. 13/230,625, filed September 12, 2011 (Publication No. 2012/0069755), which is pending; which is a continuation of U.S. Application No. 12/748,781, filed March 29, 2010, now U.S. Patent No. 8,036,199; which is a continuation of U.S. Application No. 11/931,926, filed October 31, 2007, now U.S. Patent No. 7,715,358; which is a continuation of U.S. Application No. 11/199,586, filed August 8, 2005, now U.S. Patent No. 7,454,212 ("'212 patent"); which is a continuation of U.S. Application No. 09/738,086, filed December 15, 2000, now U.S. Patent No. 6,947,748 ("'748 patent"); upon which Applicant relies for the benefits provided in 35 U.S.C. § 120.

Applicant brings to the Examiner's attention Application Nos. 09/898,163, filed July 2, 2001, now U.S. Patent No. 6,751,444; 09/692,681, filed October 18, 2000, now U.S. Patent No. 6,870,808 ("'808 patent"); 09/837,337, filed April 17, 2001, now U.S. Patent No. 6,904,283 ("'283 patent"); 09/685,977, filed October 10, 2000, now U.S.

Patent No. 7,072,315 ("'315 patent"); 09/837,701, filed April 17, 2001, now U.S. Patent No. 7,146,172 ("'172 patent"); 11/085,826, filed March 21, 2005, now U.S. Patent No. 7,355,962; 11/592,084, filed November 2, 2006, now U.S. Patent No. 7,379,742 ("'742 patent"); 11/931,759, filed October 31, 2007, now U.S. Patent No. 7,489,934 ("'934 patent"); 11/925,229, filed October 26, 2007, now U.S. Patent No. 7,573,850 ("'850 patent"); 11/007,064, filed December 7, 2004, now U.S. Patent No. 7,573,851 ("'851 patent"); 11/931,385, filed October 31, 2007, now U.S. Patent No. 7,650,152; 12/470,922, filed May 22, 2009, now U.S. Patent No. 7,933,244; 10/534,200, filed January 18, 2006, now U.S. Patent No. 8,005,479; 12/399,624, filed March 6, 2009, now U.S. Patent No. 8,738,020; 13/053,091, filed March 21, 2011, now U.S. Patent No. 8,743,717; 13/731,825, filed December 31, 2012, now U.S. Patent No. 8,743,729; 13/801,846, filed March 13, 2013, now U.S. Patent No. 8,750,238; 13/756,957, filed February 1, 2013, now U.S. Patent No. 8,760,992; 13/801,788, filed March 13, 2013, now U.S. Patent No. 8,767,702; 12/498,924, filed July 7, 2009, now U.S. Patent No. 8,797,970; 13/053,111, filed March 21, 2011 (Publication No. 2011/0170446), which is pending; 13/053,127, filed March 21, 2011 (Publication No. 2011/0222495), which is abandoned; 13/186,221, filed July 19, 2011 (Publication No. 2011/0312367), which is abandoned; 13/731,832, filed December 31, 2012 (Publication No. 2013/0121200), which is pending; 14/286,780 (Publication No. 2014/0269572), filed May 23, 2014, which is pending; 14/286,884 (Publication No. 2014/0269573), filed May 23, 2014, which is pending; 14/294,117 (Publication No. 2014/0269609), filed June 2, 2014, which is pending; 14/332,123 (Publication No. 2014/0328276), filed July 15, 2014, which is pending; and 14/491,904, filed September 19, 2014, which is pending.

Applicant also brings to the attention of the Examiner the file history (the Office Actions and responses) of each of the above-referenced patents and applications. While the individual Office Actions and responses are not attached hereto, they are available in each of the file wrappers in the Patent Office, through PAIR, or will be provided by Applicant at the Examiner's request.

Applicant notes that copies of the listed non-U.S. patent documents are attached. Applicant respectfully requests that the Examiner consider the listed documents and indicate that they were considered by making appropriate notations on the attached form.

The '742 patent (which is a continuation of the '172 patent), the '934 patent (which is a continuation of the '212 patent), as well as the '283, '315, '172, '748, and '212 patents were the subject of litigation in the United States District Court for the Eastern District of Texas, Civil Action No. 6:08-cv-00460, hereinafter referred to as Litigation 1. Litigation 1 was dismissed without prejudice pursuant to stipulation of dismissal.

The '212 and '748 patents are the subject of several litigations in the United States District Court for the Eastern District of Texas, Civil Action Nos. 6:12-cv-00020, 6:12-cv-00120, 6:12-cv-00017, 6:13-cv-00438, 6:13-cv-00439, 6:13-cv-00440, 6:13-cv-00441, 6:13-cv-00443, 6:13-cv-00444, 6:13-cv-00445, 6:13-cv-00446, 6:13-cv-00585, 6:13-cv-00778, and 6:13-cv-00922, hereinafter referred to as Litigations 3, 5, 11, 38-41, 43-48, and 51, respectively.

The '212 and '748 patents are also the subject of several litigations in the United States District Court for the Northern District of California, Civil Action Nos. 5:13-cv-02023, 5:14-cv-02359, and 5:14-cv-02360, hereinafter referred to as Litigations 28, 61, and 62, respectively.

The '212 and '748 patents were the subject of several litigations in the United States District Court for the Eastern District of Texas, Civil Action Nos. 6:12-cv-00121, 6:12-cv-00124, 6:12-cv-00125, 6:12-cv-00019, 6:13-cv-00432, 6:13-cv-00433, 6:13-cv-00434, 6:13-cv-00435, 6:13-cv-00436, 6:13-cv-00437, 6:13-cv-00442, 6:13-cv-00853, and 6:13-cv-00854, hereinafter referred to as Litigations 6, 9, 10, 12, 32-37, 42, 49, and 50, respectively, which have been transferred to the United States District Court for the Northern District of California, now Civil Action Nos. 5:13-cv-01844, 5:13-cv-01776, 5:13-cv-01777, 5:13-cv-01778, 5:14-cv-01379, 5:14-cv-03112, 5:14-cv-01380, 5:14-cv-01386, 5:14-cv-01387, 5:14-cv-01259, 5:14-cv-01385, 5:14-cv-02894, and 5:14-cv-02895, respectively, hereinafter referred to as Litigations 27, 24-26, 53, 65, 54, 56-57, 52, 55, 63, and 64, respectively.

The '212 and '748 patents were the subject of several litigations in the United States District Court for the Eastern District of Texas, Civil Action Nos. 6:12-cv-00016, 6:13-cv-00028, 6:13-cv-00296, and 6:13-cv-00424, hereinafter referred to as Litigations 2, 16, 30, and 31, respectively.

The '212 and '748 patents were also the subject of several litigations in the United States District Court for the Northern District of California, Civil Action Nos. 3:13-cv-04468, 3:13-cv-04469, and 5:13-cv-01774, hereinafter referred to as Litigations 21-23, respectively.

The '808, '283, '315, '172, and '851 patents are the subject of several litigations in the United States District Court for the Eastern District of Texas, Civil Action Nos. 6:12-cv-00022, 6:12-cv-00122, 6:12-cv-00123, 6:12-cv-00021, 6:12-cv-00318, and 6:12-cv-00369, hereinafter referred to as Litigations 4, 7, 8, 13, 14, and 15, respectively. Litigations 13 and 14 have been voluntarily dismissed without prejudice.

The '283, '315, '172, and '851 patents are the subject of litigation in the United States District Court for the Eastern District of Texas, Civil Action No. 6:13-cv-00049, hereinafter referred to as Litigation 17.

The '808 patent is the subject of litigation in the United States District Court for the Eastern District of Texas, Civil Action No. 6:13-cv-00050, hereinafter referred to as Litigation 18.

The '808 patent is also the subject of several litigations in the United States District Court for the District of Columbia, Civil Action Nos. 1:13-mc-00497 and 1:13-mc-00498, hereinafter referred to as Litigations 19 and 20, respectively.

The '850 patent was the subject of litigation in the United States District Court for the Eastern District of Texas, Civil Action No. 6:09-cv-00562, hereinafter referred to as Litigation 29.

The '172, '283, and '808 patents are the subject of litigations in the United States District Court for the Eastern District of Texas, Civil Action Nos. 6:14-cv-00501, 6:14-cv-00502, and 6:14-cv-00503, hereinafter referred to as Litigations 58-60, respectively.

The '808 patent is also the subject of an investigation pursuant to Section 337 of Tariff Act 1930, as amended, before the U.S. International Trade Commission, Investigation No. 337-TA-871, hereinafter referred to as "ITC 1."

The '748 patent is the subject of the *Inter Partes* Reviews before the Patent Trial and Appeal Board, Case Nos. IPR2014-01406 and IPR2014-01524, hereinafter referred to as "IPR 1" and "IPR 3," respectively.

The '212 patent is the subject of the *Inter Partes* Reviews before the Patent Trial and Appeal Board, Case Nos. IPR2014-01408 and IPR2014-01525, hereinafter referred to as "IPR 2" and "IPR 4," respectively.

In Litigations 1-12, 15, 17, 18, 21-28, and 30, the defendants asserted that various references were pertinent to the issue of validity of at least one of the '212, '748, '808, '283, '315, '172, '851, '742, and '934 patents under 35 U.S.C. §§ 102 and 103. Applicant notes for the Examiner on the attached Form PTO/SB/08 in the column for the Examiner's initials the various references from Litigations 1-18, 21-28, and 30. Any references associated with Litigations 1-65, ITC 1, and IPRs 1-4 are identified by the designation "Lit. 1-65," "ITC 1," and "IPRs 1-4."

Applicant also brings to the Examiner's attention that Applicant's Japanese Patent No. JP 4201595 (which corresponds to International Application No. PCT/US01/48421, filed December 13, 2001, which claims priority to U.S. Patent No. 6,947,748) is currently the subject of several litigations in Japan, Civil Action No. 17915 entitled "Adaptix, Inc. v. Huawei Japan," Civil Action No. 19919 entitled "Adaptix, Inc. v. ZTE Japan," and Civil Action No. 23278 entitled "Adaptix, Inc. v. LG Electronics Japan," hereinafter referred to as "JP Lits. 4, 5, and 7," respectively.

Applicant brings to the Examiner's attention that Applicant's Japanese Patent Nos. JP 4201595 and JP 5119070 (which claims priority to U.S. Patent No. 6,947,748) are currently the subject of litigations in Japan, Civil Action No. 22141 entitled "Adaptix, Inc. v. Kyocera," Civil Action No. 10769 entitled "Adaptix, Inc. v. LG Electronics Japan," Civil Action No. 12187 entitled "Adaptix, Inc. v. ZTE Japan," Civil Action No. 12188 entitled "Adaptix, Inc. v. Huawei Japan," Civil Action No. 12198 entitled "Adaptix, Inc. v. Apple Japan," and Civil Action No. 12199 entitled "Adaptix, Inc. v. Kyocera," hereinafter referred to as "JP Lits. 6 and 8-12," respectively. JP Lit. 9 has been withdrawn by Adaptix, Inc.

Applicant brings to the Examiner's attention that Applicant's Japanese Patent No. JP 4201595 is currently the subject of several Invalidation Trials in Japan, Trial No. 2014-800008 entitled "ZTE Japan v. Adaptix, Inc." and Trial No. 2014-800092 entitled "Huawei v. Adaptix, Inc.," hereinafter referred to as "JP Trials 6 and 8."

Applicant notes for the Examiner on the attached Form PTO/SB/08 in the column for the Examiner's initials the references from JP Lits. 4-12, and JP Trials 6 and 8.

References from JP Lits. 4-12, and JP Trials 6 and 8 are identified by the designation "JP Lits. 4-12," and "JP Trials 6 and 8," respectively. Copies of the Japanese documents as provided to Applicant by the defendants in JP Lits. 4-12 and JP Trials 6 and 8 are being submitted and include a translation when provided by the defendants or when an English abstract is readily available.

Applicant hereby respectfully requests the Examiner to advise Applicant of any additional types of litigation documents beyond those already provided that the Examiner may desire in association with the present application.

This submission does not represent that a search has been made or that no better art exists and does not constitute an admission that each or all of the listed documents are material or constitute "prior art." If the Examiner applies any of the documents as prior art against any claims in the application and Applicant determines that the cited documents do not constitute "prior art" under United States law, Applicant reserves the right to present to the office the relevant facts and law regarding the appropriate status of such documents.

Applicant further reserves the right to take appropriate action to establish the patentability of the disclosed invention over the listed documents, should one or more of the documents be applied against the claims of the present application.

If there is any fee due in connection with the filing of this Statement, please charge the fee to our Deposit Account No. 50-1068.

Respectfully submitted,

MARTIN & FERRARO, LLP

Date: November 13, 2014

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PTO/SB/06 (09-11)
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 14/294,106	Filing Date 06/02/2014	☐ To be Mailed

ENTITY: ☒ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT **08/08/2014**

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 32	Minus	** 30	= 2	X $80 =	160
Independent (37 CFR 1.16(h))	* 2	Minus	*** 3	= 0	X $420 =	0
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	**160**

AMENDMENT **11/13/2014**

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 32	Minus	** 32	= 0	X $80 =	0
Independent (37 CFR 1.16(h))	* 2	Minus	*** 3	= 0	X $420 =	0
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	**0**

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

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

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

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

LIE
/JOY J. DOBBS/

Substitute for FORM PTO-1449	Attorney Docket Number 176.0003-06000	Customer No. 22882	
INFORMATION DISCLOSURE CITATION IN AN APPLICATION	Applicant Xiaodong Li et al.	Application Number 14/294,106	
(Use several sheets if necessary) Sheet 1 of 1	Filing Date June 2, 2014	Group Art Unit 2643	Examiner M. Zewdu

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	2014/0269572	9/2014	Li et al.			
	2014/0269573	9/2014	Li et al.			
	2014/0269609	9/2014	Li et al.			

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION (YES/NO)

OTHER DOCUMENTS ***(Including Author, Title, Date, Pertinent Pages, Etc.)***

Lits. 24-28	5:13-cv-1776, -1777, -1778, -1844, -2023, Expert Report of Michael Caloyannides Concerning Rebuttal to Expert Report of Thomas Fuja Regarding Validity of U.S. Patent Nos. 6,947,748 and 7,454,212 filed by Plaintiff (Adaptix, Inc.), N.D. Cal., August 27, 2014, 157 pgs.
Lits. 3, 5, and 11	6:12-cv-17, -20, -120, Expert Report of Thomas Fuja Regarding Invalidity of U.S. Patent Nos. 6,947,748 and 7,454,212 filed by Defendants (AT&T Mobility LLC et al.), E.D. Tex., July 7, 2014, 500 pgs.
Lits. 4, 7-8, 15, and 17-18	6:12-cv-22, -122, -123, -369; 6:13-cv-49, -50, Expert Report of Anthony Acampora Regarding Invalidity of U.S. Patent Nos. 6,870,808; 6,904,283; and 7,146,172 filed by Defendants (Ericsson Inc. et al.), E.D. Tex., July 28, 2014, 886 pgs.
Lits. 4, 7-8, 15, and 17-18	6:12-cv-22, -122, -123, -369; 6:13-cv-49, -50, Rebuttal Expert Report of Jonathan Wells Regarding Validity of U.S. Patent Nos. 6,870,808; 6,904,283; and 7,146,172 filed by Plaintiff (Adaptix, Inc.), E.D. Tex., September 9, 2014, 182 pgs.

EXAMINER /Meless Zewdu/	DATE CONSIDERED 10/15/2014

EXAMINER: Initial if citation 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 the applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.Z

Substitute for FORM PTO-1449	Attorney Docket Number 176.0003-06000	Customer No. 22882	
INFORMATION DISCLOSURE CITATION IN AN APPLICATION	Applicant Xiaodong Li et al.	Application Number (Cont. of 13/230,625)	
(Use several sheets if necessary) Sheet 1 of 48	Filing Date June 2, 2014	Group Art Unit (2643)	Examiner (M. Zewdu)

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
Lits. 1, 4, 7-8, and 17-18	4,355,411	10/1982	Reudink et al.			
Lits. 7-8 and 17-18	4,488,445	12/1984	Aske			
Lits. 1, 4, and 7-8	4,670,889	6/1987	Hewitt et al.			
	4,794,635	12/1988	Hess			
Lits. 1, 4, and 7-8	5,038,399	8/1991	Bruckert			
Lits. 17-18	5,048,059	9/1991	Dent			
Lits. 7-8 and 17-18	5,200,957	4/1993	Dahlin			
ITC 1	5,212,831	5/1993	Chuang et al.			
Lits. 1, 4, and 7-8	5,239,676	8/1993	Strawczynski et al.			
ITC 1	5,260,967	11/1993	Schilling			
Lits. 2, 3, 5, 6, 9-12, 21-28, and 30	5,267,261	11/1993	Blakeney, II et al.			
Lits. 1, 4, and 7-8; ITC 1	5,280,630	1/1994	Wang			
Lits. 1-12, 21-28, and 30	5,282,222	1/1994	Fattouche et al.			
ITC 1	5,291,475	3/1994	Bruckert			
ITC 1	5,319,634	6/1994	Bartholomew			
	5,323,447	6/1994	Gillis et al.			
	5,327,576	7/1994	Uddenfeldt et al.			
ITC 1	5,345,599	9/1994	Paulraj et al.			
Lits. 7-8 and 17-18	5,410,538	4/1995	Roche et al.			
Lits. 1, 4, and 7-8	5,437,054	7/1995	Rappaport et al.			
Lits. 2, 3, 5, 6, 9-12, 21-28, and 30	5,444,697	8/1995	Leung et al.			
Lits. 7-8 and 17-18	5,448,750	9/1995	Eriksson et al.			
Lits. 1-12, 21-28, and 30	5,471,647	11/1995	Gerlach et al.			
Lits. 1-12, 21-28, and 30; ITC 1	5,479,447	12/1995	Chow et al.			

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.Z

Lits. 1-12, 17-18, 21-28, and 30	5,491,837	2/1996	Haartsen			
Lits. 4 and 7-8	5,492,837	8/1993	Naser-Kilahzadeh			
ITC 1	5,504,775	4/1996	Chouly et al.			
	5,504,783	4/1996	Tomisato et al.			
Lits. 7-8	5,507,008	4/1996	Kanai et al.			
Lits. 2, 3, 5, 6, 9-12, 21-28, and 30; ITC 1	5,507,034	4/1996	Bodin et al.			
Lits. 1, 4, 7-8 and 17-18; ITC 1	5,515,378	5/1996	Roy, III et al.			
Lits. 4, 7-8, and 17-18; ITC 1	5,546,090	8/1996	Roy, III et al.			
Lits. 7-8 and 17-18	5,548,582	8/1996	Brajal et al.			
Lits. 1, 4, and 7-8; ITC 1	5,555,268	9/1996	Fattouche et al.			
Lits. 2, 3, 5, 6, 9-12, 21-28, and 30	5,577,022	11/1996	Padovani			
Lits. 7-8 and 17-18	5,581,548	12/1996	Ugland et al.			
	5,586,148	12/1996	Furukawa et al.			
ITC 1	5,588,020	12/1996	Schilling			
	5,590,156	12/1996	Carney			
Lits. 4, 7-8, and 17-18; ITC 1	5,592,490	1/1997	Barratt et al.			
Lits. 2, 3, 5, 6, 9-12, 21-28, and 30	5,598,417	1/1997	Crisler			
Lits. 2, 3, 5, 6, 9-12, 21-28, and 30	5,623,484	4/1997	Muszynski			
Lits. 1, 4, and 7-8	5,634,199	5/1997	Gerlach et al.			
Lits. 4, 7-8, and 17-18; ITC 1	5,642,353	6/1997	Roy, III et al.			
ITC 1	5,687,194	11/1997	Paneth et al.			
Lits. 4, 7-8, and 17-18; ITC 1	5,708,973	1/1998	Ritter			
Lits. 1-12, 17-18, 21-28, and 30; ITC 1; JP Lit. 1; JP Trial 3	5,726,978	3/1998	Frodigh et al.			
Lits. 1, 4, 7-8, and 17-18	5,732,353	3/1998	Haartsen			
Lits. 1, 4, and 7-8; ITC 1	5,734,967	3/1998	Kotzin et al.			
Lits. 1-12, 21-28, and 30	5,764,699	6/1998	Needham et al.			

ITC 1	5,774,808	6/1998	Sarkioja et al.			
	5,784,363	7/1998	Engstrom et al.			
	5,793,759	8/1998	Rakib et al.			
	5,796,722	8/1998	Kotzin et al.			
ITC 1	5,799,000	8/1998	Hoole			
Lits. 4, 7-8, and 17-18	5,819,168	10/1998	Golden et al.			
ITC 1	5,822,372	10/1998	Emami			
Lits. 7-8 and 17-18; ITC 1	5,828,658	10/1998	Ottersten et al.			
	5,838,673	11/1998	Mordechai			
	5,839,074	11/1998	Plehn et al.			
ITC 1	5,848,358	12/1998	Forssen et al.			
Lits. 7-8 and 17-18	5,854,981	12/1998	Wallstedt et al.			
	5,862,487	1/1999	Fuji et al.			
Lits. 1-12, 21-28, and 30; ITC 1	5,867,478	2/1999	Baum et al.			
Lits. 1-12, 21-28, and 30	5,884,145	3/1999	Haartsen			
Lits. 1, 4, 7-8, and 17-18; ITC 1	5,886,988	3/1999	Yun et al.			
ITC 1	5,887,245	3/1999	Lindroth et al.			
	5,887,263	3/1999	Ishii			
Lits. 1, 4, and 7-8; ITC 1	5,909,436	6/1999	Engstrom et al.			
Lits. 7-8	5,912,876	6/1999	H'Mimy			
Lits. 2, 3, 5, 6, 9-12, 21-28, and 30	5,912,931	6/1999	Matsumoto			
Lits. 1-12, 17-18, 21-28, and 30; ITC 1	5,914,933	6/1999	Cimini et al.			
ITC 1	5,914,946	6/1999	Avidor et al.			
Lits. 1, 4, 7-8, 15, 17-18, and 23-28; ITC 1	5,933,421	8/1999	Alamouti et al.			
ITC 1	5,943,375	8/1999	Veintimilla			
Lits. 1-12, 17-18, 21-28, and 30; ITC 1	5,956,642	9/1999	Larsson et al.			
Lits. 7-8	5,966,644	10/1999	Suzuki			
ITC 1	5,973,642	10/1999	Li et al.			
Lits. 4 and 7-8	5,982,327	11/1999	Vook et al.			
	5,982,760	11/1999	Chen			
	5,991,273	11/1999	Abu-Dayya et al.			
Lits. 4, 7-8, 15, and 17-18	5,991,331	11/1999	Chennakeshu et al.			
Lits. 7-8 and 17-18; ITC 1	6,005,876	12/1999	Cimini, Jr. et al.			

Lits. 4, 7-8, 15, and 17-18	6,006,075	12/1999	Smith et al.			
Lits. 1-12, 17-18, 21-28, and 30	6,009,332	12/1999	Haartsen			
ITC 1	6,009,553	12/1999	Martinez et al.			
Lits. 2, 3, 5, 6, 9-12, 21-28, and 30	6,016,311	1/2000	Gilbert			
Lits. 7-8 and 17-18	6,018,528	1/2000	Gitlin et al.			
Lits. 1, 4, 7-8, and 17-18	6,023,622	2/2000	Plaschke et al.			
Lits. 1, 4, and 7-8; ITC 1	6,026,123	2/2000	Williams			
ITC 1	6,037,898	3/2000	Parish et al.			
Lits. 1-12, 17-18, 21-28, and 30	6,038,450	3/2000	Brink et al.			
Lits. 1, 4, 7-8, 15, and 17-18; ITC 1	6,041,237	3/2000	Farsakh			
Lits. 7-8 and 17-18	6,044,067	3/2000	Suzuki			
Lits 2, 3, 5, 6, 9-12, 21-28 and 30	6,047,189	4/2000	Yun et al.			
Lits. 1-12, 17-18, 21-28, and 30; ITC 1	6,052,594	4/2000	Chuang et al.			
ITC 1	6,061,568	5/2000	Dent			
ITC 1	6,064,339	5/2000	Wax et al.			
ITC 1	6,064,692	5/2000	Chow			
ITC 1	6,064,694	5/2000	Clark et al.			
Lits. 1-12, 17-18, 21-28, and 30; ITC 1	6,067,290	5/2000	Paulraj et al.			
Lits. 2, 3, 5, 6, 9-12, 21-28, and 30	6,081,536	6/2000	Gorsuch			
ITC 1	6,085,114	7/2000	Gibbons			
Lits. 1, 4, and 7-8	6,091,717	7/2000	Honkasalo et al.			
	6,091,955	7/2000	Aalto et al.			
Lits. 1, 4, and 7-8; ITC 1	6,108,374	8/2000	Balachandran et al.			
ITC 1	6,108,565	8/2000	Scherzer			
ITC 1	6,111,919	8/2000	Yonge, III			
	6,115,614	9/2000	Furukawa			
	6,119,011	9/2000	Borst et al.			
ITC 1	6,122,260	9/2000	Liu et al.			
Lits. 7-8; ITC 1	6,128,276	10/2000	Agee			
ITC 1	6,131,016	10/2000	Greenstein et al.			

Lits. 1, 4, and 7-8; ITC 1	6,141,565	10/2000	Feuerstein et al.			
ITC 1	6,141,567	10/2000	Youssefmir et al.			
Lits. 7-8 and 17-18	6,144,652	11/2000	Avidor et al.			
Lits. 7-8 and 17-18	6,144,654	11/2000	Ibanez-Meier et al.			
	6,144,696	11/2000	Shively et al.			
Lits. 7-8 and 17-18; ITC 1	6,144,711	11/2000	Raleigh et al.			
ITC 1	6,154,661	11/2000	Goldburg			
Lits. 7-8	6,160,791	12/2000	Bohnke			
Lits. 2, 3, 5-12, 17-18, 21-28, and 30	6,175,550	1/2001	van Nee			
Lits. 1, 4, 7-8, and 17-18; ITC 1	6,192,026	2/2001	Pollack et al.			
	6,198,928	3/2001	Keurulainen et al.			
Lits. 1, 4, and 7-8	6,208,663	3/2001	Schramm et al.			
Lits. 4, 7-8, 15, and 17-18	6,212,242	4/2001	Smith et al.			
	6,212,388	4/2001	Seo			
	6,215,815	4/2001	Chen et al.			
ITC 1	6,226,320	5/2001	Hakkinen et al.			
	6,246,713	6/2001	Mattisson			
	6,246,881	6/2001	Parantainen et al.			
	6,253,063	6/2001	Cudak et al.			
	6,253,094	6/2001	Schmutz			
Lits. 7-8 and 17-18	6,259,686	7/2001	Blanc et al.			
	6,276,297	8/2001	van den Berg et al.			
	6,281,840	8/2001	Miyoshi et al.			
Lits. 1, 4, and 7-8; ITC 1	6,282,185	8/2001	Hakkinen et al.			
Lits. 1, 4, and 7-8; ITC 1	6,298,092	10/2001	Heath, Jr. et al.			
Lits. 1, 4, and 7-8	6,304,593	10/2001	Alouini et al.			
Lits. 7-8; ITC 1	6,307,851	10/2001	Jung et al.			
	6,314,082	11/2001	Malmgren			
ITC 1	6,327,314	12/2001	Cimini, Jr. et al.			
Lits. 1, 4, and 7-8; ITC 1	6,327,472	12/2001	Westroos et al.			
	6,330,429	12/2001	He			
ITC 1	6,330,460	12/2001	Wong et al.			
	6,334,047	12/2001	Andersson et al.			
Lits. 1-12, 21-28 and 30; ITC 1	6,351,499	2/2002	Paulraj et al.			

Lits. 1-12, 21-28, and 30	6,351,643	2/2002	Haartsen			
Lits. 2, 3, 5, 6, 9-12, 21-28, and 30	6,359,867	3/2002	Vehmas			
Lits. 7-8 and 17-18; ITC 1	6,359,923	3/2002	Agee et al.			
Lits. 1, 4, and 7-8; ITC 1	6,366,195	4/2002	Harel et al.			
ITC 1	6,377,631	4/2002	Raleigh			
ITC 1	6,377,632	4/2002	Paulraj et al.			
Lits. 1-12, 17-18, and 30; ITC 1	6,377,636	4/2002	Paulraj et al.			
	6,388,999	5/2002	Gorsuch et al.			
	6,400,679	6/2002	Suzuki			
Lits. 1-12, 17-18, 21-28, and 30	6,400,699	6/2002	Airy et al.			
Lits. 1, 4, and 7-8	6,404,783	6/2002	Cimini, Jr. et al.			
	6,405,044	6/2002	Smith et al.			
Lits. 1-12, 17-18, 21-28, and 30	6,405,048	6/2002	Haartsen			
	6,411,186	6/2002	Lilleberg et al.			
	6,415,153	7/2002	Liew			
	6,424,836	7/2002	Gil et al.			
	6,430,148	8/2002	Ring			
Lits. 2, 3, 5, 6, 9-12, 21-28, and 30	6,434,392	8/2002	Posti			
	6,442,130	8/2002	Jones et al.			
	6,445,916	9/2002	Rahman			
ITC 1	6,449,246	9/2002	Barton et al.			
ITC 1	6,452,981	9/2002	Raleigh et al.			
Lits. 1-12, 17-18, 21-28, and 30	6,463,096	10/2002	Raleigh et al.			
ITC 1	6,463,295	10/2002	Yun			
	6,463,296	10/2002	Esmailzadeh et al.			
	6,470,044	10/2002	Kowalski			
Lits. 7-8 and 17-18; ITC 1	6,473,418	10/2002	Laroia et al.			
Lits. 1, 4, and 7-8; ITC 1	6,473,467	10/2002	Wallace et al.			
ITC 1	6,477,158	11/2002	Take			
Lits. 1, 4, and 7-8	6,487,253	11/2002	Jones, IV et al.			
	6,493,331	12/2002	Walton et al.			
Lits. 1, 4, and 7-8	6,496,490	12/2002	Andrews et al.			
	6,501,785	12/2002	Chang et al.			

ITC 1	6,512,737	1/2003	Agee			
Lits. 1, 4, and 7-8	6,526,281	2/2003	Gorsuch et al.			
	6,529,488	3/2003	Urs et al.			
	6,535,501	3/2003	Bohnke			
	6,539,233	3/2003	Taketsugu et al.			
Lits. 1, 4, and 7-8; ITC 1	6,545,997	4/2003	Bohnke et al.			
Lits. 7-8 and 17-18	6,546,249	4/2003	Imai et al.			
	6,553,001	4/2003	Indira			
	6,553,011	4/2003	Yan et al.			
	6,553,234	4/2003	Florea			
ITC 1	6,556,557	4/2003	Cimini Jr. et al.			
ITC 1	6,563,786	5/2003	Van Nee			
	6,567,383	5/2003	Bohnke et al.			
Lits. 1-12, 21-28 and 30	6,567,387	5/2003	Dulin et al.			
	6,574,476	6/2003	Williams			
	6,584,330	6/2003	Ruuska			
Lits. 2, 3, 5, 6, 9-12, 21-28, and 30	6,587,696	7/2003	Ma			
	6,600,772	7/2003	Zeira et al.			
Lits. 1, 4, and 7-8	6,600,776	7/2003	Alamouti et al.			
	6,600,934	7/2003	Yun et al.			
	6,606,296	8/2003	Kokkonen			
	6,608,863	8/2003	Onizawa et al.			
	6,609,039	8/2003	Schoen			
	6,611,506	8/2003	Huang et al.			
Lits. 7-8 and 17-18; ITC 1	6,615,024	9/2003	Boros et al.			
	6,633,614	10/2003	Barton et al.			
Lits. 2, 3, 5, 6, 9-12, 21-28, and 30	6,647,078	11/2003	Thomas			
ITC 1	6,647,271	11/2003	Doi			
	6,654,431	11/2003	Barton et al.			
	6,654,612	11/2003	Avidor et al.			
Lits. 1, 4, and 7-8; ITC 1	6,657,949	12/2003	Jones, IV et al.			
Lits. 7-8 and 17-18	6,674,732	1/2004	Boehnke et al.			
	6,681,256	1/2004	Kuntze et al.			
	6,690,944	2/2004	Lee et al.			
Lits. 1, 4, and 7-8	6,693,884	2/2004	Gutowski			
Lits. 1-12, 17-18, 21-28, and 30	6,694,147	2/2004	Viswanath et al.			

	6,699,784	3/2004	Xia et al.			
Lits. 1-12, 21-28, and 30	6,701,129	3/2004	Hashem et al.			
Lits. 7-8	6,711,416	10/2000	Zhang			
Lit. 1	6,721,159	4/2004	Takashige et al.			
Lits. 2, 3, 5-12, 17-18, 21-28, and 30	6,721,569	4/2004	Hashem et al.			
Lits. 1, 4, and 7-8	6,726,297	4/2004	Uesugi et al.			
	6,726,978	4/2004	Sehr			
Lits. 4, 7-8, and 17-18	6,741,861	5/2004	Bender et al.			
Lits. 2, 3, 5, 6, 9-12, 21-28, and 30	6,748,222	6/2004	Hashem et al.			
	6,751,193	6/2004	Kudrimoti et al.			
Lits. 7-8	6,751,261	6/2004	Olsson et al.			
	6,751,444	6/2004	Meiyappan			
Lits. 4, 7-8, and 17-18	6,751,480	6/2004	Kogiantis et al.			
Lits. 7-8 and 17-18; ITC 1	6,757,265	6/2004	Sebastian et al.			
Lits. 1-12, 21-28, and 30	6,760,882	7/2004	Gesbert et al.			
Lits. 23-28	6,775,320	8/2004	Tzannes et al.			
	6,781,974	8/2004	Tsumura			
Lits. 1, 4, and 7-8	6,782,037	8/2004	Krishnamoorthy et al.			
Lits. 1, 4, and 7-8	6,788,349	9/2004	Wu et al.			
	6,795,392	9/2004	Li et al.			
Lits. 2, 3, 5-12, 17-18, 21-28, and 30; ITC 1	6,795,424	9/2004	Kapoor et al.			
Lits. 7-8	6,816,452	11/2004	Maehata et al.			
	6,826,240	11/2004	Thomas et al.			
	6,834,045	12/2004	Lappetelainen et al.			
	6,850,506	2/2005	Holtzman et al.			
Lits. 1-12, 21-28, and 30	6,862,272	3/2005	Dulin et al.			
	6,868,277	3/2005	Cerwall et al.			
Lits. 4, 7-8, 15, and 17-18	6,870,808	3/2005	Liu et al.			
	6,870,826	3/2005	Ishizu			
	6,873,612	3/2005	Steer et al.			
Lits. 4, 7-8, 15, and 17-18	6,882,619	4/2005	Gerakoulis			
ITC 1	6,888,899	5/2005	Raleigh et al.			
ITC 1	6,891,792	5/2005	Cimini, Jr. et al.			
	6,892,059	5/2005	Kim et al.			
	6,904,030	6/2005	Lee et al.			

Lits. 3-5, 7-8, 11, 15, 17-18, and 23-28	6,904,283	6/2005	Li et al.			
Lits. 2, 3, and 5-12	6,904,284	6/2005	Saito, et al.			
Lits. 1, 4, and 7-8	6,907,244	6/2005	Santhoff et al.			
Lits. 1, 4, and 7-8	6,920,122	7/2005	Hanaoka et al.			
Lits. 4, 7-8, 15, and 17-18	6,922,388	7/2005	Laroia et al.			
Lits. 1-12, 17-18, 21-28, and 30; ITC 1	6,922,445	7/2005	Sampath et al.			
Lits. 1, 4, and 7-8	6,928,120	8/2005	Zhang			
Lits. 23-28	6,937,557	8/2005	Sudo			
Lits. 7-8 and 17-18; ITC 1	6,937,665	8/2005	Vandenameele			
Lits. 1, 4, 7-8, and 17-18	6,944,120	9/2005	Wu et al.			
Lits. 3-5, 7-8, 11, 15, 17-18, and 23-28; JP Lit. 6	6,947,748	9/2005	Li et al.			
Lits. 2, 3, 5, 6, 9-12, 21-28, and 30	6,961,364	11/2005	Laroia et al.			
	6,975,603	12/2005	Dicker et al.			
	6,975,611	12/2005	Balachandran et al.			
Lits. 1, 4, and 7-8	6,985,432	1/2006	Hadad et al.			
	6,985,434	1/2006	Wu et al.			
	6,996,056	2/2006	Chheda et al.			
Lits. 1, 4, 7-8, and 17-18	6,996,075	2/2006	Santhoff et al.			
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Lits. 7-8	7,010,048	3/2006	Shattil et al.			
Lits. 4 and 7-8	7,020,072	3/2006	Li et al.			
Lits. 4 and 7-8	7,031,753	4/2006	Hashem			
	7,047,011	5/2006	Wikman et al.			
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	7,058,146	6/2006	Paulraj et al.			
	7,062,246	6/2006	Owen			
	7,062,295	6/2006	Yoshii et al.			
	7,068,628	6/2006	Li et al.			
Lits. 2-12, 15, 17-18, 21-28, and 30; ITC 1	7,072,315	7/2006	Liu et al.			
Lits. 1-12, 21-28, and 30	7,095,719	8/2006	Wilhelmsson et al.			
	7,099,413	8/2006	Chuang et al.			
	7,116,944	10/2006	Das et al.			

Lits. 1, 4, and 7-8	7,133,352	11/2006	Hadad			
	7,133,380	11/2006	Winters et al.			
Lits. 4, 7-8, 15, and 17-18	7,135,358	11/2006	Sugino et al.			
ITC 1	7,139,592	11/2006	Leifer et al.			
ITC 1	7,145,971	12/2006	Raleigh et al.			
Lits. 4, 7-8, 15, and 17-18	7,146,172	12/2006	Li et al.			
Lits. 4, 7-8, and 17-18; ITC 1	7,180,877	2/2007	Benveniste			
	7,203,191	4/2007	Garcia-Luna-Aceves et al.			
ITC 1	7,203,249	4/2007	Raleigh et al.			
	7,209,745	4/2007	Sebastian et al.			
	7,224,741	5/2007	Hadad			
Lits. 1-12, 21-28, and 30	7,230,908	6/2007	Vanderaar et al.			
	7,269,389	9/2007	Petrus et al.			
	7,310,522	12/2007	Geile			
	7,355,962	4/2008	Li et al.			
Lits. 4, 7-8, and 17-18	7,366,253	4/2008	Kim et al.			
Lits. 1, 4, and 7-8	7,373,151	5/2008	Ahmed			
	7,376,172	5/2008	Laroia et al.			
Lits. 4 and 7-8	7,379,506	5/2008	Boariu et al.			
	7,379,742	5/2008	Li et al.			
	7,450,604	11/2008	Gardner et al.			
Lits. 3-5, 7-8, 11, 15, 17-18, and 23-28	7,454,212	11/2008	Li et al.			
	7,489,934	2/2009	Li et al.			
	7,509,138	3/2009	Shin et al.			
ITC 1	7,555,060	6/2009	Raleigh et al.			
	7,573,850	8/2009	Li et al.			
Lits. 4, 7-8, 15, and 17-18	7,573,851	8/2009	Xing et al.			
	7,590,095	9/2009	Chen et al.			
	7,650,152	1/2010	Li et al.			
ITC 1	7,664,188	2/2010	Raleigh et al.			
	7,675,938	3/2010	Kolze			
	7,706,315	4/2010	Vaneraar et al.			
	7,715,358	5/2010	Li et al.			
ITC 1	7,751,854	7/2010	Leifer et al.			
	7,783,285	8/2010	Chater-Lea			
	7,787,514	8/2010	Shattil			
	7,787,872	8/2010	Minborg et al.			
ITC 1	7,826,560	11/2010	Raleigh et al.			

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ITC 1	8,036,307	10/2011	Raleigh et al.			
	8,036,164	10/2011	Winters et al.			
	8,036,199	10/2011	Li et al.			
Lits. 4, 7-8, 15, and 17-18	8,358,574	1/2013	Gerakoulis			
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	2002/0160783	10/2002	Holtzman et al.			
	2002/0181436	12/2002	Mueckenheim et al.			
ITC 1	2002/0183010	12/2002	Catreux et al.			
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	2002/0191535	12/2002	Sugiyama et al.			
	2003/0003937	1/2003	Ohkubo et al.			
ITC 1	2003/0021245	1/2003	Haumonte et al.			
	2003/0035491	2/2003	Walton et al.			
ITC 1	2003/0067890	4/2003	Goel et al.			
	2003/0068984	4/2003	Shin et al.			
	2003/0108089	6/2003	Lee et al.			
	2003/0148738	8/2003	Arnab et al.			
Lits. 4, 7-8, and 17-18	2003/0165123	9/2003	Saunders			
ITC 1	2003/0169681	9/2003	Li et al.			
ITC 1	2003/0169824	9/2003	Chayat			
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	2004/0131025	7/2004	Dohler et al.			
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Lits. 4, 7-8, and 17-18	2004/0190484	9/2004	Shin et al.			
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Lits. 4, 7-8, 15, and 17-18	Yang et al., "A Message-Passing Approach to Distributed Resource Allocation in Uplink DFT-Spread-OFDMA Systems," IEEE Transactions on Communications, Vol. 59, No. 4, pages 1099-1113, April 2011, 15 pgs.
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EXAMINER /Meless Zewdu/	**DATE CONSIDERED** 10/17/2014

EXAMINER: Initial if citation 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 the applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.Z

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/294,106	06/02/2014	Xiaodong Li	176.0003-06000	9020

22882 7590 10/27/2014

MARTIN & FERRARO, LLP
1557 LAKE O'PINES STREET, NE
HARTVILLE, OH 44632

EXAMINER	
ZEWDU, MELESS NMN	

ART UNIT	PAPER NUMBER
2643	

MAIL DATE	DELIVERY MODE
10/27/2014	PAPER

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.

Corrected Notice of Allowability	**Application No.** 14/294,106	**Applicant(s)** LI ET AL.	
	Examiner MELESS ZEWDU	**Art Unit** 2643	**AIA (First Inventor to File) Status** No

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

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

1. ☒ This communication is responsive to *8/8/2014*.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on_____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are *1-32*. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov .
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some *c) ☐ None of the:
   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

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

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

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

/MELESS ZEWDU/
Primary Examiner, Art Unit 2643

DETAILED ACTION

Notice of Pre-AIA or AIA Status

The present application is being examined under the pre-AIA first to invent provisions.

1. This action is in response to the communication filed on 8/8/2014.

2. Claims 31 and 32 have been added in a supplemental amendment.

3. Claims 1-32 are pending in this action.

4. Claims 1-32 are allowed.

Information Disclosure Statement

The multiple references listed in the multiple lists of IDSs have been considered by examiner except those with no dates or partially dated. Lines have been drawn through such references which lack complete dates.

Allowable Subject Matter

Claims 1-32 are allowed.

The following is an examiner's statement of reasons for allowance: the reason for allowance is clear from the prosecution history.

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

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MELESS ZEWDU whose telephone number is (571)272-7873. The examiner can normally be reached on 8:30 am to 5:00 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hu Jinsong can be reached on (571) 272-3965. 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.

Any inquiry of a general nature relating to the status of proceeding of this application should be directed to the receptionist whose telephone number is (671) 272-2600.

/MELESS ZEWDU/
Primary Examiner, Art Unit 2643
10/15/2014

Examiner-Initiated Interview Summary	Application No.	Applicant(s)	
	14/294,106	LI ET AL.	
	Examiner	Art Unit	
	MELESS ZEWDU	2643	

All participants (applicant, applicant's representative, PTO personnel):

(1) *MELESS ZEWDU*. (3)_____.

(2) *Alfred Y. Chu (Reg. No. 62,317)*. (4)_____.

Date of Interview: *30 July 2014*.

Type: ☒ Telephonic ☐ Video Conference
☐ Personal [copy given to: ☐ applicant ☐ applicant's representative]

Exhibit shown or demonstration conducted: ☐ Yes ☒ No.
If Yes, brief description: _____.

Issues Discussed ☐101 ☒112 ☐102 ☐103 ☐Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: *1 and 16*.

Identification of prior art discussed: *N/A*.

Substance of Interview
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

In claims 1 and 16, examiner could not see the relationship between "first feedback" and "second feedback"; "first allocation of OFDMA" qand "second allocation of OFDMA". Although the claims were previously rejected under 112 second for these deficiencies,. applicant merely argues the rejection. While the argument was helpful in clarifying some of the issues, it wasn't in this regard. Examiner discussed these issues with the above mentioned applicant's representative, via telephonic communication, and agreement was reached to amend these claims in a manner shown in the supplemental amendment submitted on 8/8/2014..

Applicant recordation instructions: It is not necessary for applicant to provide a separate record of the substance of interview.

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

☐ Attachment

/MELESS ZEWDU/ Primary Examiner, Art Unit 2643	

Substitute for FORM PTO-1449	Attorney Docket Number 176.0003-06000	Customer No. 22882	
INFORMATION DISCLOSURE CITATION IN AN APPLICATION	Applicant Xiaodong Li et al.	Application Number 14/294,106	
(Use several sheets if necessary) Sheet 1 of 3	Filing Date June 2, 2014	Group Art Unit 2643	Examiner M. Zewdu

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	6,009,087	12/1999	Uchida et al.			
	6,347,091	2/2002	Wallentin et al.			
	6,405,043	6/2002	Jensen et al.			
	6,560,209	5/2003	Alamouti et al.			
	6,952,454	10/2005	Jalali et al.			

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION (YES/NO)
* JP Lits. 4-5 and 7-8; JP Trial 8	DE 198 00 953 C1	7/1999	Germany			YES
	EP 1 043 861 A1	10/2000	Europe			N/A
JP Lit. 1	JP 10-145854 A	5/1998	Japan			ABSTRACT ONLY
	JP 10-247955	9/1998	Japan			YES
JP Lit. 1	JP 11-196457 A	7/1999	Japan			ABSTRACT ONLY
* JP Lits. 1-2, 5, and 7-8; JP Trials 1 and 3-6	JP 11-508417	7/1999	Japan			ABSTRACT ONLY
* JP Lits. 7-8	JP 2000-49663	2/2000	Japan			ABSTRACT ONLY
JP Lit. 5	JP 2000-216842 A	8/2000	Japan			ABSTRACT ONLY
	JP 2000-286822 A	10/2000	Japan			ABSTRACT ONLY
JP Lit. 5	JP 2000-341236 A	12/2000	Japan			ABSTRACT ONLY
	JP 2001-238269 A	8/2001	Japan			YES
JP Lit. 5	WO 96/00470 A1	1/1996	WIPO			ABSTRACT ONLY

OTHER DOCUMENTS ***(Including Author, Title, Date, Pertinent Pages, Etc.)***

JP Lit. 1	Adaptix Inc. v. Huawei Japan, Japanese Litigation Case No. 28418 regarding corresponding Japanese Patent Nos. 3980478 and 4213466, Plaintiff's (Adaptix) Response to Defendant's (Huawei) Invalidity Contention Brief, July 11, 2014, 13 pgs.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.Z

JP Lit. 1	Adaptix Inc. v. Huawei Japan, Japanese Litigation Case No. 28418 regarding corresponding Japanese Patent Nos. 3980478 and 4213466, Defendant's (Huawei) Invalidity Contention Brief, July 11, 2014, 15 pgs.
JP Lit. 1	Adaptix Inc. v. Huawei Japan, Japanese Litigation Case No. 28418 regarding corresponding Japanese Patent Nos. 3980478 and 4213466, List of Non-Prior Art/Prior Art Documents cited in Defendant's (Huawei) Invalidity Contention Brief, July 11, 2014, 2 pgs.
JP Lit. 2	Adaptix Inc. v. ZTE Japan, Japanese Litigation Case No. 31440 regarding corresponding Japanese Patent Nos. 3980478 and 4213466, Plaintiff's (Adaptix) Invalidity Contention Brief, July 18, 2014, 43 pgs.
JP Lit. 2	Adaptix Inc. v. ZTE Japan, Japanese Litigation Case No. 31440 regarding corresponding Japanese Patent Nos. 3980478 and 4213466, List of Supporting Documents cited in Plaintiff's (Adaptix) Invalidity Contention Brief, July 18, 2014, 2 pgs.
JP Lit. 3	Adaptix Inc. v. Ericsson Japan, Japanese Litigation No. 1149 regarding corresponding Japanese Patent No. 3980478 and 4213466, Defendant's (Ericsson) Request for Dismissal Alleging Plaintiff's Failure to Make Infringement and Invalidity Contentions, July 25, 2014, 35 pgs.
JP Lit. 3	Adaptix Inc. v. Ericsson Japan, Japanese Litigation No. 1149 regarding corresponding Japanese Patent No. 3980478 and 4213466, List of Prior Art and Non-Prior Art Documents cited in Defendant's (Ericsson) Request for Dismissal, July 25, 2014, 2 pgs.
JP Lit. 4	Adaptix Inc. v. Huawei Japan, Japanese Litigation Case No. 17915 regarding corresponding Japanese Patent No. 4201595, Plaintiff's (Adaptix) Rebuttal to Defendant's (Huawei) Invalidity Contention Brief , July 28, 2014, 23 pgs.
JP Lit. 4	Adaptix Inc. v. Huawei Japan, Japanese Litigation Case No. 17915 regarding corresponding Japanese Patent No. 4201595, List of Non-Prior Art Documents cited in Plaintiff's (Adaptix) Rebuttal and Infringement Contention Brief, July 28, 2014, 6 pgs.
JP Lit. 5	Adaptix Inc. v. ZTE Japan, Japanese Litigation Case No. 19919 regarding corresponding Japanese Patent No. 4201595, Plaintiff's (Adaptix) Rebuttal to Defendant's (ZTE) Invalidity Contention Brief, July 31, 2014, 55 pgs.
JP Lit. 5	Adaptix Inc. v. ZTE Japan, Japanese Litigation Case No. 19919 regarding corresponding Japanese Patent No. 4201595, List of Supporting Documents cited in Plaintiff's (Adaptix) Rebuttal and Infringement Contention Brief, July 31, 2014, 5 pgs.
JP Lit. 5	Adaptix Inc. v. ZTE Japan, Japanese Litigation Case No. 19919 regarding corresponding Japanese Patent No. 4201595, Defendant's (ZTE) Invalidity Contention Brief, July 31, 2014, 33 pgs.
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JP Lit. 7	Adaptix Inc. v. LG Electronics, Japanese Litigation Case No. 23278 regarding corresponding Japanese Patent Nos. 4201595 and 5119070, Defendant's (LG) Invalidity Contention Brief, June 30, 2014, 22 pgs.
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JP Trial 4	Huawei v. Adaptix Inc., Japanese Invalidation Trial No. 2013-800147 regarding corresponding Japanese Patent No. 4213466, Favorable Trial Decision issued by Trial Examiner upholding patentability of Japanese Patent No. 4213466, June 17, 2014, 79 pgs (with partial translation).
* JP Lits. 7-8	Chuang et al., "Wideband Wireless Data Access Based on OFDM and Dynamic Packet Assignment," IEEE 0-7803-5668-3/99, September 21, 1999, 5 pgs.
JP Lit. 3	"Dictionary of Science and Engineering," 3rd Edition, IPC Inter Press Corporation, Page 1176, December 20, 1994, 3 pgs.
JP Lit. 7	IEEE Standard Dictionary of Electrical and Electronics Terms, Sixth Edition, Pages 304-305, September 30, 1989, 3 pgs.
JP Lit. 1	Kaiser, "MC-FDMA and MC-TDMA versus MC-CDMA and SS-MC-MA: Performance Evaluation for Fading Channels," Spread Spectrum Techniques and Applications, 1998. Proceedings, 1998 IEEE 5th Int'l Symposium on, 0-7803-4281-X, Pages 200-204, September 2, 1998, 7 pgs.

* JP Lits. 5 and 7-8; JP Trial 6	Keller, Thomas, et al., "Adaptive Multicarrier Modulation: A Convenient Framework for Time-Frequency Processing in Wireless Communications," IEEE Proceedings of the IEEE, Vol. 88, No.5, Pages 611-640, May 5, 2000, 30 pgs.
JP Lit. 2	Midorikawa, "Information Science Dictionary," Iwanami Shoten Publisher, Pages 472-473, May 25, 1990, 3 pgs.
JP Lit. 3	Shogakukan, "New Shogakukan Random House English-Japanese Dictionary," Pages 1000-1001 and 1737, January 10, 1999, 5 pgs.

EXAMINER	/Meless Zewdu/	**DATE CONSIDERED**	10/15/2014

EXAMINER: Initial if citation 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 the applicant.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	Confirmation No.: 9020
Xiaodong Li et al.	)	
Serial No.: 14/294,106	)	Group Art Unit: 2643
Filed: June 2, 2014	)	Examiner: Meless Nmn Zewdu
For: OFDMA WITH ADAPTIVE SUBCARRIER-CLUSTER CONFIGURATION AND SELECTIVE LOADING	)	

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P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

RESPONSE TO INFORMATIONAL NOTICE TO APPLICANT

In response to the communication of June 12, 2014, Applicant submits a new Declaration for inventors: Hui Liu and Wenzhong Zhang in compliance with 37 C.F.R. § 1.63 for filing in the above-identified application. Applicant also submits a Substitute Statement in Lieu of an Oath or Declaration for inventors: Xiaodong Li and Kemin Li, in compliance with 37 C.F.R. § 1.64 for filing in the above-identified application.

Please associate the enclosed Declarations and Substitute Statements with the above-identified application.

Respectfully submitted,

MARTIN & FERRARO LLP

Dated: October 16, 2014

By: /Alfred Y. Chu/
Alfred Y. Chu
Registration No. 62,317

1557 Lake O'Pines Street, NE
Hartville, Ohio 44632
Telephone: (330) 877-0700
Facsimile: (330) 877-2030

DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	OFDMA WITH ADAPTIVE SUBCARRIER-CLUSTER CONFIGURATION AND SELECTIVE LOADING

As the below named inventor, I hereby declare that:

This declaration is directed to:

☐ The attached application, or

☒ United States application or PCT international application number 14/294,109

filed on June 2, 2014

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

LEGAL NAME OF INVENTOR

Inventor: Hui Liu Date (Optional): ____________

Signature: ____________

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

PTO/AIA/01 (06-12)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	OFDMA WITH ADAPTIVE SUBCARRIER-CLUSTER CONFIGURATION AND SELECTIVE LOADING

As the below named inventor, I hereby declare that

This declaration is directed to:

☐ The attached application, or

☒ United States application or PCT international application number 14/294,106

filed on June 2, 2014

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

LEGAL NAME OF INVENTOR

Inventor: Wenzhong Zhang Date (Optional):

Signature: Wenzhong Zhang

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

Doc code: Oath
Document Description: Oath or declaration filed

PTO/AIA/02 (07-13)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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SUBSTITUTE STATEMENT IN LIEU OF AN OATH OR DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (35 U.S.C. 115(d) AND 37 CFR 1.64)

Title of Invention	OFDMA WITH ADAPTIVE SUBCARRIER-CLUSTER CONFIGURATION AND SELECTIVE LOADING

This statement is directed to:

☐ The attached application,

OR

☒ United States application or PCT international application number 14/294,106 filed on June 2, 2014

LEGAL NAME of inventor to whom this substitute statement applies:

(*E.g.*, Given Name (first and middle (if any)) and Family Name or Surname)

Xiaodong Li

Residence (except for a deceased or legally incapacitated inventor):

City	State	Country
Bellevue	WA	US

Mailing Address (except for a deceased or legally incapacitated inventor):

13075 SE 26TH, APT. E208

City	State	Zip	Country
Bellevue	WA	98005	US

I believe the above-named inventor or joint inventor to be the original inventor or an original joint inventor of a claimed invention in the application.

The above-identified application was made or authorized to be made by me.

I hereby acknowledge that any willful false statement made in this statement is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

Relationship to the inventor to whom this substitute statement applies:

- ☐ Legal Representative (for deceased or legally incapacitated inventor only),
- ☒ Assignee,
- ☐ Person to whom the inventor is under an obligation to assign,
- ☐ Person who otherwise shows a sufficient proprietary interest in the matter (petition under 37 CFR 1.46 is required), or
- ☐ Joint Inventor.

PTO/SB/AIA02 (07-13)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

SUBSTITUTE STATEMENT

Circumstances permitting execution of this substitute statement:

- ☐ Inventor is deceased.
- ☐ Inventor is under legal incapacity.
- ■ Inventor cannot be found or reached after diligent effort, or
- ☐ Inventor has refused to execute the oath or declaration under 37 CFR 1.63.

If there are joint inventors, please check the appropriate box below:

- ■ An application data sheet under 37 CFR 1.76 (PTO/AIA/14 or equivalent) naming the entire inventive entity has been or is currently submitted.

OR

- ☐ An application data sheet under 37 CFR 1.76 (PTO/AIA/14 or equivalent) has not been submitted. Thus, a Substitute Statement Supplemental Sheet (PTO/AIA/11 or equivalent) naming the entire inventive entity and providing inventor information is attached. See 37 CFR 1.64(b).

WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

PERSON EXECUTING THIS SUBSTITUTE STATEMENT:

Name: Marvin Key | Date (Optional): 6/6/2014

Signature:

APPLICANT NAME AND TITLE OF PERSON EXECUTING THIS SUBSTITUTE STATEMENT:

If the applicant is a juristic entity, list the applicant name and the title of the signer:

Applicant Name: Adaptix, Inc.

Title of Person Executing This Substitute Statement: CEO

The signer, whose title is supplied above, is authorized to act on behalf of the applicant.

Residence of the signer (unless provided in an application data sheet, PTO/AIA/14 or equivalent):

City	State	Country
Plano	TX	US

Mailing Address of the signer (unless provided in an application data sheet, PTO/AIA/14 or equivalent)

2400 Dallas Parkway, Suite 200

City	State	Zip	Country
Plano	TX	75093	US

Note: Use an additional PTO/AIA/02 form for each inventor who is deceased, legally incapacitated, cannot be found or reached after diligent effort, or has refused to execute the oath or declaration under 37 CFR 1.63.

Doc code: Oath
Document Description: Oath or declaration filed

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SUBSTITUTE STATEMENT IN LIEU OF AN OATH OR DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (35 U.S.C. 115(d) AND 37 CFR 1.64)

Title of Invention	OFDMA WITH ADAPTIVE SUBCARRIER-CLUSTER CONFIGURATION AND SELECTIVE LOADING

This statement is directed to:

☐ The attached application.

OR

☒ United States application or PCT international application number 14/294,106 filed on June 2, 2014

LEGAL NAME of inventor to whom this substitute statement applies:

(E.g., Given Name (first and middle (if any)) and Family Name or Surname)

Kemin Li

Residence (except for a deceased or legally incapacitated inventor):

City	State	Country
Bellevue	WA	US

Mailing Address (except for a deceased or legally incapacitated inventor):

14733 NE 1ST PLACE #E6

City	State	Zip	Country
Bellevue	WA	98007	US

I believe the above-named inventor or joint inventor to be the original inventor or an original joint inventor of a claimed invention in the application.

The above-identified application was made or authorized to be made by me.

I hereby acknowledge that any willful false statement made in this statement is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

Relationship to the inventor to whom this substitute statement applies:

- ☐ Legal Representative (for deceased or legally incapacitated inventor only).
- ☒ Assignee.
- ☐ Person to whom the inventor is under an obligation to assign.
- ☐ Person who otherwise shows a sufficient proprietary interest in the matter (petition under 37 CFR 1.46 is required), or
- ☐ Joint Inventor.

PTO/SB/AIA02 (07-13)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

SUBSTITUTE STATEMENT

Circumstances permitting execution of this substitute statement:

- ☐ Inventor is deceased,
- ☐ Inventor is under legal incapacity,
- ■ Inventor cannot be found or reached after diligent effort, or
- ☐ Inventor has refused to execute the oath or declaration under 37 CFR 1.63.

If there are joint inventors, please check the appropriate box below:

- ■ An application data sheet under 37 CFR 1.76 (PTO/AIA/14 or equivalent) naming the entire inventive entity has been or is currently submitted.

OR

- ☐ An application data sheet under 37 CFR 1.76 (PTO/AIA/14 or equivalent) has not been submitted. Thus, a Substitute Statement Supplemental Sheet (PTO/AIA/11 or equivalent) naming the entire inventive entity and providing inventor information is attached. See 37 CFR 1.64(b).

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PERSON EXECUTING THIS SUBSTITUTE STATEMENT:

Name: Marvin Key

Date (Optional): 6/6/2014

Signature:

APPLICANT NAME AND TITLE OF PERSON EXECUTING THIS SUBSTITUTE STATEMENT:

If the applicant is a juristic entity, list the applicant name and the title of the signer:

Applicant Name: Adaptix, Inc.

Title of Person Executing This Substitute Statement: CEO

The signer, whose title is supplied above, is authorized to act on behalf of the applicant.

Residence of the signer (unless provided in an application data sheet, PTO/AIA/14 or equivalent):

City	State	Country
Plano	TX	US

Mailing Address of the signer (unless provided in an application data sheet, PTO/AIA/14 or equivalent)

2400 Dallas Parkway, Suite 200

City	State	Zip	Country
Plano	TX	75093	US

Note: Use an additional PTO/AIA/02 form for each inventor who is deceased, legally incapacitated, cannot be found or reached after diligent effort, or has refused to execute the oath or declaration under 37 CFR 1.63.

Electronic Acknowledgement Receipt

EFS ID:	20435377
Application Number:	14294106
International Application Number:	
Confirmation Number:	9020
Title of Invention:	OFDMA WITH ADAPTIVE SUBCARRIER-CLUSTER CONFIGURATION AND SELECTIVE LOADING
First Named Inventor/Applicant Name:	Xiaodong Li
Customer Number:	22882
Filer:	Alfred Young Chu/Chloe Hong
Filer Authorized By:	Alfred Young Chu
Attorney Docket Number:	176.0003-06000
Receipt Date:	16-OCT-2014
Filing Date:	02-JUN-2014
Time Stamp:	15:38:34
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Applicant Response to Pre-Exam Formalities Notice	Response_to_Informational_Notice.pdf	82410 0d081864ea07f672bd1fefc7cae476191b968466	no	1

Warnings:	
Information:	

2	Oath or Declaration filed	Declarations_and_Substitute_Statements.pdf	5130280 c239039d2874bf1c223e42d954f6cf4ea66f542f	no	6

Warnings:	
Information:	
Total Files Size (in bytes):	5212690

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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.

Substitute for FORM PTO-1449	Attorney Docket Number 176.0003-06000	Customer No. 22882	
INFORMATION DISCLOSURE CITATION IN AN APPLICATION	Applicant Xiaodong Li et al.	Application Number 14/294,106	
(Use several sheets if necessary) Sheet 1 of 1	Filing Date June 2, 2014	Group Art Unit 2643	Examiner M. Zewdu

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	2014/0269572	9/2014	Li et al.			
	2014/0269573	9/2014	Li et al.			
	2014/0269609	9/2014	Li et al.			

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION (YES/NO)

OTHER DOCUMENTS ***(Including Author, Title, Date, Pertinent Pages, Etc.)***

Lits. 24-28	5:13-cv-1776, -1777, -1778, -1844, -2023, Expert Report of Michael Caloyannides Concerning Rebuttal to Expert Report of Thomas Fuja Regarding Validity of U.S. Patent Nos. 6,947,748 and 7,454,212 filed by Plaintiff (Adaptix, Inc.), N.D. Cal., August 27, 2014, 157 pgs.
Lits. 3, 5, and 11	6:12-cv-17, -20, -120, Expert Report of Thomas Fuja Regarding Invalidity of U.S. Patent Nos. 6,947,748 and 7,454,212 filed by Defendants (AT&T Mobility LLC et al.), E.D. Tex., July 7, 2014, 500 pgs.
Lits. 4, 7-8, 15, and 17-18	6:12-cv-22, -122, -123, -369; 6:13-cv-49, -50, Expert Report of Anthony Acampora Regarding Invalidity of U.S. Patent Nos. 6,870,808; 6,904,283; and 7,146,172 filed by Defendants (Ericsson Inc. et al.), E.D. Tex., July 28, 2014, 886 pgs.
Lits. 4, 7-8, 15, and 17-18	6:12-cv-22, -122, -123, -369; 6:13-cv-49, -50, Rebuttal Expert Report of Jonathan Wells Regarding Validity of U.S. Patent Nos. 6,870,808; 6,904,283; and 7,146,172 filed by Plaintiff (Adaptix, Inc.), E.D. Tex., September 9, 2014, 182 pgs.

EXAMINER	DATE CONSIDERED

EXAMINER: Initial if citation 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 the applicant.

Electronic Patent Application Fee Transmittal

Application Number:	14294106
Filing Date:	02-Jun-2014
Title of Invention:	OFDMA WITH ADAPTIVE SUBCARRIER-CLUSTER CONFIGURATION AND SELECTIVE LOADING
First Named Inventor/Applicant Name:	Xiaodong Li
Filer:	Alfred Young Chu/Chloe Hong
Attorney Docket Number:	176.0003-06000

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:	20342144
Application Number:	14294106
International Application Number:	
Confirmation Number:	9020
Title of Invention:	OFDMA WITH ADAPTIVE SUBCARRIER-CLUSTER CONFIGURATION AND SELECTIVE LOADING
First Named Inventor/Applicant Name:	Xiaodong Li
Customer Number:	22882
Filer:	Alfred Young Chu/Chloe Hong
Filer Authorized By:	Alfred Young Chu
Attorney Docket Number:	176.0003-06000
Receipt Date:	06-OCT-2014
Filing Date:	02-JUN-2014
Time Stamp:	18:51:09
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$180
RAM confirmation Number	5480
Deposit Account	501068
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	IDS.pdf	108504 ccd0454622660f41c919419927ae9d84c3aa a30b	no	5
Warnings:					
Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	SB08.pdf	101400 0d90a2dfd3ecc2de41b25d078c63556bce0 1e561	no	1
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
3	Non Patent Literature	513cv1776_1777_1778_1884_2 023_Expert_Report_of_Michael _Caloyannides_Aug_27_2014_ 157pgs.pdf	650303 640280f180826f4e6090987ba1649e507c23 66e3	no	157
Warnings:					
Information:					
4	Non Patent Literature	612cv17_20_120_Expert_Repo rt_of_Thomas_Fuja_July_7_20 14_500pgs_1of4.pdf	24952942 becea115deb80d4d50692d87416f3e8a76b 042f0	no	250
Warnings:					
Information:					
5	Non Patent Literature	612cv17_20_120_Expert_Repo rt_of_Thomas_Fuja_July_7_20 14_500pgs_2of4.pdf	24786771 fb6bb4eb4bd2cb472b1693aa4d4f31d3117 c20c8	no	125
Warnings:					
Information:					
6	Non Patent Literature	612cv17_20_120_Expert_Repo rt_of_Thomas_Fuja_July_7_20 14_500pgs_3of4.pdf	22237019 2224e4095a49b232ff3a170a6e3f7a5c60a8 2d84	no	65
Warnings:					
Information:					
7	Non Patent Literature	612cv17_20_120_Expert_Repo rt_of_Thomas_Fuja_July_7_20 14_500pgs_4of4.pdf	25150527 978f760f719c60d5b22eda8054f16a5efba2 5a4e	no	60
Warnings:					
Information:					
8	Non Patent Literature	612cv22_122_123_369_613cv4 9_50_Expert_Report_of_Acam pora_July_28_2014_886pgs_1 of2.pdf	14484775 7f719c908c78f77d4567e4565af9c5e66412 d271	no	443
Warnings:					
Information:					

9	Non Patent Literature	612cv22_122_123_369_613cv49_50_Expert_Report_of_Acampora_July_28_2014_886pgs_2of2.pdf	20804974 425c88add88d0ee23aaf3e111499bc6f0e2dcb00	no	443
Warnings:					
Information:					
10	Non Patent Literature	612cv22_122_123_369_613cv49_50_Rebuttal_Expert_Report_of_Jonathan_Wells_Sep_9_2014_182pgs.pdf	9083887 580564935ff8339a05763c3d2c9129053ae527fc	no	182
Warnings:					
Information:					
11	Fee Worksheet (SB06)	fee-info.pdf	30665 a56dc1cd680f66848321894 91a1300b9ac1cace4	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	142391767	

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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
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New International Application Filed with the USPTO as a Receiving Office
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	Confirmation No.: 9020
Xiaodong Li et al.	)	
Serial No.: 14/294,106	)	Group Art Unit: 2643
Filed: June 2, 2014	)	Examiner: Meless Nmn Zewdu
For: OFDMA WITH ADAPTIVE SUBCARRIER-CLUSTER CONFIGURATION AND SELECTIVE LOADING	)	

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

Sir:

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. § 1.97(d)

Pursuant to 37 C.F.R. §§ 1.56 and 1.97(d), Applicant brings to the attention of the Examiner the documents listed on the attached Form PTO/SB/08. This Information Disclosure Statement is being filed after a Notice of Allowance but before payment of the issue fee and is accompanied by the required fee of $180.00 (to be charged to Deposit Account No. 50-1068) and a certification as specified under § 1.97(e).

The present application is a continuation of U.S. Application No. 13/230,625, filed September 12, 2011 (Publication No. 2012/0069755), which is pending; which is a continuation of U.S. Application No. 12/748,781, filed March 29, 2010, now U.S. Patent No. 8,036,199; which is a continuation of U.S. Application No. 11/931,926, filed October 31, 2007, now U.S. Patent No. 7,715,358; which is a continuation of U.S. Application No. 11/199,586, filed August 8, 2005, now U.S. Patent No. 7,454,212 ("'212 patent"); which is a continuation of U.S. Application No. 09/738,086, filed December 15, 2000, now U.S. Patent No. 6,947,748 ("'748 patent"); upon which Applicant relies for the benefits provided in 35 U.S.C. § 120.

Applicant brings to the Examiner's attention Application Nos. 09/898,163, filed July 2, 2001, now U.S. Patent No. 6,751,444; 09/692,681, filed October 18, 2000, now U.S. Patent No. 6,870,808 ("'808 patent"); 09/837,337, filed April 17, 2001, now U.S.

Patent No. 6,904,283 ("'283 patent"); 09/685,977, filed October 10, 2000, now U.S. Patent No. 7,072,315 ("'315 patent"); 09/837,701, filed April 17, 2001, now U.S. Patent No. 7,146,172 ("'172 patent"); 11/085,826, filed March 21, 2005, now U.S. Patent No. 7,355,962; 11/592,084, filed November 2, 2006, now U.S. Patent No. 7,379,742 ("'742 patent"); 11/931,759, filed October 31, 2007, now U.S. Patent No. 7,489,934 ("'934 patent"); 11/925,229, filed October 26, 2007, now U.S. Patent No. 7,573,850 ("'850 patent"); 11/007,064, filed December 7, 2004, now U.S. Patent No. 7,573,851 ("'851 patent"); 11/931,385, filed October 31, 2007, now U.S. Patent No. 7,650,152; 12/470,922, filed May 22, 2009, now U.S. Patent No. 7,933,244; 10/534,200, filed January 18, 2006, now U.S. Patent No. 8,005,479; 12/399,624, filed March 6, 2009, now U.S. Patent No. 8,738,020; 13/053,091, filed March 21, 2011, now U.S. Patent No. 8,743,717; 13/731,825, filed December 31, 2012, now U.S. Patent No. 8,743,729; 13/801,846, filed March 13, 2013, now U.S. Patent No. 8,750,238; 13/756,957, filed February 1, 2013, now U.S. Patent No. 8,760,992; 13/801,788, filed March 13, 2013, now U.S. Patent No. 8,767,702; 12/498,924, filed July 7, 2009, now U.S. Patent No. 8,797,970; 13/053,111, filed March 21, 2011 (Publication No. 2011/0170446), which is pending; 13/053,127, filed March 21, 2011 (Publication No. 2011/0222495), which is abandoned; 13/186,221, filed July 19, 2011 (Publication No. 2011/0312367), which is pending; 13/731,832, filed December 31, 2012 (Publication No. 2013/0121200), which is pending; 14/286,780 (Publication No. 2014/0269572), filed May 23, 2014, which is pending; 14/286,884 (Publication No. 2014/0269573), filed May 23, 2014, which is pending; 14/294,117 (Publication No. 2014/0269609), filed June 2, 2014, which is pending; 14/332,123, filed July 15, 2014, which is pending; and 14/491,904, filed September 19, 2014, which is pending.

Applicant also brings to the attention of the Examiner the file history (the Office Actions and responses) of each of the above-referenced patents and applications. While the individual Office Actions and responses are not attached hereto, they are available in each of the file wrappers in the Patent Office, through PAIR, or will be provided by Applicant at the Examiner's request.

Copies of the listed non-U.S. patent documents are attached. Applicant respectfully requests that the Examiner consider the listed documents and indicate that they were considered by making appropriate notations on the attached form.

Based on reasonable inquiry, each document listed in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing date of this Information Disclosure Statement; or no document listed in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and no document listed in this Information Disclosure Statement was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing date of this Information Disclosure Statement.

The '212 and '748 patents are the subject of several litigations in the United States District Court for the Eastern District of Texas, Civil Action Nos. 6:12-cv-00020, 6:12-cv-00120, 6:12-cv-00017, 6:13-cv-00438, 6:13-cv-00439, 6:13-cv-00440, 6:13-cv-00441, 6:13-cv-00443, 6:13-cv-00444, 6:13-cv-00445, 6:13-cv-00446, 6:13-cv-00585, 6:13-cv-00778, and 6:13-cv-00922, hereinafter referred to as Litigations 3, 5, 11, 38-41, 43-48, and 51, respectively.

The '212 and '748 patents are also the subject of several litigations in the United States District Court for the Northern District of California, Civil Action Nos. 5:13-cv-02023, 5:14-cv-02359, and 5:14-cv-02360, hereinafter referred to as Litigations 28 and 61-62, respectively.

The '212 and '748 patents were the subject of several litigations in the United States District Court for the Eastern District of Texas, Civil Action Nos. 6:12-cv-00121, 6:12-cv-00124, 6:12-cv-00125, 6:12-cv-00019, 6:13-cv-00432, 6:13-cv-00433, 6:13-cv-00434, 6:13-cv-00435, 6:13-cv-00436, 6:13-cv-00437, 6:13-cv-00442, 6:13-cv-00853, and 6:13-cv-00854, hereinafter referred to as Litigations 6, 9-10, 12, 32-37, 42, and 49-50, respectively, which have been transferred to the United States District Court for the Northern District of California, now Civil Action Nos. 5:13-cv-01844, 5:13-cv-01776, 5:13-cv-01777, 5:13-cv-01778, 5:14-cv-01379, 5:14-cv-03112, 5:14-cv-01380, 5:14-cv-01386, 5:14-cv-01387, 5:14-cv-01259, 5:14-cv-01385, 5:14-cv-02894, and 5:14-cv-

02895, respectively, hereinafter referred to as Litigations 27, 24-26, 53, 65, 54, 56-57, 52, 55, and 63-64, respectively.

The '212 and '748 patents were the subject of several litigations in the United States District Court for the Eastern District of Texas, Civil Action Nos. 6:12-cv-00016, 6:13-cv-00028, 6:13-cv-00296, and 6:13-cv-00424, hereinafter referred to as Litigations 2, 16, and 30-31, respectively.

The '212 and '748 patents were also the subject of several litigations in the United States District Court for the Northern District of California, Civil Action Nos. 3:13-cv-04468, 3:13-cv-04469, and 5:13-cv-01774, hereinafter referred to as Litigations 21-23, respectively.

The '808, '283, '315, '172, and '851 patents are the subject of several litigations in the United States District Court for the Eastern District of Texas, Civil Action Nos. 6:12-cv-00022, 6:12-cv-00122, 6:12-cv-00123, 6:12-cv-00021, 6:12-cv-00318, and 6:12-cv-00369, hereinafter referred to as Litigations 4, 7, 8, 13, 14, and 15, respectively. Litigations 13 and 14 have been voluntarily dismissed without prejudice.

The '283, '315, '172, and '851 patents are the subject of litigation in the United States District Court for the Eastern District of Texas, Civil Action No. 6:13-cv-00049, hereinafter referred to as Litigation 17.

The '808 patent is the subject of litigation in the United States District Court for the Eastern District of Texas, Civil Action No. 6:13-cv-00050, hereinafter referred to as Litigation 18.

The '808 patent is also the subject of several litigations in the United States District Court for the District of Columbia, Civil Action Nos. 1:13-mc-00497 and 1:13-mc-00498, hereinafter referred to as Litigations 19 and 20, respectively.

The '850 patent was the subject of litigation in the United States District Court for the Eastern District of Texas, Civil Action No. 6:09-cv-00562, hereinafter referred to as Litigation 29.

The '172, '283, and '808 patents are the subject of litigations in the United States District Court for the Eastern District of Texas, Civil Action Nos. 6:14-cv-00501, 6:14-cv-00502, and 6:14-cv-00503, hereinafter referred to as Litigations 58-60, respectively.

In Litigations 1-12, 15, 17, 18, 21-28, and 30, the defendants asserted that various references were pertinent to the issue of validity of at least one of the '212, '748, '808, '283, '315, '172, '851, '742, and '934 patents under 35 U.S.C. §§ 102 and 103. Applicant notes for the Examiner on the attached Form PTO/SB/08 in the column for the Examiner's initials the various references from Litigations 1-18, 21-28, and 30. Any references associated with Litigations 1-65 are identified by the designation "Lit. 1-65."

Applicant hereby respectfully requests the Examiner to advise Applicant of any additional types of litigation documents beyond those already provided that the Examiner may desire in association with the present application.

This submission does not represent that a search has been made or that no better art exists and does not constitute an admission that each or all of the listed documents are material or constitute "prior art." If the Examiner applies any of the documents as prior art against any claims in the application and Applicant determines that the cited documents do not constitute "prior art" under United States law, Applicant reserves the right to present to the office the relevant facts and law regarding the appropriate status of such documents.

Applicant further reserves the right to take appropriate action to establish the patentability of the disclosed invention over the listed documents, should one or more of the documents be applied against the claims of the present application.

If there is any fee due in connection with the filing of this Statement, please charge the fee to our Deposit Account No. 50-1068.

Respectfully submitted,

MARTIN & FERRARO, LLP

Date: October 6, 2014

By: /Alfred Y. Chu/
Alfred Y. Chu
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UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/294,106	06/02/2014	Xiaodong Li	176.0003-06000

CONFIRMATION NO. 9020

22882
MARTIN & FERRARO, LLP
1557 LAKE O'PINES STREET, NE
HARTVILLE, OH 44632

PUBLICATION NOTICE

OC000000070832312

Title:OFDMA WITH ADAPTIVE SUBCARRIER-CLUSTER CONFIGURATION AND SELECTIVE LOADING

Publication No.US-2014-0269396-A1
Publication Date:09/18/2014

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently http://pair.uspto.gov/. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

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

UNITED STATES PATENT AND TRADEMARK OFFICE

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Alexandria, Virginia 22313-1450
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NOTICE OF ALLOWANCE AND FEE(S) DUE

22882 7590 08/14/2014

MARTIN & FERRARO, LLP
1557 LAKE O'PINES STREET, NE
HARTVILLE, OH 44632

EXAMINER	
ZEWDU, MELESS NMN	
ART UNIT	PAPER NUMBER
2643	

DATE MAILED: 08/14/2014

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/294,106	06/02/2014	Xiaodong Li	176.0003-06000	9020

TITLE OF INVENTION: OFDMA WITH ADAPTIVE SUBCARRIER-CLUSTER CONFIGURATION AND SELECTIVE LOADING

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$960	$0	$0	$960	11/14/2014

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

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

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

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

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

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

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

22882 7590 08/14/2014
MARTIN & FERRARO, LLP
1557 LAKE O'PINES STREET, NE
HARTVILLE, OH 44632

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

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

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/294,106	06/02/2014	Xiaodong Li	176.0003-06000	9020

TITLE OF INVENTION: OFDMA WITH ADAPTIVE SUBCARRIER-CLUSTER CONFIGURATION AND SELECTIVE LOADING

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$960	$0	$0	$960	11/14/2014

EXAMINER	ART UNIT	CLASS-SUBCLASS
ZEWDU, MELESS NMN	2643	370-252000

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

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

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

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

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

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

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

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

5. **Change in Entity Status** (from status indicated above)
☐ Applicant certifying micro entity status. See 37 CFR 1.29
NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
☐ Applicant asserting small entity status. See 37 CFR 1.27
NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
☐ Applicant changing to regular undiscounted fee status.
NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/294,106	06/02/2014	Xiaodong Li	176.0003-06000	9020

22882 7590 08/14/2014

MARTIN & FERRARO, LLP
1557 LAKE O'PINES STREET, NE
HARTVILLE, OH 44632

EXAMINER	
ZEWDU, MELESS NMN	

ART UNIT	PAPER NUMBER
2643	

DATE MAILED: 08/14/2014

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

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

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.

Notice Requiring Inventor's Oath or Declaration	Application No. 14/294,106	Applicant(s) Xiaodong Li	
	Examiner ZEWDU, MELESS NMN	Art Unit 2643	

This notice is an attachment to the Notice of Allowability (PTOL-37), or the Notice of Allowability For A Design Application (PTOL-37D).

An inventor's oath or declaration in compliance with 37 CFR 1.63 or 1.64 executed by or with respect to each inventor has not yet been submitted.

An oath or declaration in compliance with 37 CFR 1.63, or a substitute statement in compliance with 37 CFR 1.64, executed by or with respect to each inventor (for any inventor for which a compliant oath, declaration, or substitute statement has not yet been submitted) MUST be filed no later than the date on which the issue fee is paid. See 35 U.S.C. 115(f). Failure to timely comply will result in ABANDONMENT of this application.

A properly executed inventor's oath to declaration has not been received for the following inventor(s):

If applicant previously filed one or more oaths, declarations, or substitute statements, applicant may have received an informational notice regarding deficiencies therein.

The following deficiencies are noted:

INFORMAL ACTION PROBLEMS

A new inventor's oath or declaration that identifies this application (e.g., by Application Number and filing date) is required. The inventor's oath or declaration does not comply with 37 CFR 1.63 in that it:

- does not state that the above-identified application was made or authorized to be made by the person executing the oath or declaration: **Xiaodong Li**, **Hui Liu**, **Kemin Li**, and **Wenzhong Zhang**.

Questions relating to this Notice should be directed to the Application Assistance Unit at 571-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

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

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

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

Examiner-Initiated Interview Summary	Application No.	Applicant(s)	
	14/294,106	LI ET AL.	
	Examiner	Art Unit	
	MELESS ZEWDU	2643	

All participants (applicant, applicant's representative, PTO personnel):

(1) *MELESS ZEWDU*. (3)_____.

(2) *Alfred Y. Chu (Reg. No. 62,317)*. (4)_____.

Date of Interview: *30 July 2014*.

Type: ☒ Telephonic ☐ Video Conference
☐ Personal [copy given to: ☐ applicant ☐ applicant's representative]

Exhibit shown or demonstration conducted: ☐ Yes ☒ No.
If Yes, brief description: _____.

Issues Discussed ☐101 ☒112 ☐102 ☐103 ☐Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: *1 and 16*.

Identification of prior art discussed: *N/A*.

Substance of Interview
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

In claims 1 and 16, examiner could not see the relationship between the "first feedback" and "second feedback"; "first allocation of OFDMA" and "second allocation of OFDMA". Although the claims were previously rejected under 112 second for these deficiencies, applicant merely argues the reejction. While the argument was helpful in clarifying some of the issues, it wasn't in this regard.Examiner discussed the these issues with the above mentioned applicant's representative, via telephonic communication, and agreement was reached to amend these claims in a manner shown in the supplemental amendment submitted on 8/7/2014..

Applicant recordation instructions: It is not necessary for applicant to provide a separate record of the substance of interview.

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

☒ Attachment

/MELESS ZEWDU/ Primary Examiner, Art Unit 2643	

Notice of Allowability	Application No. 14/294,106	Applicant(s) LI ET AL.	
	Examiner MELESS ZEWDU	Art Unit 2643	AIA (First Inventor to File) Status No

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

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

1. ☒ This communication is responsive to *7/10/2014*.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on_____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are *1-32*. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov .
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some *c) ☐ None of the:
   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

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

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
4. ☒ Interview Summary (PTO-413), Paper No./Mail Date *7/30/2014* .
5. ☐ Examiner's Amendment/Comment
6. ☒ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/MELESS ZEWDU/
Primary Examiner, Art Unit 2643

DETAILED ACTION

Notice of Pre-AIA or AIA Status

The present application is being examined under the pre-AIA first to invent provisions.

1. This action is in response to the communication filed on 7/10/2014.
2. Claims 31 and 32 have been added in a supplemental amendment.
3. Claims 1032 are pending in this action.
4. Claims 1032 are allowed.

Allowable Subject Matter

Claims 1-32 are allowed.

The following is an examiner's statement of reasons for allowance: the reason for allowance is clear from the prosecution history.

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

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MELESS ZEWDU whose telephone number is (571)272-7873. The examiner can normally be reached on 8:30 am to 5:00 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hu Jinsong can be reached on (571) 272-3965. 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.

Any inquiry of a general nature relating to the status or proceeding of this application should be directed to the receptionist whose telephone number is (571) 272-2600.

/MELESS ZEWDU/
Primary Examiner, Art Unit 2643
8/7/2014

Examiner-Initiated Interview Summary	Application No.	Applicant(s)	
	14/294,106	LI ET AL.	
	Examiner	Art Unit	
	MELESS ZEWDU	2643	

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(2) *Alfred Y. Chu (Reg. No. 62,317)*. (4)_____.

Date of Interview: *30 July 2014*.

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(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: *1 and 16*.

Identification of prior art discussed: *N/A*.

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(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

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Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

☒ Attachment

/MELESS ZEWDU/ Primary Examiner, Art Unit 2643	

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14294106	LI ET AL.
	Examiner	Art Unit
	MELESS ZEWDU	2643

CPC- SEARCHED

Symbol	Date	Examiner
H04B17/00, H04B1/00, H04B15/00, H04B7/00, H04M3/00, H04W24/00, H04W4/00, H04W72/00, H04B1/38, H04B1/10, G08C15/00, H04J1/00, H04B7/208, H04B7/212, H04J3/24, H04J3/06	7/2/2014	M.Z.

CPC COMBINATION SETS - SEARCHED

Symbol	Date	Examiner

US CLASSIFICATION SEARCHED

Class	Subclass	Date	Examiner
455	420, 423-425, 434, 450-451, 452.1-452.2, 453, 509-510, 512-514, 516-517, 522, 524-525, 61-62, 63.1, 67.11, 67.13, 68-69, 702-703, 70-71, 550.1, 556.2, 560-561).ccls.) or (370/(252, 328-329, 338, 341, 343-344, 347, 349-350, 447	6/25/2014	M.Z.
370	252, 328-330, 338, 341, 343-345, 431, 436-437, 464-465, 468, 480-482, 537	8/7/2014	M.Z.
455	67.11, 101-104, 420, 423, 425, 434, 450-451, 452.1-452.2, 509, 550.1, 556.2, 561	8/7/2014	M.Z.

SEARCH NOTES

Search Notes	Date	Examiner
Searched in EAST: US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT & IBM_TDB	6/25/2014	M.Z.
Searchedby: Assignee; Inventors; Keywords; Class-subclasses and CPC symbols (for more detail, please refer to the attached search history printout)	6/25/2014	M>Z.
The above databases and class-subclasses have been updated (pease see attached search history printout)>	8/7/2014	M.Z.

	/MELESS ZEWDU/ Primary Examiner, Art Unit 2643

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
370	252, 328, 329, 341, 344	8/7/2014	M.Z.
455	425, 509, 452.2	8/14/2014	M.Z.

	/MELESS ZEWDU/ Primary Examiner, Art Unit 2643

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14294106	LI ET AL.
	Examiner	**Art Unit**
	MELESS ZEWDU	2643

CPC									
Symbol								**Type**	**Version**
H04J		11	/	003				I	2013-01-01
H04J		11	/	005				I	2013-01-01
H04W		24	/	08				I	2013-01-01
H04L		5	/	0007				I	2013-01-01
H04L		5	/	0073				F	2013-01-01
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CPC Combination Sets									
Symbol								**Type**	**Set**	**Ranking**	**Version**
			/								
			/								

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	32	
/MELESS ZEWDU/ Primary Examiner.Art Unit 2643	08/07/2014	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1B

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14294106	LI ET AL.
	Examiner	Art Unit
	MELESS ZEWDU	2643

US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS
370	252

CROSS REFERENCE(S)					
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				
370	328	329	341	344	
455	425	509	452.1		

INTERNATIONAL CLASSIFICATION					
CLAIMED					NON-CLAIMED
H	0	4	W	4 / 00 (2009.01.01)	
H	0	4	B	7 / 208 (2006.01.01)	
H	0	4	W	24 / 00 (2009.01.01)	
H	0	4	B	7 / 00 (2006.01.01)	
H	0	4	W	72 / 00 (2009.01.01)	

NONE		Total Claims Allowed:
(Assistant Examiner)	(Date)	32
/MELESS ZEWDU/ Primary Examiner.Art Unit 2643	08/07/2014	O.G. Print Claim(s): 1
(Primary Examiner)	(Date)	O.G. Print Figure: 1B

U.S. Patent and Trademark Office

Part of Paper No. 20140807

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14294106	LI ET AL.
	Examiner	**Art Unit**
	MELESS ZEWDU	2643

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

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	1	18	17												
2	2	19	18												
3	3	20	19												
4	4	21	20												
5	5	22	21												
6	6	23	22												
7	7	24	23												
8	8	25	24												
9	9	26	25												
10	10	27	26												
11	11	28	27												
12	12	29	28												
13	13	30	29												
14	14	31	30												
15	15	16	31												
17	16	32	32												

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 32	
/MELESS ZEWDU/ Primary Examiner.Art Unit 2643 (Primary Examiner)	08/07/2014 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 1B

U.S. Patent and Trademark Office

Part of Paper No. 20140807

Substitute for FORM PTO-1449	Attorney Docket Number 176.0003-06000	Customer No. 22882	
INFORMATION DISCLOSURE CITATION IN AN APPLICATION	Applicant Xiaodong Li et al.	Application Number 14/294,106	
(Use several sheets if necessary) Sheet 1 of 3	Filing Date June 2, 2014	Group Art Unit 2643	Examiner M. Zewdu

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	6,009,087	12/1999	Uchida et al.			
	6,347,091	2/2002	Wallentin et al.			
	6,405,043	6/2002	Jensen et al.			
	6,560,209	5/2003	Alamouti et al.			
	6,952,454	10/2005	Jalali et al.			

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION (YES/NO)
* JP Lits. 4-5 and 7-8; JP Trial 8	DE 198 00 953 C1	7/1999	Germany			YES
	EP 1 043 861 A1	10/2000	Europe			N/A
JP Lit. 1	JP 10-145854 A	5/1998	Japan			ABSTRACT ONLY
	JP 10-247955	9/1998	Japan			YES
JP Lit. 1	JP 11-196457 A	7/1999	Japan			ABSTRACT ONLY
* JP Lits. 1-2, 5, and 7-8; JP Trials 1 and 3-6	JP 11-508417	7/1999	Japan			ABSTRACT ONLY
* JP Lits. 7-8	JP 2000-49663	2/2000	Japan			ABSTRACT ONLY
JP Lit. 5	JP 2000-216842 A	8/2000	Japan			ABSTRACT ONLY
	JP 2000-286822 A	10/2000	Japan			ABSTRACT ONLY
JP Lit. 5	JP 2000-341236 A	12/2000	Japan			ABSTRACT ONLY
	JP 2001-238269 A	8/2001	Japan			YES
JP Lit. 5	WO 96/00470 A1	1/1996	WIPO			ABSTRACT ONLY

OTHER DOCUMENTS ***(Including Author, Title, Date, Pertinent Pages, Etc.)***

JP Lit. 1	Adaptix Inc. v. Huawei Japan, Japanese Litigation Case No. 28418 regarding corresponding Japanese Patent Nos. 3980478 and 4213466, Plaintiff's (Adaptix) Response to Defendant's (Huawei) Invalidity Contention Brief, July 11, 2014, 13 pgs.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.Z

JP Lit. 1	Adaptix Inc. v. Huawei Japan, Japanese Litigation Case No. 28418 regarding corresponding Japanese Patent Nos. 3980478 and 4213466. Defendant's (Huawei) Invalidity Contention Brief, July 11, 2014, 15 pgs.
JP Lit. 1	Adaptix Inc. v. Huawei Japan, Japanese Litigation Case No. 28418 regarding corresponding Japanese Patent Nos. 3980478 and 4213466, List of Non-Prior Art/Prior Art Documents cited in Defendant's (Huawei) Invalidity Contention Brief, July 11, 2014, 2 pgs.
JP Lit. 2	Adaptix Inc. v. ZTE Japan, Japanese Litigation Case No. 31440 regarding corresponding Japanese Patent Nos. 3980478 and 4213466, Plaintiff's (Adaptix) Invalidity Contention Brief, July 18, 2014, 43 pgs.
JP Lit. 2	Adaptix Inc. v. ZTE Japan, Japanese Litigation Case No. 31440 regarding corresponding Japanese Patent Nos. 3980478 and 4213466, List of Supporting Documents cited in Plaintiff's (Adaptix) Invalidity Contention Brief, July 18, 2014, 2 pgs.
JP Lit. 3	Adaptix Inc. v. Ericsson Japan, Japanese Litigation No. 1149 regarding corresponding Japanese Patent No. 3980478 and 4213466, Defendant's (Ericsson) Request for Dismissal Alleging Plaintiff's Failure to Make Infringement and Invalidity Contentions, July 25, 2014, 35 pgs.
JP Lit. 3	Adaptix Inc. v. Ericsson Japan, Japanese Litigation No. 1149 regarding corresponding Japanese Patent No. 3980478 and 4213466, List of Prior Art and Non-Prior Art Documents cited in Defendant's (Ericsson) Request for Dismissal, July 25, 2014, 2 pgs.
JP Lit. 4	Adaptix Inc. v. Huawei Japan, Japanese Litigation Case No. 17915 regarding corresponding Japanese Patent No. 4201595, Plaintiff's (Adaptix) Rebuttal to Defendant's (Huawei) Invalidity Contention Brief , July 28, 2014, 23 pgs.
JP Lit. 4	Adaptix Inc. v. Huawei Japan, Japanese Litigation Case No. 17915 regarding corresponding Japanese Patent No. 4201595, List of Non-Prior Art Documents cited in Plaintiff's (Adaptix) Rebuttal and Infringement Contention Brief, July 28, 2014, 6 pgs.
JP Lit. 5	Adaptix Inc. v. ZTE Japan, Japanese Litigation Case No. 19919 regarding corresponding Japanese Patent No. 4201595, Plaintiff's (Adaptix) Rebuttal to Defendant's (ZTE) Invalidity Contention Brief, July 31, 2014, 55 pgs.
JP Lit. 5	Adaptix Inc. v. ZTE Japan, Japanese Litigation Case No. 19919 regarding corresponding Japanese Patent No. 4201595, List of Supporting Documents cited in Plaintiff's (Adaptix) Rebuttal and Infringement Contention Brief, July 31, 2014, 5 pgs.
JP Lit. 5	Adaptix Inc. v. ZTE Japan, Japanese Litigation Case No. 19919 regarding corresponding Japanese Patent No. 4201595, Defendant's (ZTE) Invalidity Contention Brief, July 31, 2014, 33 pgs.
JP Lit. 5	Adaptix Inc. v. ZTE Japan, Japanese Litigation Case No. 19919 regarding corresponding Japanese Patent No. 4201595, List of Prior Art and Non-Prior Art Documents cited in Defendant's (ZTE) Rebuttal and Invalidity Contention Brief, July 31, 2014, 2 pgs.
JP Lit. 7	Adaptix Inc. v. LG Electronics, Japanese Litigation Case No. 23278 regarding corresponding Japanese Patent Nos. 4201595 and 5119070, Defendant's (LG) Invalidity Contention Brief, June 30, 2014, 22 pgs.
JP Lit. 7	Adaptix Inc. v. LG Electronics, Japanese Litigation Case No. 23278 regarding corresponding Japanese Patent Nos. 4201595 and 5119070, List of Non-Prior Art/Prior Art Documents cited in Defendant's (LG) Invalidity Contention Brief, July 1, 2014, 3 pgs.
JP Lit. 8	Adaptix Inc. v. LG Electronics, Japanese Litigation Case No. 10769 regarding corresponding Japanese Patent Nos. 4201595 and 5119070, Defendant's (LG) Invalidity Contention Brief regarding Japanese Patent No. 4201595, July 4, 2014, 29 pgs.
JP Lit. 8	Adaptix Inc. v. LG Electronics, Japanese Litigation Case No. 10769 regarding corresponding Japanese Patent Nos. 4201595 and 5119070, Defendant's (LG)'s Invalidity Contention Brief regarding Japanese Patent No. 5119070, July 4, 2014, 46 pgs.
JP Lit. 8	Adaptix Inc. v. LG Electronics, Japanese Litigation Case No. 10769 regarding corresponding Japanese Patent Nos. 4201595 and 5119070, List of Non-Prior Art/Prior Art Documents cited in Defendant's Infringement and Invalidity Contention Briefs, July 4, 2014, 3 pgs.
JP Trial 4	Huawei v. Adaptix Inc., Japanese Invalidation Trial No. 2013-800147 regarding corresponding Japanese Patent No. 4213466, Favorable Trial Decision issued by Trial Examiner upholding patentability of Japanese Patent No. 4213466, June 17, 2014, 79 pgs (with partial translation).
* JP Lits. 7-8	Chuang et al., "Wideband Wireless Data Access Based on OFDM and Dynamic Packet Assignment," IEEE 0-7803-5668-3/99, September 21, 1999, 5 pgs.
JP Lit. 3	"Dictionary of Science and Engineering," 3rd Edition, IPC Inter Press Corporation, Page 1176, December 20, 1994, 3 pgs.
JP Lit. 7	IEEE Standard Dictionary of Electrical and Electronics Terms, Sixth Edition, Pages 304-305, September 30, 1989, 3 pgs.
JP Lit. 1	Kaiser, "MC-FDMA and MC-TDMA versus MC-CDMA and SS-MC-MA: Performance Evaluation for Fading Channels," Spread Spectrum Techniques and Applications, 1998. Proceedings, 1998 IEEE 5th Int'l Symposium on, 0-7803-4281-X, Pages 200-204, September 2, 1998, 7 pgs.

* JP Lits. 5 and 7-8; JP Trial 6	Keller, Thomas, et al., "Adaptive Multicarrier Modulation: A Convenient Framework for Time-Frequency Processing in Wireless Communications," IEEE Proceedings of the IEEE, Vol. 88, No.5, Pages 611-640, May 5, 2000, 30 pgs.
JP Lit. 2	Midorikawa, "Information Science Dictionary," Iwanami Shoten Publisher, Pages 472-473, May 25, 1990, 3 pgs.
JP Lit. 3	Shogakukan, "New Shogakukan Random House English-Japanese Dictionary," Pages 1000-1001 and 1737, January 10, 1999, 5 pgs.

EXAMINER	/Meless Zewdu/	**DATE CONSIDERED**	08/08/2014

EXAMINER: Initial if citation 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 the applicant.

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1004568	(("370"/("252", 328-330, "338", "341", 343-345, "431", 436-437, 464-465, "468", 480-482, "537").ccls.) or ("455"/("67.11", 101-104, "420", "423", "425", "434", 450-451, "452.1-452.2", "509", "550.1", "556.2", "561").ccls.))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/08/07 14:25
L2	337	((Xiaodong) near2 (Li)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/07 14:26
L3	505	((Hui) near2 (Liu)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/07 14:26
L4	78	((Kemin) near2 (Li)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/07 14:26
L5	104	((Wenzhong) near2 (Zhang)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/07 14:26
L6	860	l2 or l3 or l4 or l5	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/08/07 14:26
L7	4	(BROADSTORM ADJ TELECOMMUNICATIONS).AS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/08/07 14:27
L8	42	("6473467" | "7933244" | "8743717" | "6904283" | "8760992" | "6526281" | "6947748" | "7355962" | "8406700" | "8767702" | "6928120" | "6985432" | "20070147536" | "7454212" | "7573850" | "8750238" | "8743729" | "6795424").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/08/07 14:28
L9	2256	((subcarrier or sub-carrier or subchannel or sub-channel or OFDM or OFDMA) and ((first or initial$3) near12 (measur$5 or feedback or report$3)) and ((first or initial$3) near12 (assign$5 or allocat$3)) and ((second$3 or additional$3) near12 (measur$5 or feedback or report$3)) and ((second) near12 (assign$5 or allocat$3)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/08/07 14:36
L10	539	((subcarrier or sub-carrier or	US-PGPUB;	OR	ON	2014/08/07

		subchannel or sub-channel or OFDM or OFDMA) and ((first or initial$3) near12 (measur$5 or feedback or report$3)) and ((first or initial$3) near12 (assign$5 or allocat$3)) and ((second$3 or additional$3) near12 (measur$5 or feedback or report$3)) and ((second) near12 (assign$5 or allocat$3)) and (rate near16 (modulation near12 coding)))	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			14:38
L11	111	((subcarrier or sub-carrier or subchannel or sub-channel or OFDM or OFDMA) and ((first or initial$3) near12 (measur$5 or feedback or report$3)) and ((first or initial$3) near12 (assign$5 or allocat$3)) and ((second$3 or additional$3) near12 (measur$5 or feedback or report$3)) and ((second) near12 (assign$5 or allocat$3)) and (rate near16 (modulation near12 coding)) and (((base near2 station) or (access adj point)) with (select$3 near12 (assign$5 or allocation))))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/08/07 14:40
L12	109	((subcarrier or sub-carrier or subchannel or sub-channel or OFDM or OFDMA) and ((first or initial$3) near12 (measur$5 or feedback or report$3)) and ((first or initial$3) near12 (assign$5 or allocat$3)) and ((second$3 or additional$3) near12 (measur$5 or feedback or report$3)) and ((second) near12 (assign$5 or allocat$3)) and (rate near16 (modulation near12 coding)) and (((base near2 station) or (access adj point)) near20 (select$3 near10 (assign$5 or allocation))))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/08/07 14:41
L13	45	(((measuring or measures) near20 (subcarrier or sub-carrier or subchannel or sub-channel or OFDM or OFDMA)) and ((first or initial$3) near12 (measur$5 or feedback or report$3)) and ((first or initial$3) near12 (assign$5 or allocat$3)) and ((second$3 or additional$3) near12 (measur$5 or feedback or report$3)) and ((second) near12 (assign$5 or allocat$3)) and (rate near16 (modulation near12 coding)) and (((base near2 station) or (access adj point)) near20 (select$3 near10 (assign$5 or allocation))))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/08/07 14:43
L14	18	l1 and l13	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/08/07 14:46
L15	42	l6 and l13	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2014/08/07 14:46

			DERWENT; IBM_TDB			
L16	0	l7 and l13	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/08/07 14:47
L17	9	l8 and l13	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/08/07 14:47
L18	43	l14 or l15 or l17	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/08/07 14:47
L19	0	(((measuring or measures) near20 (subcarrier or sub-carrier or subchannel or sub-channel or OFDM or OFDMA)) and ((first or initial$3) near12 (measur$5 or feedback or report$3)) and ((first or initial$3) near12 (assign$5 or allocat$3)) and ((second$3 or additional$3) near12 (measur$5 or feedback or report$3)) and ((second) near12 (assign$5 or allocat$3)) and (rate near16 (modulation near12 coding)) and (((base near2 station) or (access adj point)) near20 (select$3 near10 (assign$5 or allocation)))).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/08/07 14:47
L20	17	("836199", "7715358", "7454212", "6947748").pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/08/07 14:49
L21	3	l12 and l20	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/08/07 14:50

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L22	0	((("370"/("252", "328", "329", "341", "344").ccls.) or ("455"/("425", "509", "452.2").ccls.)) and ((measuring or measures or measured) with (subcarrier or sub-carrier or subchannel or sub-channel or OFDM or	US-PGPUB; USPAT; UPAD	OR	ON	2014/08/07 14:56

		OFDMA)) and ((first or initial$3) near12 (measur$5 or feedback or report$3)) and ((first or initial$3) near12 (assign$5 or allocat$3)) and ((second$3 or additional$3) near12 (measur$5 or feedback or report$3)) and ((second) near12 (assign$5 or allocat$3)) and (rate near16 (modulation near12 coding)) and (((base near2 station) or (access adj point)) near20 (select$3 near10 (assign$5 or allocation)))).clm.				

8/ 7/ 2014 2:57:28 PM
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Substitute for FORM PTO-1449	Attorney Docket Number 176.0003-06000	Customer No. 22882	
INFORMATION DISCLOSURE CITATION IN AN APPLICATION	Applicant Xiaodong Li et al.	Application Number 14/294,106	
(Use several sheets if necessary) Sheet 1 of 2	Filing Date June 2, 2014	Group Art Unit 2643	Examiner M. Zewdu

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	8,743,717	6/2014	Li et al.			
	8,743,729	6/2014	Li et al.			
	8,750,238	6/2014	Li et al.			
	8,760,992	6/2014	Xing et al.			
	8,767,702	7/2014	Li et al.			

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION (YES/NO)
* JP Lits. 4-5 and 7; JP Trial 8	DE 198 00 953 C1	7/1999	Germany			YES
* JP Lits. 1-2; JP Trials 3, 5, and 7	JP 11-504169 A	4/1999	Japan			ABSTRACT ONLY
JP Lit. 5	JP 2000-78062	3/2000	Japan			YES
* JP Lit. 1; JP Trial 7	JP 2003-530010	10/2003	Japan			ABSTRACT ONLY
* JP Lit. 1; JP Trial 3	JP 2013-55677 A	3/2013	Japan			ABSTRACT ONLY
* JP Lits. 1-3; JP Trials 1, 3, and 7	JP 3980478 B	8/2004	Japan			ABSTRACT ONLY
* JP Lits.4-12; JP Trial 8	JP 4201595 B	1/2005	Japan			ABSTRACT ONLY
* JP Lits. 1 and 4; JP Trials 7-8	WO 98/35463	8/1998	WIPO			N/A

OTHER DOCUMENTS ***(Including Author, Title, Date, Pertinent Pages, Etc.)***

* JP Lit. 1; JP Trial 7	Adaptix Inc. v. Huawei Japan, Japanese Litigation Case No. 28418 regarding corresponding Japanese Patent Nos. 3980478 and 4213466, Preparatory Document 7 filed by Plaintiff (Adaptix) dated December 25, 2013, 74 pgs.
* JP Lit. 1; JP Trial 7	Adaptix Inc. v. Huawei Japan, Japanese Litigation Case No. 28418 regarding corresponding Japanese Patent Nos. 3980478 and 4213466, Preparatory Document 8 filed by Plaintiff (Adaptix) dated December 25, 2013, 7 pgs.
JP Lit. 4	Adaptix Inc. v. Huawei Japan, Japanese Litigation Case No. 17915 regarding corresponding Japanese Patent No. 4201595, Defendant's (Huawei) Invalidity Contention Brief, May 30, 2014, 41 pgs.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.Z

JP Lit. 4	Adaptix Inc. v. Huawei Japan, Japanese Litigation Case No. 17915 regarding corresponding Japanese Patent No. 4201595, List of Prior Art/Non-Prior Art Documents cited in Invalidity Contention Brief submitted by Defendant (Huawei), May 30, 2014, 2 pgs.
JP Lit. 5	Adaptix Inc. v. ZTE Japan, Japanese Litigation Case No. 19919 regarding corresponding Japanese Patent No. 4201595, Plaintiff's (Adaptix) Response to Defendant's (ZTE) Invalidity Contention Brief, May 30, 2014, 21 pgs.
JP Lit. 5	Adaptix Inc. v. ZTE Japan, Japanese Litigation Case No. 19919 regarding corresponding Japanese Patent No. 4201595, Defendant's (ZTE) Invalidity Contention Brief, May 30, 2014, 88 pgs.
JP Lit. 5	Adaptix Inc. v. ZTE Japan, Japanese Litigation Case No. 19919 regarding corresponding Japanese Patent No. 4201595, List of Prior Art/Non-Prior Art Documents cited in Invalidity Contention Brief submitted by Defendant (ZTE), May 30, 2014, 2 pgs.
JP Lit. 11	Adaptix Inc. v. Apple Japan, Japanese Litigation Case No. 12198 regarding corresponding Japanese Patent Nos. 4201595 and 5119070, Defendant's (Apple) Response to Plaintiff's (Adaptix) Complaint, June 17, 2014, 2 pgs.
JP Trial 3	Huawei v. Adaptix Inc., Japanese Invalidation Trial No. 2013-800141 regarding corresponding Japanese Patent No. 3980478, Adaptix's Summary of Oral Proceedings, June 2, 2014, 14 pgs.
JP Trial 3	Huawei v. Adaptix Inc., Japanese Invalidation Trial No. 2013-800141 regarding corresponding Japanese Patent No. 3980478, Huawei's Summary of Oral Proceedings, June 2, 2014, 3 pgs.
JP Trial 3	Huawei v. Adaptix Inc., Japanese Invalidation Trial No. 2013-800141 regarding corresponding Japanese Patent No. 3980478, Huawei's Additional Summary of Oral Proceedings, June 10, 2014, 9 pgs.
JP Trial 3	Huawei v. Adaptix Inc., Japanese Invalidation Trial No. 2013-800141 regarding corresponding Japanese Patent No. 3980478, Summary of Hearing issued by Trial Examiner-in-Chief, June 18, 2014, 2 pgs.
JP Trial 5	ZTE Japan v. Adaptix Inc., Japanese Invalidation Trial No. 2013-800235 regarding corresponding Japanese Patent No. 3980478, ZTE's Response to Adaptix's Written Reply, May 30, 2014, 19 pgs.
JP Trial 5	ZTE Japan v. Adaptix Inc., Japanese Invalidation Trial No. 2013-800235 regarding corresponding Japanese Patent No. 3980478, Inquiry issued by Japanese Patent Office, June 16, 2014, 2 pgs.
JP Trial 7	Huawei v. Adaptix Inc., Japanese Invalidation Trial No. 2014-800074 regarding corresponding Japanese Patent No. 3980478, Demand filed by Huawei, May 13, 2014, 65 pgs.
JP Trial 8	Huawei v. Adaptix, Inc., Japanese Invalidation Trial No. 2014-800092 regarding corresponding Japanese Patent No. 4201595, Demand filed by Huawei, June 2, 2014, 42 pgs.
* JP Lits. 1-2 and 5-12; JP Trial 3	Hattori et al., "All about 3G Evolution: LTE Mobile Broadband System Technology," Maruzen Corporation, Pages 318-329, December 25, 2009, 8 pgs.
JP Lit. 4; JP Trial 8	Hadad et al., "Initial OFDM/OFDMA PHY proposal for the 802.16.3 BWA," IEEE 802.16 Broadband Wireless Access Working Group, IEEE 802.16.3c-00/33, October 30, 2000, 20 pgs.
JP Lit. 5	Hattori, "OFDM/OFDMA Textbook," Impress R&D, Pages 109-110 and 237-238, September 21, 2008, 5 pgs.
* JP Lits. 1 and 5-12; JP Trial 5	Hattori, "OFDM/OFDMA Textbook," Impress R&D, pages 78-85, September 21, 2008, 10 pgs.

EXAMINER	/Meless Zewdu/	**DATE CONSIDERED**	08/07/2014

EXAMINER: Initial if citation 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 the applicant.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	Confirmation No.: 9020
Xiaodong Li et al.	)	
Serial No.: 14/294,106	)	Group Art Unit: 2643
Filed: June 2, 2014	)	Examiner: Meless Nmn Zewdu
For: OFDMA WITH ADAPTIVE SUBCARRIER-CLUSTER CONFIGURATION AND SELECTIVE LOADING	)	

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

Sir:

AMENDMENT

Further to the Amendment filed July 10, 2014, please amend the application as follows:

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

Remarks begin on page 8 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. (currently amended) A method for a wireless system employing orthogonal frequency division multiple access (OFDMA), the method comprising:

measuring, at a first time by a subscriber unit, a first channel information for a first plurality of subcarriers based on a first plurality of pilot symbols received from a base station;

providing, by the subscriber unit, a first feedback information relating to a plurality of feedback clusters based on at least the measuring of the first channel information for the first plurality of subcarriers based on the first plurality of pilot symbols, each feedback cluster of the plurality of feedback clusters being a plurality of subcarriers, the first feedback information relating to the plurality of feedback clusters based on the first plurality of pilot symbols includes an index corresponding to a first modulation and coding rate associated with each feedback cluster of the plurality of feedback clusters;

receiving, by the subscriber unit, a first allocation of OFDMA subcarriers based on at least the providing of the first feedback information selected by the base station for use by the subscriber unit, the first allocation of OFDMA subcarriers including an indication of a modulation and coding rate associated with the first allocation of OFDMA subcarriers;

measuring, at a second time by the subscriber unit, a second channel information for a second plurality of subcarriers based on a second plurality of pilot symbols received from the base station;

providing, by the subscriber unit, a second feedback information relating to the plurality of feedback clusters based on at least the measuring of the second channel information for the second plurality of subcarriers based on the second plurality of pilot symbols, the second feedback information relating to the plurality of

feedback clusters based on the second plurality of pilot symbols includes an index corresponding to a second modulation and coding rate associated with each feedback cluster of the plurality of feedback clusters; and

receiving, by the subscriber unit, a second allocation of OFDMA subcarriers based on at least the providing of the second feedback information selected by the base station for use by the subscriber unit, the second allocation of OFDMA subcarriers including an indication of a modulation and coding rate associated with the second allocation of OFDMA subcarriers, the second allocation of OFDMA subcarriers being different from the first allocation of OFDMA subcarriers, the first and second allocations of OFDMA subcarriers being received by the subscriber unit at two different times.

2. (original) The method of claim 1, wherein the plurality of feedback clusters at the second time is different than the plurality of feedback clusters at the first time.

3. (original) The method of claim 1, wherein at least one subcarrier of the first allocation of OFDMA subcarriers is non-contiguous with other subcarriers of the first allocation of OFDMA subcarriers.

4. (original) The method of claim 3, wherein the first allocation of OFDMA subcarriers includes a cluster identifier that identifies a first plurality of subcarriers in a first time slot and a second plurality of subcarriers in a second time slot, at least two subcarriers of the first plurality of subcarriers and of the second plurality of subcarriers being disjoint.

5. (original) The method of claim 4, wherein at least one subcarrier of the first plurality of subcarriers in the first time slot is different than all of the subcarriers of the second plurality of subcarriers in the second time slot.

6. (original) The method of claim 1, wherein the receiving of the first allocation of OFDMA subcarriers is receiving a first allocation of at least one diversity cluster.

7. (original) The method of claim 6, wherein the at least one diversity cluster includes two or more subcarriers spread farther apart than a coherence bandwidth of a respective channel.

8. (original) The method of claim 1, wherein the receiving of the first allocation of OFDMA subcarriers is receiving a first allocation of at least one coherence cluster.

9. (original) The method of claim 1, wherein the receiving of the first allocation of OFDMA subcarriers includes receiving a first allocation of at least one group of clusters selected by the base station for use by the subscriber unit.

10. (original) The method of claim 9, wherein at least one cluster of the first allocation of the at least one group of clusters is disjoint from at least one other cluster of the first allocation of the at least one group of clusters to obtain frequency diversity.

11. (original) The method of claim 10, wherein disjoint clusters of the first allocation of the at least one group of clusters are spread farther apart than a coherence bandwidth of a respective channel.

12. (original) The method of claim 9, wherein the receiving of the first allocation of the at least one group of clusters includes consecutive clusters.

13. (original) The method of claim 9, wherein the receiving of the first allocation of the at least one group of clusters includes an indication of space between each cluster of the first allocation of the at least one group of clusters.

14. (original) The method of claim 9, wherein the receiving of the first allocation of the at least one group of clusters includes receiving a group identifier that identifies one group of the first allocation of the at least one group of clusters.

15. (previously presented) The method of claim 1, wherein the measuring of the first channel information for the first plurality of subcarriers based on the first plurality of pilot symbols includes measuring channel information for all available clusters allocable by the base station.

16. (currently amended) A subscriber unit in a wireless system employing orthogonal frequency division multiple access (OFDMA), the subscriber unit comprising:

a processor configured to:

measure, at a first time, a first channel information for a first plurality of subcarriers based on a first plurality of pilot symbols received from a base station;

provide a first feedback information relating to a plurality of feedback clusters based on at least the measurement of the first channel information for the first plurality of subcarriers based on the first plurality of pilot symbols, each feedback cluster of the plurality of feedback clusters being a plurality of

subcarriers, the first feedback information relating to the plurality of feedback clusters based on the first plurality of pilot symbols includes an index corresponding to a first modulation and coding rate associated with each feedback cluster of the plurality of feedback clusters;

receive a first allocation of OFDMA subcarriers based on at least the first feedback information and selected by the base station for use by the subscriber unit, the first allocation of OFDMA subcarriers including an indication of a modulation and coding rate associated with the first allocation of OFDMA subcarriers;

measure, at a second time, a second channel information for a second plurality of subcarriers based on a second plurality of pilot symbols received from the base station;

provide a second feedback information relating to the plurality of feedback clusters based on at least the measurement of the second channel information for the second plurality of subcarriers based on the second plurality of pilot symbols, the second feedback information relating to the plurality of feedback clusters based on the second plurality of pilot symbols includes an index corresponding to a second modulation and coding rate associated with each feedback cluster of the plurality of feedback clusters; and

receive a second allocation of OFDMA subcarriers based on at least the second feedback information and selected by the base station for use by the subscriber unit, the second allocation of OFDMA subcarriers including an indication of a modulation and coding rate associated with the second allocation of OFDMA subcarriers, the second allocation of OFDMA subcarriers being different from the first allocation of OFDMA subcarriers, the first and second allocations of OFDMA subcarriers being received by the subscriber unit at two different times.

17. (original) The subscriber unit of claim 16, wherein the plurality of feedback clusters at the second time is different than the plurality of feedback clusters at the first time.

18. (original) The subscriber unit of claim 16, wherein at least one subcarrier of the first allocation of OFDMA subcarriers is non-contiguous with other subcarriers of the first allocation of OFDMA subcarriers.

19. (original) The subscriber unit of claim 18, wherein the first allocation of OFDMA subcarriers includes a cluster identifier that identifies a first plurality of subcarriers in a first time slot and a second plurality of subcarriers in a second time slot, at least two subcarriers of the first plurality of subcarriers and of the second plurality of subcarriers being disjoint.

20. (original) The subscriber unit of claim 19, wherein at least one subcarrier of the first plurality of subcarriers in the first time slot is different than all of the subcarriers of the second plurality of subcarriers in the second time slot.

21. (original) The subscriber unit of claim 16, wherein receipt of the first allocation of OFDMA subcarriers is receipt of a first allocation of at least one diversity cluster.

22. (original) The subscriber unit of claim 21, wherein the at least one diversity cluster includes two or more subcarriers spread farther apart than a coherence bandwidth of a respective channel.

23. (original) The subscriber unit of claim 16, wherein receipt of the first allocation of OFDMA subcarriers is receipt of a first allocation of at least one coherence cluster.

24. (original) The subscriber unit of claim 16, wherein receipt of the first allocation of OFDMA subcarriers includes receipt of a first allocation of at least one group of clusters selected by the base station for use by the subscriber unit.

25. (original) The subscriber unit of claim 24, wherein at least one cluster of the first allocation of the at least one group of clusters is disjoint from at least one other cluster of the first allocation of the at least one group of clusters to obtain frequency diversity.

26. (original) The subscriber unit of claim 25, wherein disjoint clusters of the first allocation of the at least one group of clusters are spread farther apart than a coherence bandwidth of a respective channel.

27. (original) The subscriber unit of claim 24, wherein receipt of the first allocation of the at least one group of clusters includes consecutive clusters.

28. (original) The subscriber unit of claim 24, wherein receipt of the first allocation of the at least one group of clusters includes an indication of space between each cluster of the first allocation of the at least one group of clusters.

29. (original) The subscriber unit of claim 24, wherein receipt of the first allocation of the at least one group of clusters includes receipt of a group identifier that identifies one group of the first allocation of the at least one group of clusters.

30. (previously presented) The subscriber unit of claim 16, wherein the measurement of the first channel information for the first plurality of subcarriers based on the first plurality of pilot symbols includes measurement of channel information for all available clusters allocable by the base station.

31. (new) The method of claim 1, wherein the providing of the first feedback information includes providing the first feedback information relating to all of the plurality of feedback clusters.

32. (new) The subscriber unit of claim 16, wherein the processor is further configured to provide the first feedback information relating to all of the plurality of feedback clusters.

REMARKS

Applicant amended independent claims 1 and 16 and added new dependent claims 31 and 32 to further define Applicant's invention.

Applicant submits that amended independent claims 1 and 16 are patentable and that dependent claims 2-15 and 17-32, dependent from amended independent claims 1 or 16, or claims dependent therefrom, are patentable at least due to their dependency from an allowable independent claim.

In view of the foregoing remarks, it is respectfully submitted that the claims, as amended, are patentable. Therefore, it is requested that the Examiner reconsider the outstanding rejections in view of the preceding comments. Issuance of a timely Notice of Allowance of the claims is earnestly solicited.

To the extent any extension of time under 37 C.F.R. § 1.136 is required to obtain entry of this reply, such extension is hereby respectfully requested. If there are any fees due under 37 C.F.R. §§ 1.16 or 1.17 which are not enclosed herewith, including any fees required for an extension of time under 37 C.F.R. § 1.136, please charge such fees to our Deposit Account No. 50-1068.

Respectfully submitted,

MARTIN & FERRARO, LLP

Date: August 8, 2014

By: /Alfred Y. Chu/
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	Confirmation No.: 9020
Xiaodong Li et al.	)	
Serial No.: 14/294,106	)	Group Art Unit: 2643
Filed: June 2, 2014	)	Examiner: Meless Nmn Zewdu
For: OFDMA WITH ADAPTIVE SUBCARRIER-CLUSTER CONFIGURATION AND SELECTIVE LOADING	)	

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

Sir:

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. § 1.97(c)

Pursuant to 37 C.F.R. §§ 1.56 and 1.97(c), Applicant brings to the attention of the Examiner the documents listed on the attached Form PTO/SB/08. This Information Disclosure Statement is being filed after the events recited in Section 1.97(b) but, to the undersigned's knowledge, before the mailing date of either a Final Action or a Notice of Allowance. Under the provisions of 37 C.F.R. § 1.97(c), this Information Disclosure Statement is accompanied by a fee of $180.00 as specified by Section 1.17(p).

The present application is a continuation of U.S. Application No. 13/230,625, filed September 12, 2011 (Publication No. 2012/0069755), which is pending; which is a continuation of U.S. Application No. 12/748,781, filed March 29, 2010, now U.S. Patent No. 8,036,199; which is a continuation of U.S. Application No. 11/931,926, filed October 31, 2007, now U.S. Patent No. 7,715,358; which is a continuation of U.S. Application No. 11/199,586, filed August 8, 2005, now U.S. Patent No. 7,454,212; which is a continuation of U.S. Application No. 09/738,086, filed December 15, 2000, now U.S. Patent No. 6,947,748; upon which Applicant relies for the benefits provided in 35 U.S.C. § 120.

Applicant brings to the Examiner's attention Application Nos. 09/898,163, filed July 2, 2001, now U.S. Patent No. 6,751,444; 09/692,681, filed October 18, 2000, now

U.S. Patent No. 6,870,808; 09/837,337, filed April 17, 2001, now U.S. Patent No. 6,904,283; 09/685,977, filed October 10, 2000, now U.S. Patent No. 7,072,315; 09/837,701, filed April 17, 2001, now U.S. Patent No. 7,146,172; 11/085,826, filed March 21, 2005, now U.S. Patent No. 7,355,962; 11/592,084, filed November 2, 2006, now U.S. Patent No. 7,379,742; 11/931,759, filed October 31, 2007, now U.S. Patent No. 7,489,934; 11/925,229, filed October 26, 2007, now U.S. Patent No. 7,573,850; 11/007,064, filed December 7, 2004, now U.S. Patent No. 7,573,851; 11/931,385, filed October 31, 2007, now U.S. Patent No. 7,650,152; 12/470,922, filed May 22, 2009, now U.S. Patent No. 7,933,244; 10/534,200, filed January 18, 2006, now U.S. Patent No. 8,005,479; 12/399,624, filed March 6, 2009, now U.S. Patent No. 8,738,020; 13/053,091, filed March 21, 2011, now U.S. Patent No. 8,743,717; 13/731,825, filed December 31, 2012, now U.S. Patent No. 8,743,729; 13/801,846, filed March 13, 2013, now U.S. Patent No. 8,750,238; 13/756,957, filed February 1, 2013, now U.S. Patent No. 8,760,992; 13/801,788, filed March 13, 2013, now U.S. Patent No. 8,767,702; 12/498,924, filed July 7, 2009, now U.S. Patent No. 8,797,970; 13/053,111, filed March 21, 2011 (Publication No. 2011/0170446), which is pending; 13/053,127, filed March 21, 2011 (Publication No. 2011/0222495), which is pending; 13/186,221, filed July 19, 2011 (Publication No. 2011/0312367), which is pending; 13/731,832, filed December 31, 2012 (Publication No. 2013/0121200), which is pending; 14/286,780, filed May 23, 2014, which is pending; 14/286,884, filed May 23, 2014, which is pending; 14/294,106, filed June 2, 2014, which is pending; and 14/294,117, filed June 2, 2014, which is pending.

Applicant also brings to the attention of the Examiner the file history (the Office Actions and responses) of each of the above-referenced patents and applications. While the individual Office Actions and responses are not attached hereto, they are available in each of the file wrappers in the Patent Office, through PAIR, or will be provided by Applicant at the Examiner's request.

Applicant notes that copies of the listed non-U.S. patent documents not previously submitted in a prior application are attached. Copies of the other non-U.S. patent documents were previously submitted in one of the prior applications listed above, upon which the present application relies for the benefits provided in 35 U.S.C.

§ 120. Applicant respectfully requests that the Examiner consider the documents upon which Applicant relies for the benefits provided in 35 U.S.C. § 120 and indicate that they were considered by making appropriate notations on the attached form.

Applicant brings to the Examiner's attention that Applicant's Japanese Patent Nos. JP 3980478 (which corresponds to International Application No. PCT/US01/31766, filed October 10, 2001, which claims priority to U.S. Patent No. 7,072,315) and JP 4213466 (which corresponds to International Application No. PCT/US01/48701, filed December 13, 2001, which claims priority to U.S. Patent No. 7,146,172) are currently the subject of several litigations in Japan, Civil Action No. 28418 entitled "Adaptix, Inc. v. Huawei Japan," Civil Action No. 31440 entitled "Adaptix, Inc. v. ZTE Japan," and Civil Action No. 1149 entitled "Adaptix, Inc. v. Ericsson Japan," hereinafter referred to as "JP Lits. 1, 2, and 3," respectively.

Applicant also brings to the Examiner's attention that Applicant's Japanese Patent No. JP 4201595 (which corresponds to International Application No. PCT/US01/48421, filed December 13, 2001, which claims priority to U.S. Patent No. 6,947,748) is currently the subject of several litigations in Japan, Civil Action No. 17915 entitled "Adaptix, Inc. v. Huawei Japan," Civil Action No. 19919 entitled "Adaptix, Inc. v. ZTE Japan," and Civil Action No. 23278 entitled "Adaptix, Inc. v. LG Electronics Japan," hereinafter referred to as "JP Lits. 4, 5, and 7," respectively.

Applicant brings to the Examiner's attention that Applicant's Japanese Patent Nos. JP 4201595 and JP 5119070 (which claims priority to U.S. Patent No. 6,947,748) are the subject of litigations in Japan, Civil Action No. 22141 entitled "Adaptix, Inc. v. Kyocera," Civil Action No. 10769 entitled "Adaptix, Inc. v. LG Electronics Japan," Civil Action No. 12187 entitled "Adaptix, Inc. v. ZTE Japan," Civil Action No. 12188 entitled "Adaptix, Inc. v. Huawei Japan," Civil Action No. 12198 entitled "Adaptix, Inc. v. Apple Japan," and Civil Action No. 12199 entitled "Adaptix, Inc. v. Kyocera," hereinafter referred to as "JP Lits. 6 and 8-12," respectively. JP Lit. 9 has been withdrawn by Adaptix, Inc.

Applicant brings to the Examiner's attention that Applicant's Japanese Patent No. JP 3980478 is currently the subject of several Invalidation Trials in Japan, Trial No. 2013-800082 entitled "ZTE Japan v. Adaptix, Inc.," Trial No. 2013-800141 entitled

"Huawei v. Adaptix, Inc.," Trial No. 2013-800235 entitled "ZTE Japan v. Adaptix, Inc.," and Trial No. 2014-800074 entitled "Huawei v. Adaptix, Inc.," hereinafter referred to as "JP Trials 1, 3, 5, and 7," respectively.

Applicant brings to the Examiner's attention that Applicant's Japanese Patent No. JP 4213466 is the subject of several Invalidation Trials in Japan, Trial No. 2013-800083 entitled "ZTE Japan v. Adaptix, Inc." and Trial No. 2013-800147 entitled "Huawei v. Adaptix, Inc.," hereinafter referred to as "JP Trials 2 and 4," respectively. In JP Trials 2 and 4, the Japanese Patent Office upheld the patentability of Japanese Patent No. JP4213466 in favor of Adaptix, Inc.

Applicant brings to the Examiner's attention that Applicant's Japanese Patent No. JP 4201595 is currently the subject of several Invalidation Trials in Japan, Trial No. 2014-800008 entitled "ZTE Japan v. Adaptix, Inc." and Trial No. 2014-800092 entitled "Huawei v. Adaptix, Inc.," hereinafter referred to as "JP Trials 6 and 8."

Applicant notes for the Examiner on the attached Form PTO/SB/08 in the column for the Examiner's initials the references from JP Lits. 1-12, and JP Trials 1-8. References from JP Lits. 1-12, and JP Trials 1-8 are identified by the designation "JP Lit. 1-12," and "JP Trial 1-8," respectively. Copies of the Japanese documents as provided to Applicant by the defendants in JP Lits. 1-12 and JP Trials 1-8 are being submitted and include a translation when provided by the defendants or when an English abstract is readily available.

Applicant hereby respectfully requests the Examiner to advise Applicant of any additional types of litigation documents beyond those already provided that the Examiner may desire in association with the present application.

An asterisk "*" identifies references that were disclosed by Applicant with previously filed information disclosure statements that are being relisted to ensure that the Examiner is aware that the defendants in one of the above proceedings have alleged that these references are pertinent to at least one of the JP 3980478, JP 4213466, JP 4201595, and JP 5119070 patents.

This submission does not represent that a search has been made or that no better art exists and does not constitute an admission that each or all of the listed documents are material or constitute "prior art." If the Examiner applies any of the

documents as prior art against any claims in the application and Applicant determines that the cited documents do not constitute "prior art" under United States law, Applicant reserves the right to present to the office the relevant facts and law regarding the appropriate status of such documents.

Applicant further reserves the right to take appropriate action to establish the patentability of the disclosed invention over the listed documents, should one or more of the documents be applied against the claims of the present application.

If there is any fee due in connection with the filing of this Statement, please charge the fee to our Deposit Account No. 50-1068.

Respectfully submitted,

MARTIN & FERRARO, LLP

Date: August 8, 2014

By: /Alfred Y. Chu/
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Substitute for FORM PTO-1449	Attorney Docket Number 176.0003-06000	Customer No. 22882	
INFORMATION DISCLOSURE CITATION IN AN APPLICATION	Applicant Xiaodong Li et al.	Application Number 14/294,106	
(Use several sheets if necessary) Sheet 1 of 3	Filing Date June 2, 2014	Group Art Unit 2643	Examiner M. Zewdu

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	6,009,087	12/1999	Uchida et al.			
	6,347,091	2/2002	Wallentin et al.			
	6,405,043	6/2002	Jensen et al.			
	6,560,209	5/2003	Alamouti et al.			
	6,952,454	10/2005	Jalali et al.			

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION (YES/NO)
* JP Lits. 4-5 and 7-8; JP Trial 8	DE 198 00 953 C1	7/1999	Germany			YES
	EP 1 043 861 A1	10/2000	Europe			N/A
JP Lit. 1	JP 10-145854 A	5/1998	Japan			ABSTRACT ONLY
	JP 10-247955	9/1998	Japan			YES
JP Lit. 1	JP 11-196457 A	7/1999	Japan			ABSTRACT ONLY
* JP Lits. 1-2, 5, and 7-8; JP Trials 1 and 3-6	JP 11-508417	7/1999	Japan			ABSTRACT ONLY
* JP Lits. 7-8	JP 2000-49663	2/2000	Japan			ABSTRACT ONLY
JP Lit. 5	JP 2000-216842 A	8/2000	Japan			ABSTRACT ONLY
	JP 2000-286822 A	10/2000	Japan			ABSTRACT ONLY
JP Lit. 5	JP 2000-341236 A	12/2000	Japan			ABSTRACT ONLY
	JP 2001-238269 A	8/2001	Japan			YES
JP Lit. 5	WO 96/00470 A1	1/1996	WIPO			ABSTRACT ONLY

OTHER DOCUMENTS ***(Including Author, Title, Date, Pertinent Pages, Etc.)***

JP Lit. 1	Adaptix Inc. v. Huawei Japan, Japanese Litigation Case No. 28418 regarding corresponding Japanese Patent Nos. 3980478 and 4213466, Plaintiff's (Adaptix) Response to Defendant's (Huawei) Invalidity Contention Brief, July 11, 2014, 13 pgs.

JP Lit. 1	Adaptix Inc. v. Huawei Japan, Japanese Litigation Case No. 28418 regarding corresponding Japanese Patent Nos. 3980478 and 4213466, Defendant's (Huawei) Invalidity Contention Brief, July 11, 2014, 15 pgs.
JP Lit. 1	Adaptix Inc. v. Huawei Japan, Japanese Litigation Case No. 28418 regarding corresponding Japanese Patent Nos. 3980478 and 4213466, List of Non-Prior Art/Prior Art Documents cited in Defendant's (Huawei) Invalidity Contention Brief, July 11, 2014, 2 pgs.
JP Lit. 2	Adaptix Inc. v. ZTE Japan, Japanese Litigation Case No. 31440 regarding corresponding Japanese Patent Nos. 3980478 and 4213466, Plaintiff's (Adaptix) Invalidity Contention Brief, July 18, 2014, 43 pgs.
JP Lit. 2	Adaptix Inc. v. ZTE Japan, Japanese Litigation Case No. 31440 regarding corresponding Japanese Patent Nos. 3980478 and 4213466, List of Supporting Documents cited in Plaintiff's (Adaptix) Invalidity Contention Brief, July 18, 2014, 2 pgs.
JP Lit. 3	Adaptix Inc. v. Ericsson Japan, Japanese Litigation No. 1149 regarding corresponding Japanese Patent No. 3980478 and 4213466, Defendant's (Ericsson) Request for Dismissal Alleging Plaintiff's Failure to Make Infringement and Invalidity Contentions, July 25, 2014, 35 pgs.
JP Lit. 3	Adaptix Inc. v. Ericsson Japan, Japanese Litigation No. 1149 regarding corresponding Japanese Patent No. 3980478 and 4213466, List of Prior Art and Non-Prior Art Documents cited in Defendant's (Ericsson) Request for Dismissal, July 25, 2014, 2 pgs.
JP Lit. 4	Adaptix Inc. v. Huawei Japan, Japanese Litigation Case No. 17915 regarding corresponding Japanese Patent No. 4201595, Plaintiff's (Adaptix) Rebuttal to Defendant's (Huawei) Invalidity Contention Brief , July 28, 2014, 23 pgs.
JP Lit. 4	Adaptix Inc. v. Huawei Japan, Japanese Litigation Case No. 17915 regarding corresponding Japanese Patent No. 4201595, List of Non-Prior Art Documents cited in Plaintiff's (Adaptix) Rebuttal and Infringement Contention Brief, July 28, 2014, 6 pgs.
JP Lit. 5	Adaptix Inc. v. ZTE Japan, Japanese Litigation Case No. 19919 regarding corresponding Japanese Patent No. 4201595, Plaintiff's (Adaptix) Rebuttal to Defendant's (ZTE) Invalidity Contention Brief, July 31, 2014, 55 pgs.
JP Lit. 5	Adaptix Inc. v. ZTE Japan, Japanese Litigation Case No. 19919 regarding corresponding Japanese Patent No. 4201595, List of Supporting Documents cited in Plaintiff's (Adaptix) Rebuttal and Infringement Contention Brief, July 31, 2014, 5 pgs.
JP Lit. 5	Adaptix Inc. v. ZTE Japan, Japanese Litigation Case No. 19919 regarding corresponding Japanese Patent No. 4201595, Defendant's (ZTE) Invalidity Contention Brief, July 31, 2014, 33 pgs.
JP Lit. 5	Adaptix Inc. v. ZTE Japan, Japanese Litigation Case No. 19919 regarding corresponding Japanese Patent No. 4201595, List of Prior Art and Non-Prior Art Documents cited in Defendant's (ZTE) Rebuttal and Invalidity Contention Brief, July 31, 2014, 2 pgs.
JP Lit. 7	Adaptix Inc. v. LG Electronics, Japanese Litigation Case No. 23278 regarding corresponding Japanese Patent Nos. 4201595 and 5119070, Defendant's (LG) Invalidity Contention Brief, June 30, 2014, 22 pgs.
JP Lit. 7	Adaptix Inc. v. LG Electronics, Japanese Litigation Case No. 23278 regarding corresponding Japanese Patent Nos. 4201595 and 5119070, List of Non-Prior Art/Prior Art Documents cited in Defendant's (LG) Invalidity Contention Brief, July 1, 2014, 3 pgs.
JP Lit. 8	Adaptix Inc. v. LG Electronics, Japanese Litigation Case No. 10769 regarding corresponding Japanese Patent Nos. 4201595 and 5119070, Defendant's (LG) Invalidity Contention Brief regarding Japanese Patent No. 4201595, July 4, 2014, 29 pgs.
JP Lit. 8	Adaptix Inc. v. LG Electronics, Japanese Litigation Case No. 10769 regarding corresponding Japanese Patent Nos. 4201595 and 5119070, Defendant's (LG)'s Invalidity Contention Brief regarding Japanese Patent No. 5119070, July 4, 2014, 46 pgs.
JP Lit. 8	Adaptix Inc. v. LG Electronics, Japanese Litigation Case No. 10769 regarding corresponding Japanese Patent Nos. 4201595 and 5119070, List of Non-Prior Art/Prior Art Documents cited in Defendant's Infringement and Invalidity Contention Briefs, July 4, 2014, 3 pgs.
JP Trial 4	Huawei v. Adaptix Inc., Japanese Invalidation Trial No. 2013-800147 regarding corresponding Japanese Patent No. 4213466, Favorable Trial Decision issued by Trial Examiner upholding patentability of Japanese Patent No. 4213466, June 17, 2014, 79 pgs (with partial translation).
* JP Lits. 7-8	Chuang et al., "Wideband Wireless Data Access Based on OFDM and Dynamic Packet Assignment," IEEE 0-7803-5668-3/99, September 21, 1999, 5 pgs.
JP Lit. 3	"Dictionary of Science and Engineering," 3rd Edition, IPC Inter Press Corporation, Page 1176, December 20, 1994, 3 pgs.
JP Lit. 7	IEEE Standard Dictionary of Electrical and Electronics Terms, Sixth Edition, Pages 304-305, September 30, 1989, 3 pgs.
JP Lit. 1	Kaiser, "MC-FDMA and MC-TDMA versus MC-CDMA and SS-MC-MA: Performance Evaluation for Fading Channels," Spread Spectrum Techniques and Applications, 1998. Proceedings, 1998 IEEE 5th Int'l Symposium on, 0-7803-4281-X, Pages 200-204, September 2, 1998, 7 pgs.

* JP Lits. 5 and 7-8; JP Trial 6	Keller, Thomas, et al., "Adaptive Multicarrier Modulation: A Convenient Framework for Time-Frequency Processing in Wireless Communications," IEEE Proceedings of the IEEE, Vol. 88, No.5, Pages 611-640, May 5, 2000, 30 pgs.
JP Lit. 2	Midorikawa, "Information Science Dictionary," Iwanami Shoten Publisher, Pages 472-473, May 25, 1990, 3 pgs.
JP Lit. 3	Shogakukan, "New Shogakukan Random House English-Japanese Dictionary," Pages 1000-1001 and 1737, January 10, 1999, 5 pgs.

EXAMINER	DATE CONSIDERED

EXAMINER: Initial if citation 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 the applicant.

Electronic Patent Application Fee Transmittal

Application Number:	14294106
Filing Date:	02-Jun-2014
Title of Invention:	OFDMA WITH ADAPTIVE SUBCARRIER-CLUSTER CONFIGURATION AND SELECTIVE LOADING
First Named Inventor/Applicant Name:	Xiaodong Li
Filer:	Alfred Young Chu/Chloe Hong
Attorney Docket Number:	176.0003-06000

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:				
Claims in Excess of 20	1202	2	80	160
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
		Total in USD ($)		**340**

Electronic Acknowledgement Receipt

EFS ID:	19816375
Application Number:	14294106
International Application Number:	
Confirmation Number:	9020
Title of Invention:	OFDMA WITH ADAPTIVE SUBCARRIER-CLUSTER CONFIGURATION AND SELECTIVE LOADING
First Named Inventor/Applicant Name:	Xiaodong Li
Customer Number:	22882
Filer:	Alfred Young Chu/Chloe Hong
Filer Authorized By:	Alfred Young Chu
Attorney Docket Number:	176.0003-06000
Receipt Date:	08-AUG-2014
Filing Date:	02-JUN-2014
Time Stamp:	15:34:30
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$340
RAM confirmation Number	1779
Deposit Account	501068
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Foreign Reference	EP1043861A1.pdf	960651 34d8cf03b1544 1b6fa5a21730ca5a6db88c2 62de	no	16
Warnings:					
Information:					
2	Foreign Reference	JP10145854_ABS_ONLY.pdf	2473033 6540c28c435198acc90d8991b1d553c908b 869c4	no	18
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Information:					
3	Foreign Reference	JP10247955_with_trans.pdf	1268116 1cea3be26e22cc68325b08d5056fac43bf8b 7096	no	12
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Information:					
4	Foreign Reference	JP11196457_ABS_ONLY.pdf	1851636 07fc9b25dd67b5321 1bedf0da897bbd3793 1a1de	no	12
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Information:					
5	Foreign Reference	JP2000216842_ABS_ONLY.pdf	17592754 324cd7f796746209bece2d8543067aa5c97 1afd6	no	33
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6	Foreign Reference	JP2000286822A_ABS_ONLY. pdf	1682594 434da0331f20df926e9e5f0299a68ab01663 dcd2	no	13
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7	Foreign Reference	JP2000341236_ABS_ONLY.pdf	1730490 eab8fbfba46d69b5462ed1d116adff23a82a aac4	no	16
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8	Foreign Reference	JP2001238269A_with_trans.pdf	1987627 ea49b632b8deafed9021e82f5eb74e9c770 6f68c	no	14
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9	Foreign Reference	WO9600470_ABS_ONLY.pdf	9324878 63f9ed392bb130d40a83d6cfa9cc6502ebcef0d1	no	25
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10	Non Patent Literature	JP_Lit_28418_Plaintiffs_Adaptix_Response_to_Defs_Invalidity_Cont_July_11_2014_13pgs.pdf	333809 a963f41169006888b1f456c2c3d6cff17dbd629a3	no	13
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11	Non Patent Literature	JP_Lit_28418_Defendants_Huawei_Invalidity_Contention_Brief_July_11_2014_15pgs.pdf	1599506 b56ce50cb6c0347ade9de408bc25ae30c64ef8b5	no	15
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12	Non Patent Literature	JP_Lit_28418_List_of_Non-Prior_Art_Prior_Art_Docs_in_Defs_Invalidity_Brief_July_11_2014_2pgs.pdf	147743 8920666ba7b1f401f9b6ee9ad1e42a72ba803409	no	2
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13	Non Patent Literature	JP_Lit_31440_Plaintiffs_Adaptix_Invalidity_Contention_Brief_July_18_2014_43pgs.pdf	2841776 6061a922c26e8f30c1a0f1f2073fcbf3c3fb8ffb	no	43
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14	Non Patent Literature	JP_Lit_31440_List_of_Supporting_Docs_in_Plaintiffs_Invalidity_Cont_Brief_July_18-2014_2pgs.pdf	65640 1609d97cb6d650555a5309aa7449e2f2fd5a29e6	no	2
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15	Non Patent Literature	JP_Lit_1149_Defendants_Ericsson_Request_for_Dismissal_July_25_2014_35pgs.pdf	3154344 0c4dacffe54f6ea5eec5b26c02698b628ff62737	no	35
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16	Non Patent Literature	JP_Lit_1149_List_of_Non-Prior_Art_Prior_Art_Docs_in_Defs_Request_July_25_2014_2pgs.pdf	134995 f63faabae3a2374a36cc5f279f30a4b3e663c4d6	no	2
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17	Non Patent Literature	JP_Lit_17915_Plaintiffs_Adaptix_Rebuttal_to_Defs_Invalidity_Cont_July_28_2014_23pgs.pdf	326407 72dd31002c6bcea55fe8833d22e242af9f78321b	no	23
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18	Non Patent Literature	JP_Lit_17915_List_of_Non-Prior_Art_Docs_in_Plaintiffs_Rebuttal_July_28_2014_6pgs.pdf	156854 a0c2e7464459f7c1f9f3a481a7bc26d6295c4258f	no	6
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Information:					
20	Non Patent Literature	JP_Lit_19919_List_of_Supporting_Docs_in_Plaintiffs_Rebuttal_and_Infring_Brief_July_31_2014_5pgs.pdf	143288 88df1a0ea9e351030a53f8442ad91e362b471f3f	no	5
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21	Non Patent Literature	JP_Lit_19919_Defendants_ZTE_Invalidity_Contention_July_31_2014_33pgs.pdf	1543691 41a4d42ba935a5f8d15d2a133de9d8fa17472975	no	33
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22	Non Patent Literature	JP_Lit_19919_List_of_Non-Prior_Art_Prior_Art_in_Defs_Briefs_July_31_2014_2pgs.pdf	87417 4fc9d01c40b5e53b6d9884960b65f870af6787a6	no	2
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Information:					
23	Non Patent Literature	JP_Lit_23278_Defendants_LG_Invalidity_Contention_Brief_June_30_2014_22pgs.pdf	2173194 bbe890123a1ba4499718f44f2de480c43db4f603	no	22
Warnings:					
Information:					
24	Non Patent Literature	JP_Lit_23278_List_of_Non-Prior_Art_Prior_Art_Docs_in_Def_Invality_Cont_July_1_2014_3pgs.pdf	188348 484b509bfaa6ab1f2542626800312aa6cd8f625d	no	3
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25	Non Patent Literature	JP_Lit_10769_Defendants_LG_Invalidity_Contetion_Brief_re_4201595_July_4_2014_29pgs.pdf	2163954 bf9a0a8000ca6de3f45309d4f297ae5e16d40d56	no	29
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Information:					
26	Non Patent Literature	JP_Lit_10769_Defendants_LG_Invalidity_Contetion_Brief_re_5119070_July_4_2014_46pgs.pdf	4158691 228f14b10b5c94edc63263bc21e371c7b4128b83	no	46
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27	Non Patent Literature	JP_Lit_10769_List_of_Non-Prior_Art_Prior_Art_Docs_in_Defendants_Briefs_July_4_2014_3pgs.pdf	212471 c0eaf72986c10b9afe8265690031b5ec9993913d	no	3
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Information:					
28	Non Patent Literature	JP_Invalidation_Trial_2013-800147_Favorable_Trial_Decision_June_17_2014_79pgs.pdf	7894774 9a325fc271b4a05f0f8b162dbac9bd5cc12e5a57	no	79
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29	Non Patent Literature	Dictionary_of_Science_and_Engineering_Page_1176_December_20_1994_3pgs.pdf	1910829 06c3036697d464fc49aaedfaa5d4678cca4b1fe6	no	3
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30	Non Patent Literature	IEEE_Standard_Dictionary_of_Electrical_Pages_304-305_Sep_30_1989_3pgs.pdf	2983598 698a1e37b2e24cb7f44fc0808ef363c3f469e957	no	3
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31	Non Patent Literature	Kaiser_MC-FDMA_and_MC-TDMA_Pages_200-204_Sep_2_1998_7pgs.pdf	1179351 ff4351a4abe2dc734547331a6ce75c6dbbee4633	no	7
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32	Non Patent Literature	Midorikawa_Information_Science_Dictionary_Pages_472-473_May_25_1990_3pgs.pdf	375068 cee205ac9caa8041d4d0613cf8d4aec9d0f98f04	no	3
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33	Non Patent Literature	Shogakukan_English_Japanese_Dictionary_Pages_1000-1001_1737_Jan_10_1999_5pgs.pdf	5601484 8eb6151f0d0eb51ef734cf3276593f932f381936	no	5
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34	Transmittal Letter	Transmittal.pdf	97975 c8df860b963cc383f005dae83756a662f6cc6a5e	no	1
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35		Amendment.pdf	107756 9801f774506ccaa6f1a0177cc2975b30fbf02185	yes	8

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Supplemental Response or Supplemental Amendment	1	1
	Claims	2	7
	Applicant Arguments/Remarks Made in an Amendment	8	8

Warnings:					
Information:					
36	Transmittal Letter	IDS.pdf	108688 d2be5600d740cce83127b539752bc5fdb48e2c7a	no	5
Warnings:					
Information:					
37	Information Disclosure Statement (IDS) Form (SB08)	SB08.pdf	114597 70112665e0874197d1039795d9f0aa5ddbb605c1	no	3
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This is not an USPTO supplied IDS fillable form					
38	Fee Worksheet (SB06)	fee-info.pdf	32279 1435f82360288bbf848f52d91f67ee477df3f776	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	79537391		

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

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

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

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