

132 between Target RNC 122₂ and Source RNC 122₁. Further, Source RNC 122₁ then requests its Source diversity handover unit (DHU) 130₁ to listen for any frames from mobile station MS on inter-RNC link 132 and to send frames destined to mobile station MS on inter-RNC link 132 as well as to involved base stations owned by Source RNC 122₁.

In the illustrative scenario currently described, a connection on inter-RNC link 132 was previously allocated upon addition of base station (BS) 126_{2,1}, so that operation 4-2 need not be performed in the illustrative scenario.

After the determination has been made to add a new base station now owned by Source RNC 122₁, and regardless of whether the added base station is the first base station involved for another RNC, at operation 4-3 Source RNC 122₁ sends a signaling message to Target RNC 122₂. Signaling messages between RNCs are transmitted over signaling network 143, and can be in accordance with signaling system no. 7, for example. The signaling message sent at operation 4-3 includes a handover setup request. The handover setup request of operation 4-3 instructs Target RNC 122₂ to connect to the base station to be added (e.g., in the illustrative scenario, base station (BS) 126_{2,2}). If the added base station is the first base station owned by Target RNC 122₂ involved in the connection, the handover setup request also includes an identifier for the inter-RNC connection to be used and a connection identifier respecting the mobile station MS. In the case that Target RNC 122₂ is already handling a leg of the connection with mobile station MS, the handover setup request includes the identities of the base stations previously allocated by diversity handling unit (DHU) 140₁ of Source RNC 122₁ and currently in use for the mobile connection with mobile station MS.

In response to the handover setup request message, at operation 4-4 Target RNC 122₂ allocates a Target diversity handover unit (DHU) to the mobile connection for mobile station MS in the event that a Target diversity handover unit (DHU) has not yet been allocated for this mobile connection. In the illustrated scenario, Target diversity

handover unit (DHU) 130₂ has already allocated by virtue of previous inclusion of base station (BS) 126_{2,1} in the mobile connection for mobile station MS. Had a Target diversity handover unit (DHU) not yet been allocated, the allocation would be accomplished e.g., by connecting, via switch 140₂, handover unit (DHU) 130₂ to RNC interface unit 146₂. Such connections, previously made in the illustrative scenario, are shown by lines TS-1 and TS-2 in Fig. 3B.

In response to the handover setup request message, at operation 4-4 Target RNC 122₂ allocates a connection to the new base station (i.e., base station (BS) 126_{2,2}) for mobile station MS. Such connections are shown by cross connection lines TS-5 and Ts-6 in Fig. 3B.

After allocation of a connection to base station (BS) 126_{2,2}, at operation 4-6 Target RNC 122₂ sends a connection setup request message to base station (BS) 126_{2,2} over semipermanent connections established at start-up of the base station. The connection setup request instructs base station (BS) 126_{2,2} to activate the transceiver of base station (BS) 126_{2,2} and to connected the transceiver to the indicated RNC-BS connection. When the newly added base station (e.g., base station (BS) 126_{2,2}) provides a connection setup confirmation message (indicated by operation 4-7), Target RNC 122₂ activates Target diversity handover unit (DHU) 130₂ so that Target diversity handover unit (DHU) 130₂ begins actually to process frames (operation 4-8).

Upon activation of Target diversity handover unit (DHU) 130₂, Target RNC 122₂ sends a signaling message to Source RNC 122₁ with a handover setup confirmation message (operation 4-9). Meanwhile, Source RNC 122₁ and Target RNC 122₂ adjust their timing to compensate for any delay differences between (1) the connection involving Source RNC 122₁ and base station (BS) 126_{1,3}, and (2) the connection involving Source RNC 122₁ and Target RNC 122₂. Such timing adjustment is shown as synchronization operation 4-10 in Fig. 4. Synchronization is particularly important when an added base station is the first base station added for a

non-Source RNC for the connection to mobile station MS. Included in operation 4-10 is the newly added base station (e.g., base station (BS) 126_{2,2}) instructing Target diversity handover unit (DHU) 130₂ to adjust its sending time if frames arrive too early or too late, and in turn Target diversity handover unit (DHU) 130₂ instructs Source
 5 diversity handover unit (DHU) 130₁ to adjust its sending time. During operation 4-10 frames may be lost if Source diversity handover unit (DHU) 130₁ does not have sufficient delay margins. A buffer in Source diversity handover unit (DHU) 130₁ for providing sufficient delay margin is therefore preferred at original setup of the mobile connection with mobile station MS. Also included in operation 4-10 is a signaling
 10 message from Source RNC 122₁ to Target RNC 122₂ confirming that synchronization and timing have been adjusted.

When synchronization and timing have been adjusted, at operation 4-11 Source RNC 122₁ sends a signaling message with a handover request to mobile station MS. The handover request orders the mobile station MS to use, in addition to existing base
 15 stations, the newly added base station (e.g., base station (BS) 126_{2,2}).

Fig. 5 depicts, in simplified form, a multistage frame splitting operation performed using Source RNC 122₁ and Target RNC 122₂ according to a mode of the invention. Frame splitter 162₁ of Source RNC 122₁ receives a user traffic frame from mobile switching center 124₁ which is to be forwarded to mobile station MS. As
 20 shown in more detail in Fig. 3A, Frame splitter 162₁ copies the user traffic frame to downlink buffers 164₁₋₁ and 164₁₋₂. Frame splitter 162₁ applies a frame number to the two frames (the same frame number to both frames). In this regard, timing unit 142₁ supplies Target diversity handover unit (DHU) 130₂ with a frame number clock reference.

25 The two frame copies (frame copy 1 and frame copy 2) are forwarded from downlink buffers 164₁₋₁ and 164₁₋₂ both to base station (BS) 126_{3,1} and Target RNC 122₂. The two frame copies are sent from downlink buffers 164₁₋₁ and 164₁₋₂

according to timing information contained in synchronization adjustment frames received from the other end [see Fig. 8C]. The first frame copy F1 is forwarded to base station (BS) 126_{3,1} using cross connection line SS-3 of switch 140₁; the second frame copy F2 is forwarded to Target RNC 122₂ using cross connection line SS-4 of switch 140₁. Fig. 5 shows the first frame being applied to base station (BS) 126_{3,1} and the second frame copy F2 being applied on intra-RNC link 132 to Target RNC 122₂.

The second frame copy F2 forwarded to Target RNC 122₂ is routed through switch 140₂ as indicated by connection line Ts-1 [see Fig. 3B]. The second frame copy F2 is applied to frame splitter 162₂. Frame splitter 162₂ makes a copy of the second frame for each of downlink buffers 164_{2,1} and 164_{2,2}, with the respective copies (frame copy F2,1 and frame copy F2,2) being sent to base station (BS) 126_{2,1} and base station (BS) 126_{2,2}, respectively. In customary form, frames from each of the three involved base stations are sent to mobile station MS, with mobile station MS selecting the best of same-numbered frames.

Fig. 6 shows, again in simplified form, a multistage frame combining operation performed using Source RNC 122₁ and Target RNC 122₂ according to a mode of the invention. In Fig. 6, mobile station MS sends the same frame to each involved base station, e.g., base station (BS) 126_{1,3}; base station (BS) 126_{2,1}, and base station (BS) 126_{2,2}. In Fig. 6, the frame F2,1 received at base station (BS) 126_{2,1} is connected through switch 140₂ (see connection line TS-4 in Fig. 3B) to uplink buffer 168_{2,1}. Similarly, the frame F2,2 received at base station (BS) 126_{2,2} is connected through switch 140₂ (see connection line TS-5 in Fig. 3B) to uplink buffer 168_{2,2}. The frame F1 received at base station (BS) 126_{1,3} is connected through switch 140₁ (see connection line SS-5 in Fig. 3A) to uplink buffer 168_{1,1}.

Using a quality indicator in two copies of the same-numbered frames (frame F2,1 and frame F2,2), frame selector 166₂ determines the “best” of the two frame copies. More specifically, upon obtaining a frame with a new frame number,

Target diversity handover unit (DHU) 130₂ stores the first frame with the new frame number in the appropriate one of the uplink buffers 168 and awaits, for a specified time interval, arrival of other frames with the same frame number. Upon completion of the specified time interval, frame selector 166₂ selects the best frame. Any later arriving
5 frames of the same frame number are discarded. Accordingly, Fig. 6 shows Target diversity handover unit (DHU) 130₂ of Target RNC 122₂ forwarding one resultant frame (in this illustration, frame F2,1) on inter-RNC link 132 to Source RNC 122₁.

Frame F2,1 applied on inter-RNC link 132 to Source RNC 122₁ is routed through switch 140₁ on connection line SS-5 as shown in Fig. 3A to uplink buffer
10 168₁₋₁. The resultant frame obtained from Target diversity handover unit (DHU) 130₂ of Target RNC 122₂ is routed through switch 140₁ (see connection SS-6 in Fig. 3A) and is stored in uplink buffer 168₁₋₂. With frame selector 166₁ having both frame F1,3 and frame F2,1 in its set of uplink buffers 168, frame selector 166₁ makes a determination of “best” frame in much the same manner as did frame selector 166₂ of
15 Target RNC 122₂. Frame selector 166₁ forwards the user traffic part of the “best” frame (e.g., frame F2,1 in the example of Fig. 6) to MSC 124₁. The user traffic part of the “best” frame is routed through switch 140₁ on connection line SS-2 as shown in Fig. 3A.

Thus, the both frame splitting and frame combining operations of the
20 present invention are multistaged. In particular, in the situation shown in Fig. 2, Fig. 3A, Fig. 3B, Fig. 5, and Fig. 6, for example, Source diversity handover unit (DHU) 130₁ of Source RNC 122₁ performs a first stage of frame splitting while Target diversity handover unit (DHU) 130₂ of Target RNC 122₂ performs a second stage of frame splitting. Conversely, for frame directed from mobile station MS to MSC 124₁,
25 Target diversity handover unit (DHU) 130₂ performs a second stage of frame combining and Source diversity handover unit (DHU) 130₁ of Source RNC 122₁ performs a first stage of frame combining.

In the frame combining and frame splitting operation, each the DHU controller of each diversity handover unit (DHU) is supervised by the RNC control unit of the respective RNC node. For example, the RNC control unit instructs its corresponding DHU controller as to which ports of its corresponding switch the diversity handover unit (DHU) shall be connected for reception and transmission of information streams (e.g., frames).

In the foregoing reference has been made to various types of frames, including user traffic frames and synchronization frames. Fig. 8, Fig. 8A, Fig. 8B, and Fig. 8C are diagrammatic view of types of frames utilized according to an embodiment of the invention. Examples of traffic frame formats are shown in Fig. 8 and Fig. 8A. Fig. 8 particularly shows an uplink traffic frame which has a frame type field 8-1; a frame number field 8-2; a quality indicator field 8-3; and, a user traffic data field 8-4. Fig. 8A shows a downlink traffic frame which has a frame type field 8A-1; a frame number field 8A-2; and, a user traffic data field 8A-4.

An example of contents of the quality indicator fields 8-3 and 8-4 is a received signal-to-noise ratio (SIR) for the frame. In addition, a checksum result for the frame could be included in the quality indicator fields 8-3 and 8-4. The quality indicator is used by the frame selector in the diversity handover unit (DHU) to select and forward (to the appropriate mobile switching center MSC) the user traffic data of the best frame, of all of the frames received with a given frame number from all base stations involved for the connection with mobile station MS. The frame splitter, on the other hand, copies the user traffic data to all base stations involved in the connection for mobile station MS, and attaches the frame number for field 8A-2 [see Fig. 8A]. The timing unit (e.g., timing unit 1411) supplies the diversity handover unit (DHU) with a frame number and with a frame number clock reference.

A dummy frame, an example of which is illustrated in Fig. 8B, can be used for establishment of communication and synchronization when no real traffic is to

be sent. The example dummy frame of Fig. 8B includes a frame type field 8B-1 and a dummy data field 8B-4.

A synchronization frame, such as that shown in Fig. 8C, is employed to carry synchronization adjustment values. The example of the synchronization frame shown in Fig. 8C includes a frame type field 8C-1 and an adjustment value data field 8C-4. In one mode of the invention, the adjustment value data field 8C-4 contains a positive or negative time offset value.

Fig. 7 shows a radio area network 720 which utilizes multistage diversity handling involving more than two stages. In particular, in addition to Source RNC 122₁ and Target RNC 122₂ as above discussed, radio area network 720 includes RNC 122₃. In the uplink in Fig. 7, diversity handover unit (DHU) 130₃ of RNC 122₃ combines frames received from base station (BS) 126_{3,1} and base station (BS) 126_{3,2}, both of which are included in respective legs of the mobile connection with mobile station MS. For each same-numbered frame received by diversity handover unit (DHU) 130₃, one resultant (e.g., "best") frame is forwarded on inter-RNC link 132' to Target RNC 122₂. The resultant frame applied on inter-RNC link 132' is connected through switch 140₂ to Target diversity handover unit (DHU) 130₂. Target diversity handover unit (DHU) 130₂ makes a second stage selection from between the resultant frame after making a selection of a best frame from base station (BS) 126_{2,1} and base station (BS) 126_{2,2}, and the frames received from each of base station (BS) 126_{2,1} and base station (BS) 126_{2,2}. The resultant frame from the second stage combination performed by Target diversity handover unit (DHU) 130₂ is forwarded on inter-RNC link 132 to Source RNC 122₁. Target diversity handover unit (DHU) 130₂ of Source RNC 122₁ then performs a first stage combination by selecting one of the frame received from base station (BS) 126_{1,3} and the second stage resultant frame received on inter-RNC link 132. The first stage resultant frame is then forwarded to MSC 124₁.

In the downlink, a frame from MSC 124₁ is applied through switch 140₁ to Target diversity handover unit (DHU) 130₂, which performs a first stage split and sends a frame copy to base station (BS) 126_{3,1} and a frame copy on inter-RNC link 132 to Target RNC 122₂. The frame copy sent to Target RNC 122₂ is routed through
5 switch 140₂ to Target diversity handover unit (DHU) 130₂, which performs a second stage split of the frame. In the second stage split, copies of the frame are sent to each of base station (BS) 126_{2,1}, base station (BS) 126_{2,2}, and RNC 122₃ (via inter-RNC link 132'). RNC 122₃ performs a third stage split by sending copies of the frame to base station (BS) 126_{3,1} and base station (BS) 126_{3,2}. Thus, in the Fig. 7 illustration,
10 mobile station MS receives five copies of the same frame, and selects the best frame for utilization.

In view of the foregoing, it should be understood that numerous differently staged configurations are within the purview of the present invention, including greater number of stages and stages being treed in differing configurations.
15 For example, RNC 122₃ of Fig. 7 could be connected by an inter-RNC link to Source RNC 122₁ instead of Target RNC 122₂, in which case a two stage configuration would exist with Source diversity handover unit (DHU) 130₁ applying copies to three members of the second stage (e.g., base station (BS) 126_{1,3}, Target RNC 122₂, and RNC 122₃).

20 In connection with the foregoing, one mobile connection, specifically the mobile connection for mobile station MS has been discussed. Connections for other mobile stations are likely being handled by each of the RNCs, which typically involves use of the same or other diversity handover units (DHUs) within those RNCs.

In the embodiments described herein, for sake of simplicity only a limited
25 number of base stations (BS) have been shown as connected to each RNC. It should be understood that differing and greater numbers of base stations can be connected to each

RNC, and accordingly that the number of downlink and uplink buffers in each diversity handover unit (DHU) is dependent thereon. -

In the foregoing discussion, MSC I/F unit 144 and RNC I/F unit 146 have been illustrated as separate interfaces. It should be understood, however, that these
5 interfaces can be combined into a single transport network interface unit.

In the embodiments herein illustrated, the connection between Source diversity handling unit (DHU) 130₁ and Target diversity handover unit (DHU) 130₂ has been shown as a direct link. It should also be understood that the connection between Source diversity handling unit (DHU) 130₁ and Target diversity handover unit (DHU)
10 130₂ can instead be switched via any intermediate node. For example, in an embodiment in which such connection is switched, the intermediate node can be an MSC, an RNC, or a node in the public switched telephone network (PSTN).

It should be noted that the Source DHT (e.g., the DHT that does the
15 second stage of the combining/splitting) can be moved. An example of a preferred embodiment of DHT moveover is described in United States Patent Application SN 08/980,013 (attorney docket: 2380-4) filed simultaneously, entitled "Diversity Handling Moveover for CDMA Mobile Telecommunications", which is incorporated herein by reference.

20 Advantageously, in accordance with the present invention each inter-RNC link requires only one transport connection for a non-source RNC. This is because the upstage or Source diversity handover unit (DHU) sends only one copy to a Target RNC 122₂, with the Target diversity handover unit (DHU) 130₂ of the Target RNC 122₂ performing splitting operations for the base stations which it owns. Conversely, on the
25 uplink, the downstage or Target diversity handover unit (DHU) 130₂ sends only one resultant frame on the inter-RNC link to Source RNC 122₁, the Target diversity

handover unit (DHU) 130₂ having performed a combining operation with respect to all base stations owned by Target RNC 122₂.

While the invention has been described in connection with what is presently considered to be the most practical and preferred embodiment, it is to be understood
5 that the invention is not to be limited to the disclosed embodiment, but on the contrary, is intended to cover various modifications and equivalent arrangements included within the spirit and scope of the appended claims.

WHAT IS CLAIMED IS:

1 1. A mobile telecommunications system comprising:

2 a first control node serving a first set of base stations, the first control
3 node performing one of a first stage connection combining operation and a first stage
4 connection splitting operation with respect to a mobile connection; and

5 a second control node serving a second set of base stations, the second
6 control node performing one of a second stage connection combining and a second
7 stage connection splitting operations with respect to the mobile connection.

1 2. The system of claim 1, wherein the second control mode combines same-
2 numbered frames from a plurality of base stations of the second set to yield a resultant
3 frame, and wherein the first control mode combines the resultant frame with a same-
4 numbered frame from at least one of the base stations of the first set.

1 3. The system of claim 1, wherein the first control mode forwards copies of the
2 frame received from a mobile switching center to at least one of the base stations of the
3 first set and a single copy of the frame to the second control node, and wherein the
4 second control mode forwards copies of the frame received from the first control node
5 to a plurality of base stations of the second set.

1 4. A method of operating a mobile telecommunications system, the method
2 comprising:

3 performing one of a first stage connection combining operation and a first
4 stage connection splitting operation at a first control node, the first control node serving
5 a first set of base stations; and

6 performing one of a second stage connection combining operation and a
7 second stage connection splitting operation at a second control node, the second control
8 node serving a second set of base stations.

1 5. The method of claim 4, wherein the performing of the second stage
2 connection combining operation comprises the second control node combining same-
3 numbered frames from a plurality of base stations of the second set to yield a resultant
4 frame, and wherein the performing of the first stage connection combining operation
5 comprises first control node combining the resultant frame with a same-numbered
6 frame from at least one of the base stations of the first set.

1 6. The method of claim 4, the performing of the first stage connection splitting
2 operation comprises the first control node forwarding copies of the frame received from
3 a mobile switching center to at least one of the base stations of the first set and a single
4 copy of the frame to the second control node, and wherein the performing of the second
5 stage connection splitting operation comprises the second control node forwarding
6 copies of the frame received from the first control node to a plurality of base stations of
7 the second set.

1 7. A mobile telecommunications system comprising:
2 a first control node serving a first base station, the first control node having a
3 diversity handling unit;
4 a second control node serving a second base station, the first control node having
5 a diversity handling unit;
6 wherein when particular mobile connection involves the first base station and the
7 second base station, both the diversity handling unit of the first control node and the
8 diversity handling unit of the second control node are utilized for the particular mobile
9 connection.

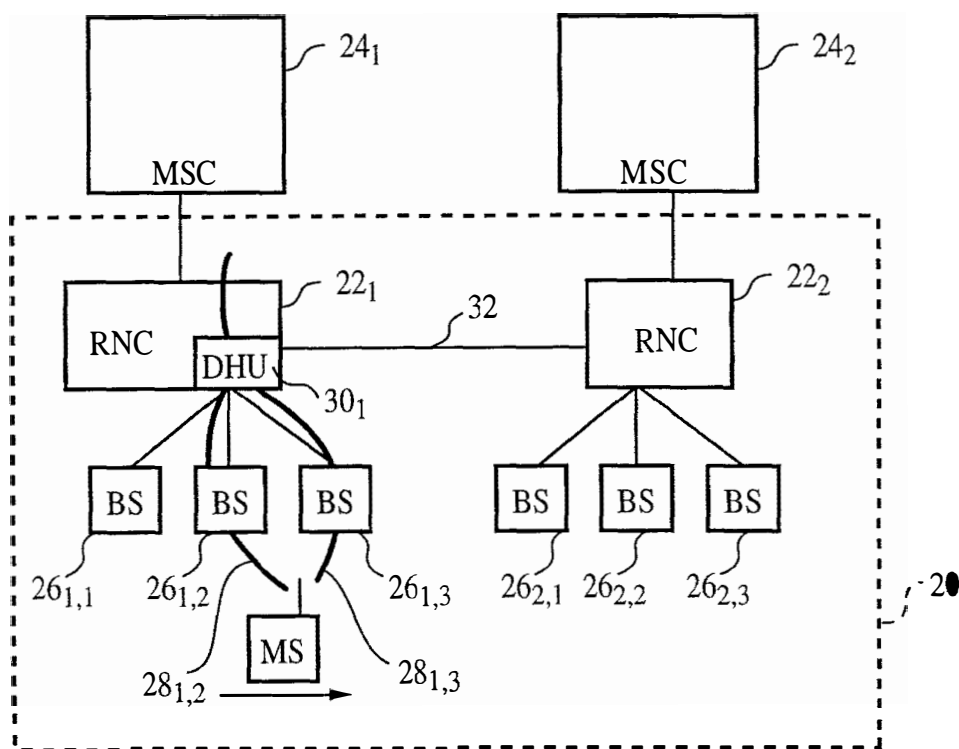
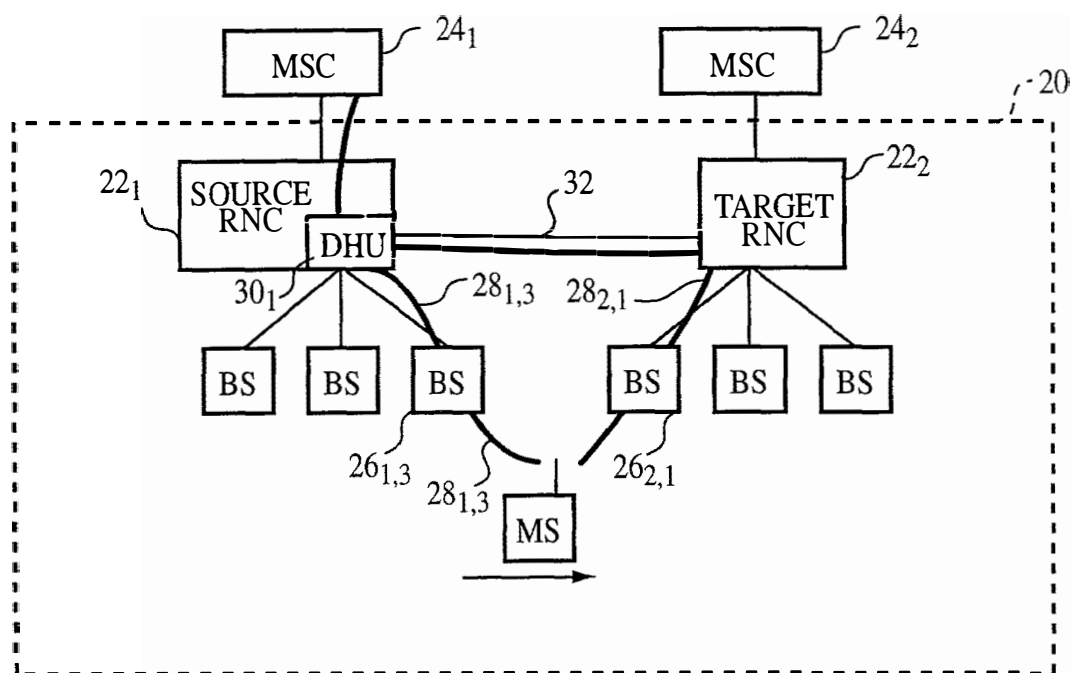
1 8. A method of operating a mobile telecommunications system, the method
2 comprising:

3 establishing a particular mobile connection with a mobile station using a first
4 base station and a second base station, the first base station and the second base station
5 being respectively controlled by a first control node and a second control node;

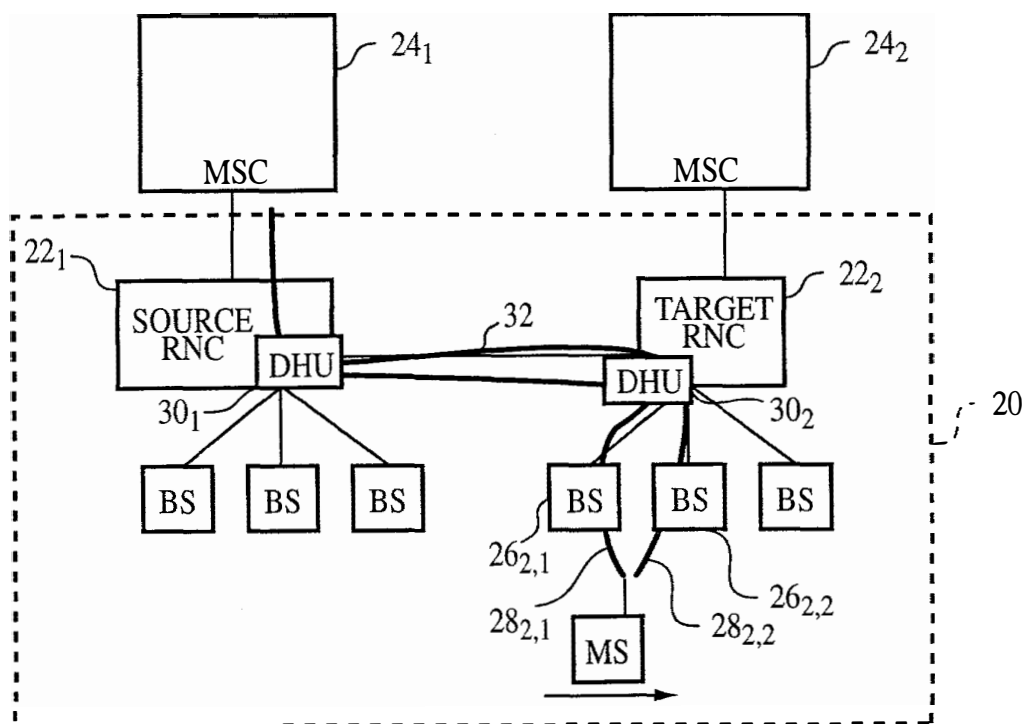
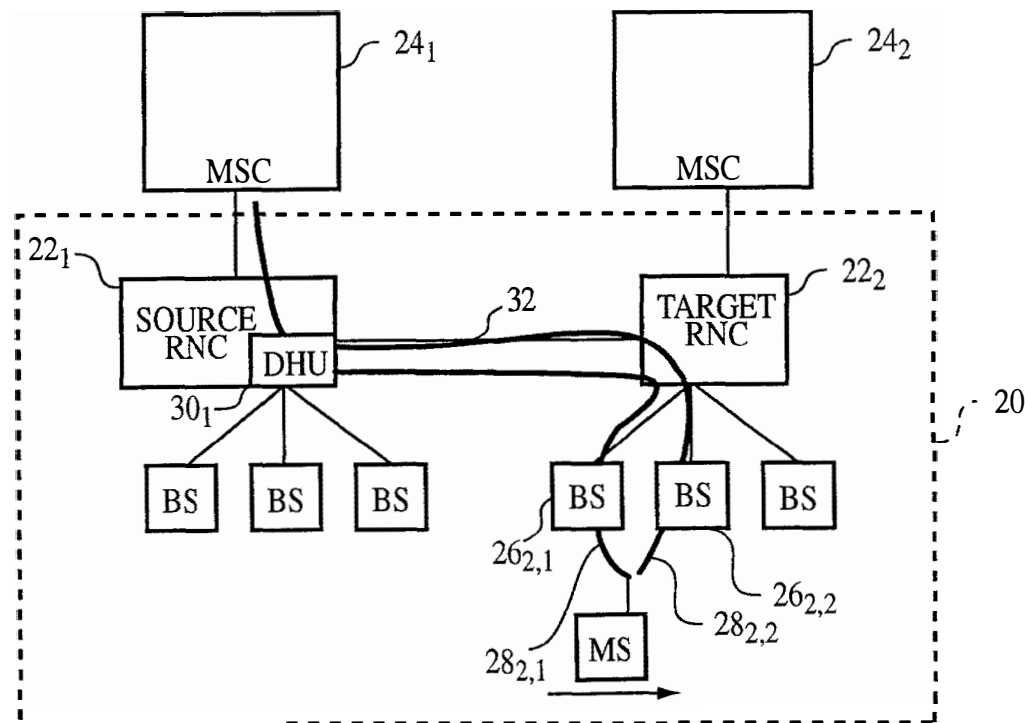
6 utilizing a first diversity handling unit in the first control node and a second
7 diversity handling unit in the second control node for performing combining and
8 splitting functions for the particular mobile connection.

1 9. The method of claim 8, wherein initially one of the first control node and the
2 second control node performs a first stage combining and splitting function and the
3 other of the first control node and the second control node performs a second stage
4 combining and splitting function, and wherein the method further comprises moving the
5 second stage splitting and combining function to a control node other than the control
6 node which initially performed the second stage combining and splitting function.

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FIG. 1
PRIOR ARTFIG. 1A
PRIOR ART

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FIG. 1C
PRIOR ARTFIG. 1B
PRIOR ART

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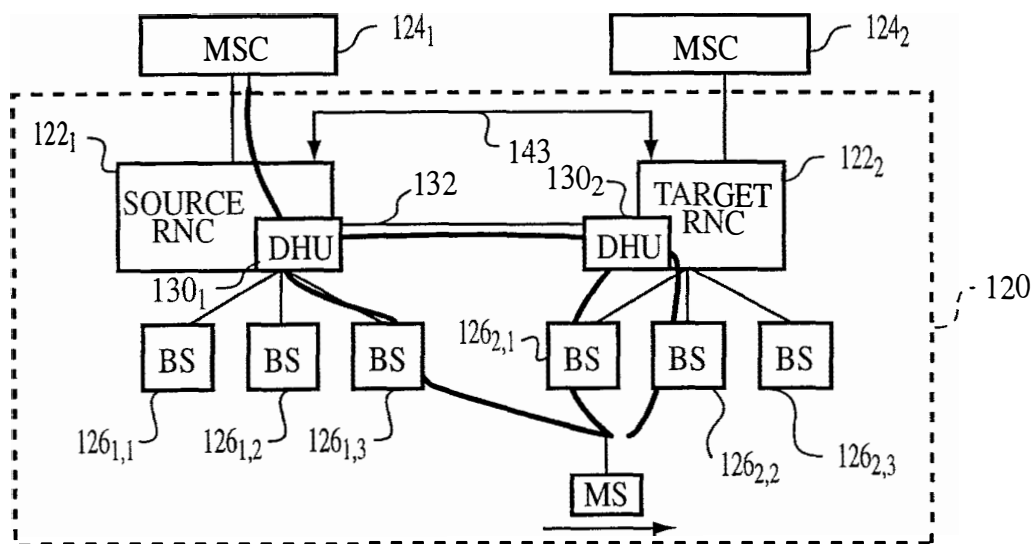


FIG. 2

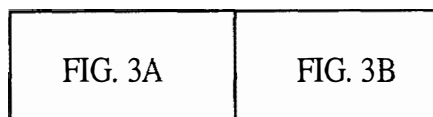


FIG. 3

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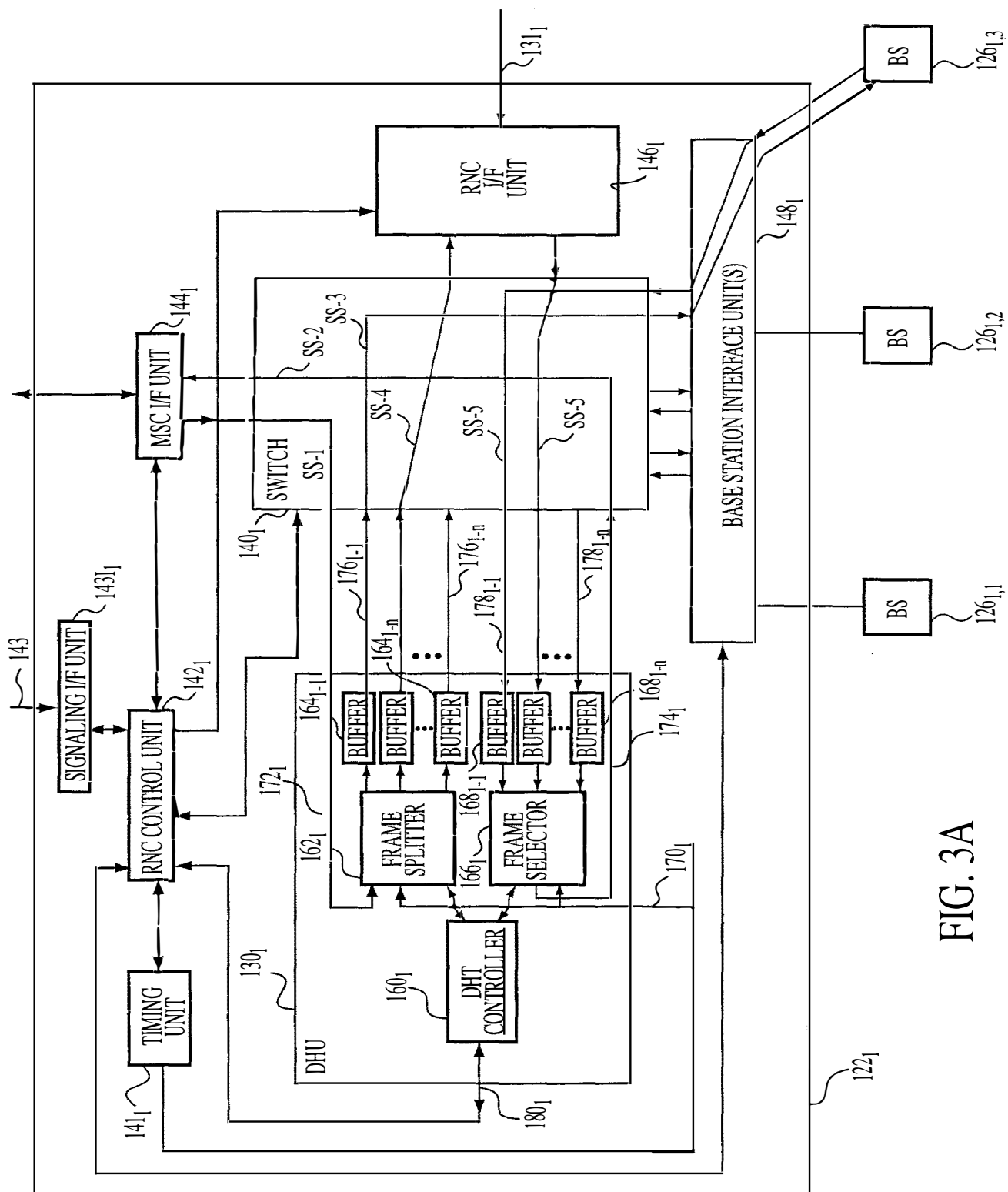


FIG. 3A

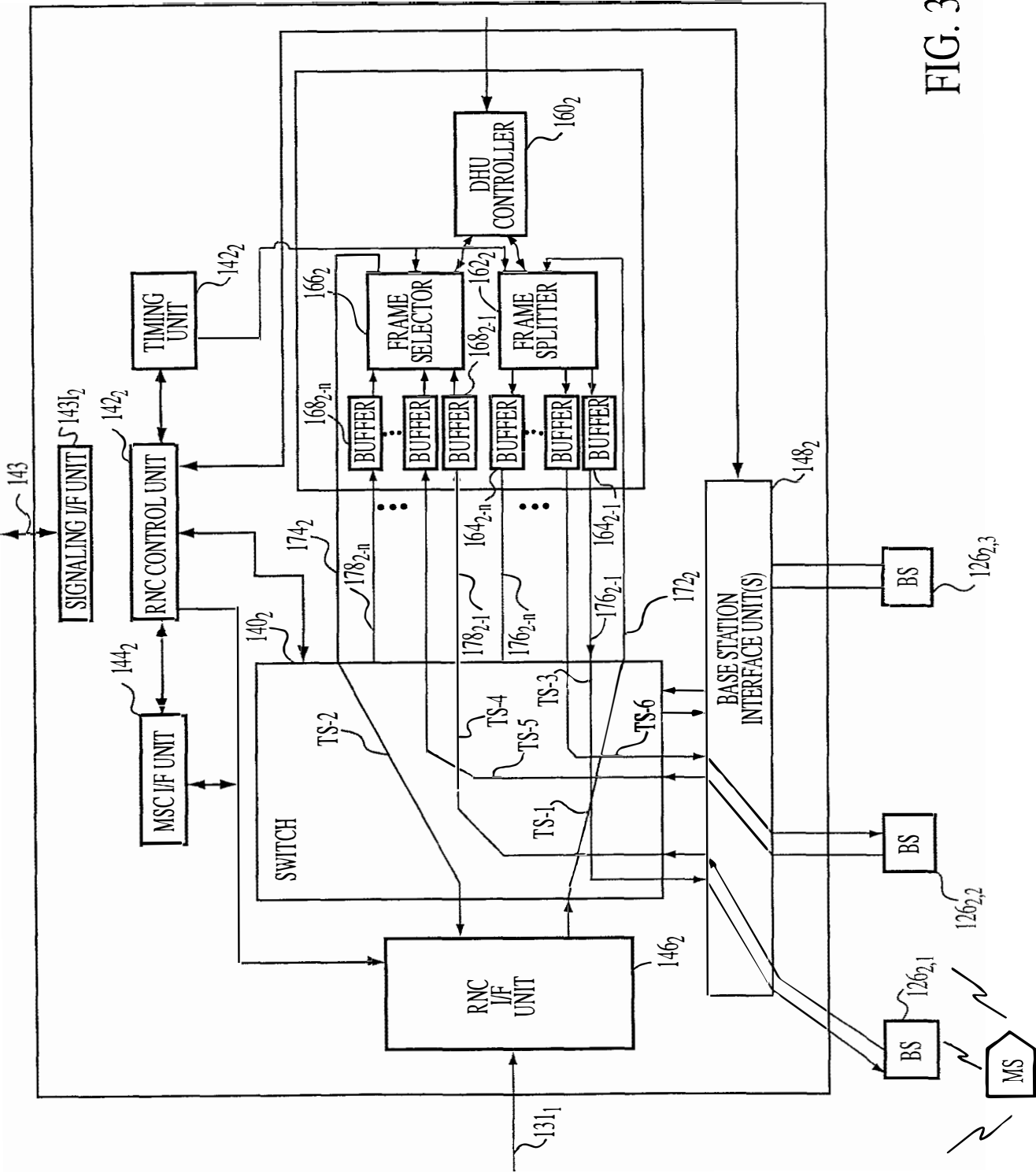


FIG. 3B

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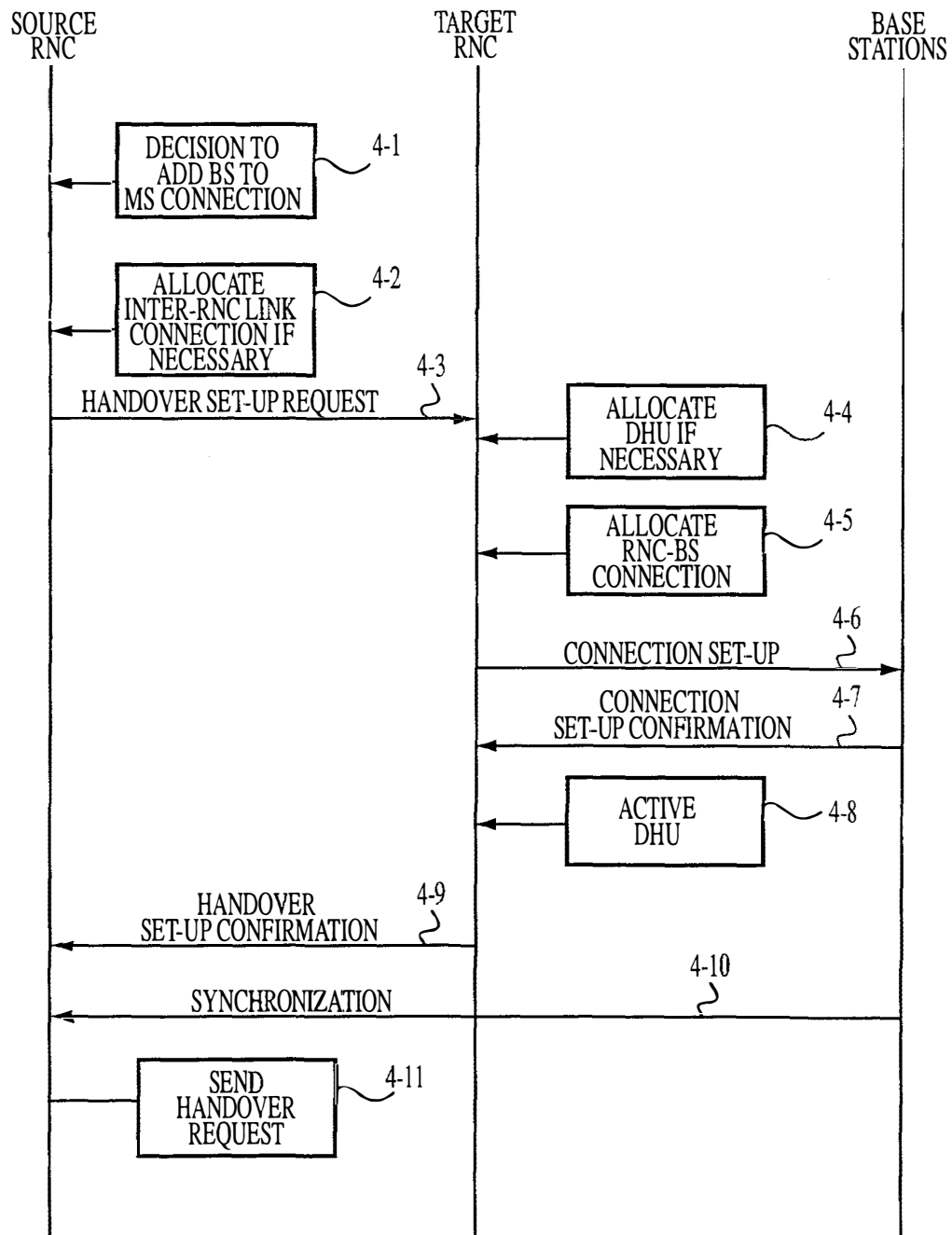


FIG. 4

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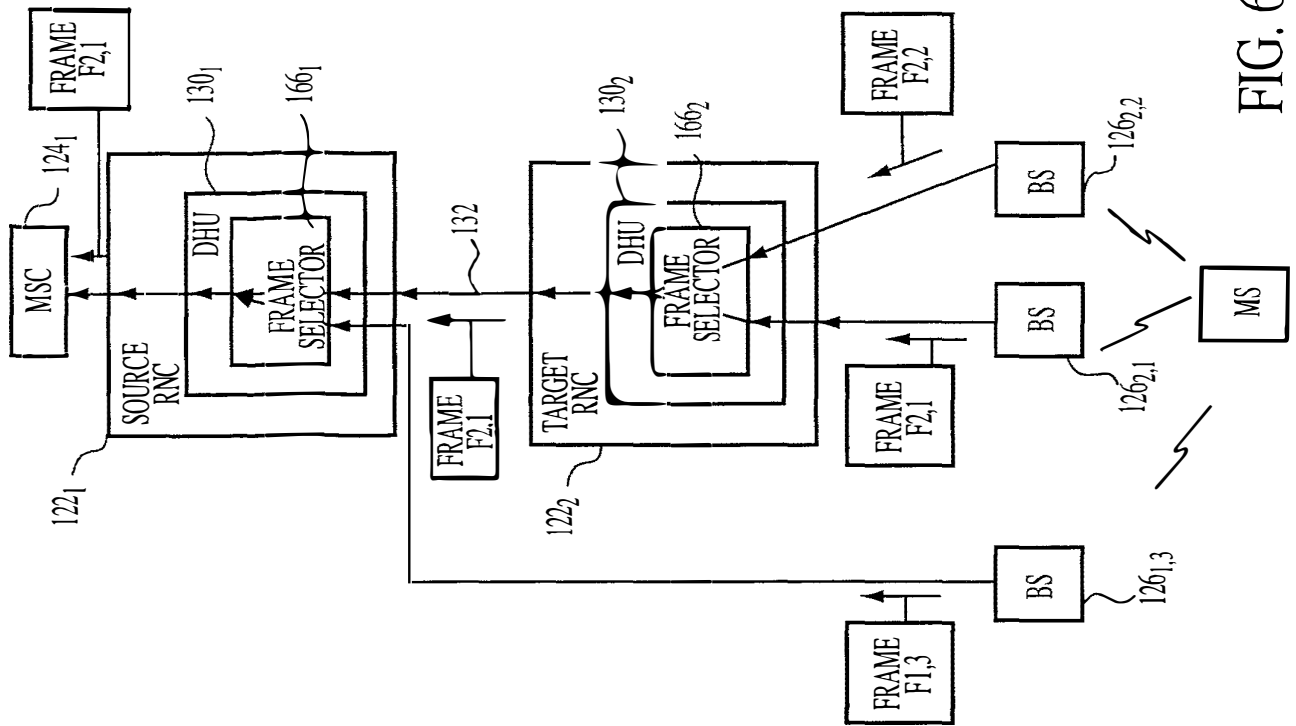


FIG. 6

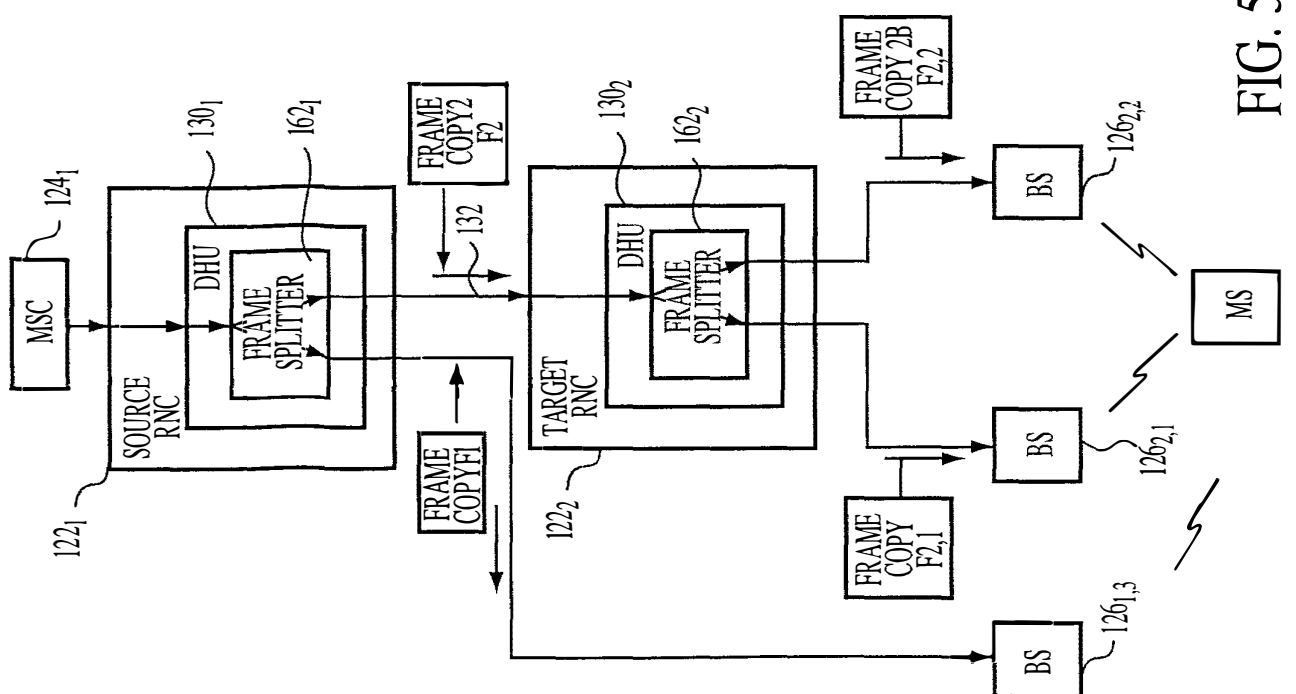


FIG. 5

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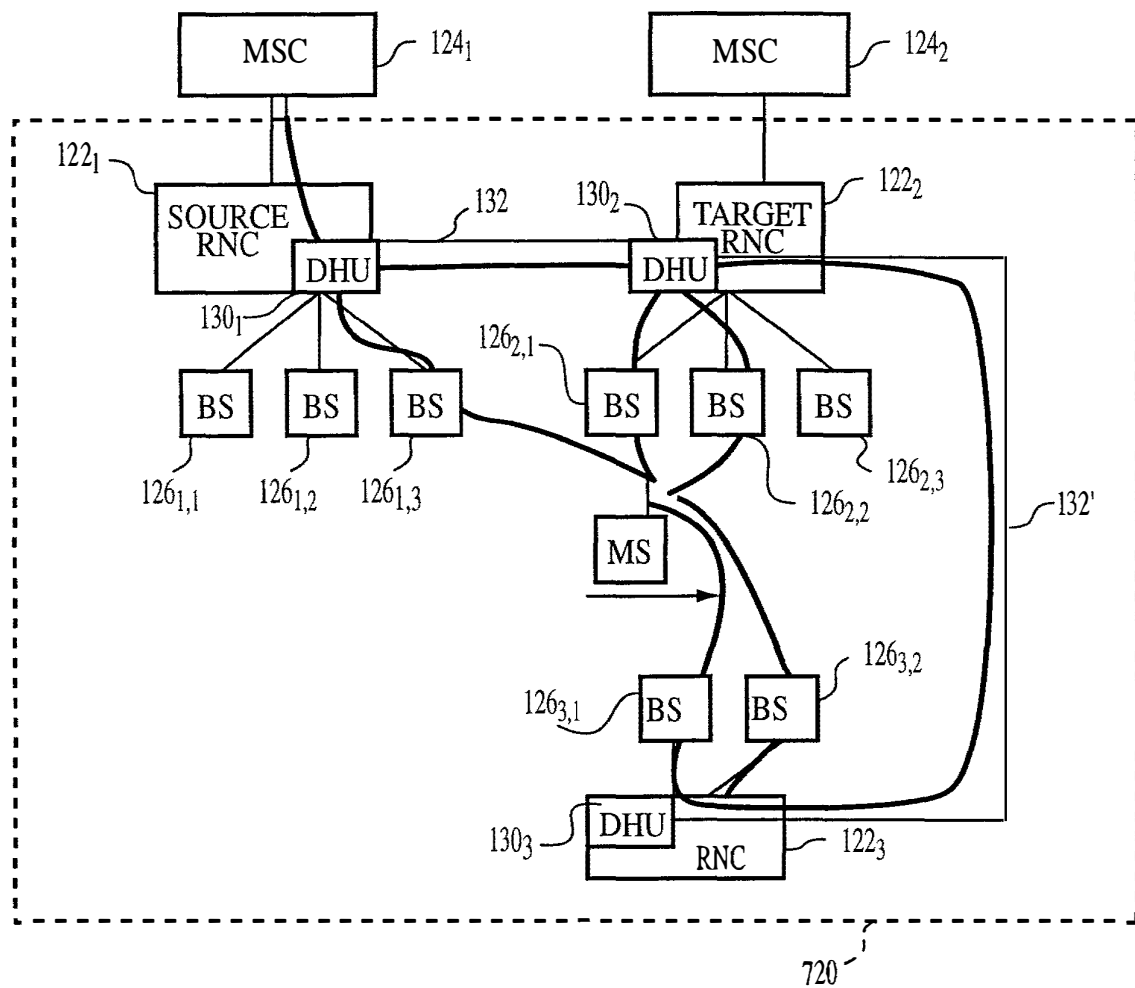


FIG. 7

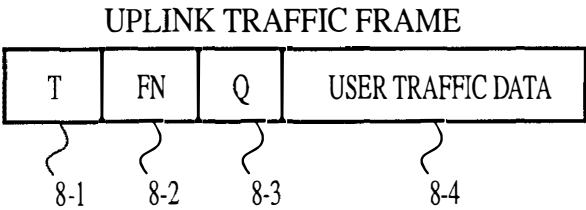


FIG. 8

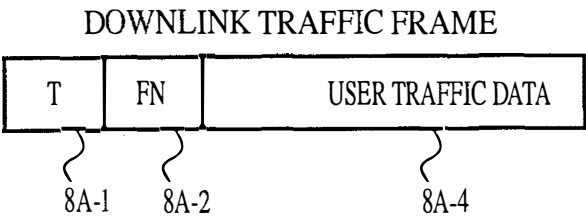


FIG. 8A

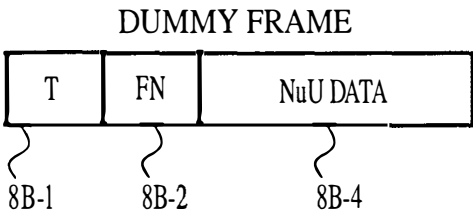


FIG. 8B

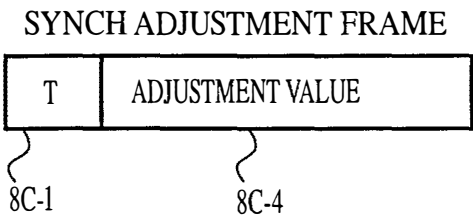


FIG. 8C

INTERNATIONAL SEARCH REPORT

International Application No

PCT/SE 98/02131

A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 H04Q7/38

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 H04Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 97 23098 A (SIEMENS AG ;HAFERBECK RALF (DE); ERNST DETLEF (DE)) 26 June 1997 see page 1, line 24 - page 2, line 21 see page 5, line 1 - page 7, line 12 see page 7, line 25 - page 9, line 2; figure 2 ---	1-8
X	WO 95 04420 A (BRITISH TELECOMM ;CULLEN JOHN MICHAEL (GB)) 9 February 1995 see page 4, line 32 - page 6, line 9; figure 1 ---	1-8
X	EP 0 679 042 A (ROKE MANOR RESEARCH) 25 October 1995 see column 6, line 14 - column 7, line 46; figures 5,6 ---	1-8
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

5 March 1999

Date of mailing of the international search report

17/03/1999

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/SE 98/02131

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 95 08897 A (NOKIA TELECOMMUNICATIONS OY ;MUSZYNSKI PETER (FI)) 30 March 1995 see page 16, line 20 - page 17, line 32; figure 1 -----	1-9
A	WO 97 41698 A (QUALCOMM INC) 6 November 1997 see page 8, line 22 - page 9, line 28 see page 11, line 3 - page 13, line 19 -----	1-9

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/SE 98/02131

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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Electronic Acknowledgement Receipt

EFS ID:	20095662
Application Number:	13908242
International Application Number:	
Confirmation Number:	5287
Title of Invention:	SUPPORTING ENHANCED UPLINK DURING SOFT HANDOVER
First Named Inventor/Applicant Name:	Guodong Zhang
Customer Number:	24374
Filer:	Abhik A. Huq/Carey Kulp
Filer Authorized By:	Abhik A. Huq
Attorney Docket Number:	SIG-2-0674US05
Receipt Date:	10-SEP-2014
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Time Stamp:	17:03:34
Application Type:	Utility under 35 USC 111(a)

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Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	3254808_1IDS.pdf	60696 37f5a53ff8373f4efe65b5aaecacbb99b0b6e26	no	3

Warnings:

Information:

2	Information Disclosure Statement (IDS) Form (SB08)	SB08.pdf	641058 42731e1d8aefc22cb99303cfb3d17798e02c9d	no	4
Warnings:					
Information:					
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3	Foreign Reference	WO99027740_.pdf	1881227 35b3a35f9e9a72e4cc4158aaaa475e203b6db1c2	no	40
Warnings:					
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Total Files Size (in bytes):			2582981		
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.					

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the PATENT APPLICATION of:

Zhang et al.

Application No.: 13/908,242

Confirmation No.: 5287

Filed: June 3, 2013

For: SUPPORTING
ENHANCED UPLINK DURING SOFT
HANDOVER

Group: 2464

Examiner: Ricky Quoc Ngo

Our File: SIG-2-0674US05

Date: September 10, 2014

INFORMATION DISCLOSURE STATEMENT

Mail Stop Amendment (via EFS)
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Madam:

Further to Applicants' Duty of Disclosure pursuant to 37 C.F.R. §1.56, Applicants wish to bring to the Examiner's attention the material cited on the enclosed Form SB-08. A copy of the newly cited document is enclosed.

This Application is a continuation of U.S. Patent Application No. 13/308,950, filed December 1, 2011, which issued June 4, 2013 as U.S. Patent No. 8,457,072, which is a continuation of U.S. Patent Application No. 11/434,330, filed May 15, 2006, which issued March 6, 2012 as U.S. Patent No. 8,130,720, which is a continuation of U.S. Patent Application No. 10/962,720, filed October 12, 2004, which issued May 16, 2006

as U.S. Patent No. 7,046,648, which claims priority from Provisional Application No. 60/578,674, filed June 10, 2004, Provisional Application No. 60/520,692, filed November 17, 2003, Provisional Application No. 60/519,990, filed November 14, 2003, and Provisional Application No. 60/517,656, filed November 5, 2003.

Applicants would like to bring the following Applications to the Examiner's attention: U.S. Patent Application No. 13/236,133, filed September 19, 2011; U.S. Patent Application No. 10/925,426, filed August 25, 2004, which issued September 20, 2011 as U.S. Patent No. 8,023,463; Provisional Application No. 60/585,174, filed July 2, 2004; Provisional Application No. 60/520,207, filed November 14, 2003; Provisional Application No. 60/508,797, filed October 3, 2003; Provisional Application No. 60/507,554, filed October 1, 2003; and Provisional Application No. 60/497,747, filed August 25, 2003.

It is respectfully requested that the Examiner consider these documents and return an initialed copy of the Form SB-08 indicating consideration of the cited materials.

Respectfully submitted,

Zhang et al.

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AAH/PCK
Enclosures (2)



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/908,242	06/03/2013	Guodong Zhang	SIG-2-0674US05

CONFIRMATION NO. 5287

POA ACCEPTANCE LETTER



OC000000070792751

3624
VOLPE AND KOENIG, P.C.
UNITED PLAZA
30 SOUTH 17TH STREET
PHILADELPHIA, PA 19103

Date Mailed: 09/17/2014

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 06/18/2014.

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

/tpetros/

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



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/908,242	06/03/2013	Guodong Zhang	SIG-2-0674US05

CONFIRMATION NO. 5287

POWER OF ATTORNEY NOTICE



24374
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NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 06/18/2014.

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

/tpetros/

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



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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
13/908,242	06/03/2013	2464	2160	SIG-2-0674US05	6	2

CONFIRMATION NO. 5287

CORRECTED FILING RECEIPT



3624
VOLPE AND KOENIG, P.C.
UNITED PLAZA
30 SOUTH 17TH STREET
PHILADELPHIA, PA 19103

Date Mailed: 09/17/2014

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

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Stephen G. Dick, Nesconset, NY;

Applicant(s)

Signal Trust for Wireless Innovation, Wilmington, DE

Power of Attorney: The patent practitioners associated with Customer Number 03624

Domestic Priority data as claimed by applicant

This application is a CON of 13/308,950 12/01/2011 PAT 8457072
which is a CON of 11/434,330 05/15/2006 PAT 8130720
which is a CON of 10/962,720 10/12/2004 PAT 7046648
which claims benefit of 60/578,674 06/10/2004
and claims benefit of 60/520,692 11/17/2003
and claims benefit of 60/519,990 11/14/2003
and claims benefit of 60/517,656 11/05/2003

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.) - None.

Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access - A proper **Authorization to Permit Access to Application by Participating Offices** (PTO/SB/39 or its equivalent) has been received by the USPTO.

If Required, Foreign Filing License Granted: 06/20/2013

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 13/908,242**

Projected Publication Date: Not Applicable

Non-Publication Request: No

Early Publication Request: No
Title

SUPPORTING ENHANCED UPLINK DURING SOFT HANDOVER

Preliminary Class

370

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

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Title 37, Code of Federal Regulations, 5.11 & 5.15

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the PATENT APPLICATION of:

Zhang et al.

Application No.: 13/908,242

Confirmation No.: 5287

Filed: June 3, 2013

For: SUPPORTING ENHANCED UPLINK
DURING SOFT HANDOVER

Group: 2464

Examiner: Ricky Quoc Ngo

Our File: SIG-2-0674US05

Date: September 17, 2014

PRELIMINARY AMENDMENT

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

Prior to examination, please amend the application as follows:

AMENDMENTS TO THE CLAIMS

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

1. – 12. (Canceled)

13. (New) In a wireless network having a plurality of cells, a method comprising:

receiving, via the plurality of cells during soft handover, enhanced uplink data from a wireless transmit/receive unit (WTRU), wherein a first one of the plurality of cells is a primary cell for the WTRU and at least a second one of the plurality of cells is not a primary cell for the WTRU;

transmitting scheduling information to the WTRU by the primary cell and not by the at least one second cell; and

transmitting hybrid automatic repeat request (HARQ) acknowledgements (ACKs) and negative acknowledgements (NACKs) to the WTRU by the primary cell;

wherein the at least one second cell does not transmit the HARQ NACKs to the WTRU.

14. (New) The method of claim 13, further comprising:

designating, by a radio network controller (RNC), the primary cell and the at least one second cell from the plurality of cells.

15. (New) The method of claim 14, wherein each cell is served by a cell Node-B, and the cell Node-Bs are controlled by the RNC.

16. (New) The method of claim 15, further comprising:
transmitting, by each of the cell Node-Bs, correctly received enhanced uplink data to the RNC.

17. (New) The method of claim 15, further comprising:
performing, by at least the primary cell Node-B and the second cell Node-B, an error check on the received enhanced uplink data the cell Node-Bs receive;
wherein each cell Node-B that correctly receives the enhanced uplink data transmits a HARQ ACK, and the primary cell Node-B transmits the HARQ NACK if none of the cell Node-Bs receives the uplink enhanced data correctly; and
wherein the error check is a cyclic redundancy check.

18. (New) The method of claim 17, further comprising:
soft combining the enhanced uplink data received by the primary cell Node-B with additional enhanced uplink data if the enhanced uplink data was not received correctly by any of the cell Node-Bs.

19. (New) The method of claim 15, further comprising:
designating, by the RNC, which of the cell Node-Bs form an active set of cell Node-Bs for each of a plurality of WTRUs served by the RNC and the cell Node-Bs controlled thereby;
wherein the primary cell and at least one secondary cell for a WTRU are selected from the cells served by the active set of cell Node-Bs designated for that WTRU.

20. (New) The method of claim 14, further comprising:
receiving from the WTRU downlink power measurements of transmissions received by the WTRU from the plurality of cells; and
designating, by the RNC, the cell having a highest downlink power measured by the WTRU as the primary cell.

21. (New) The method of claim 13, wherein the enhanced uplink data includes WTRU identification.

22. (New) The method of claim 13, wherein the scheduling information includes at least one of a HARQ process identification and a maximum transmit power level of the WTRU.

23. (New) An apparatus, comprising:
a plurality of cells served by corresponding cell Node-Bs;
wherein the cell Node-Bs are configured to:
receive, via the cells during soft handover, enhanced uplink data from a wireless transmit/receive unit (WTRU), wherein a first one of the plurality of cells is a primary cell for the WTRU and at least a second one of the plurality of cells is not a primary cell for the WTRU;
transmit scheduling information to the WTRU by the primary cell Node-B and not by the at least one second cell Node-B; and
transmit hybrid automatic repeat request (HARQ) acknowledgements (ACKs) and negative acknowledgements (NACKs) to the WTRU by the primary cell Node-B;
wherein the at least one second cell Node-B does not transmit the

HARQ NACKs to the WTRU.

24. (New) The apparatus of claim 23, further comprising:
a radio network controller (RNC) coupled to the cell Node-Bs;
wherein the RNC is configured to:

designate which one of the plurality of cells is the primary cell and which of
the plurality of cells is the at least one second cell.

25. (New) The apparatus of claim 24, wherein each of the cell Node-Bs is
further configured to:

transmit correctly received enhanced uplink data to the RNC.

26. (New) The apparatus of claim 24, wherein at least the primary cell
Node-B and the at least one second cell Node-Bs are further configured to:

perform an error check on the received enhanced uplink data the cell Node-B
receives; and

transmit a HARQ ACK when that Node-B correctly receives the enhanced
uplink data;

wherein the primary cell Node-B transmits the HARQ NACK if none of the
plurality of cell Node-Bs receives the enhanced uplink data correctly; and

wherein the error check is a cyclic redundancy check.

27. (New) The apparatus of claim 26, wherein the primary cell Node-B is
further configured to:

soft combine the enhanced uplink data with additional enhanced uplink data
if the enhanced uplink data was not received correctly by any of the cell Node-Bs.

28. (New) The apparatus of claim 26, wherein the RNC is further configured to:

instruct the primary cell Node-B to inform the WTRU of missing enhanced uplink data.

29. (New) The apparatus of claim 24, wherein the RNC is further configured to:

designate which of the cell Node-Bs form an active set of cell Node-Bs for each of a plurality of WTRUs served by the RNC and the cell Node-Bs controlled thereby;

wherein the primary cell and at least one second cell for a WTRU are selected from the cells served by the active set of cell Node-Bs designated for that WTRU.

30. (New) The apparatus of claim 24, wherein the RNC is further configured to:

receive a message generated by the WTRU, the message containing WTRU downlink power measurements of transmissions received by the WTRU from the cell Node-Bs; and

designate the Node-B having a highest downlink power measured by the WTRU as the primary cell Node-B.

31. (New) The apparatus of claim 23, wherein the enhanced uplink data includes WTRU identification.

32. (New) The apparatus of claim 23, wherein the scheduling information includes at least one of a HARQ process identification and a maximum transmit power level of the WTRU.

33. (New) A method of operating a cell Node-B configured to communicate with a wireless transmit/receive unit (WTRU) via at least one cell of a plurality of cells, the method comprising:

receiving, via the at least one cell during soft handover, enhanced uplink data from the WTRU, wherein the at least one cell is either a primary cell for the WTRU or a non-primary cell for the WTRU;

transmitting scheduling information to the WTRU if the cell is the primary cell for the WTRU, wherein the scheduling information is not transmitted to the WTRU if the cell is the non-primary cell for the WTRU;

transmitting hybrid automatic repeat request (HARQ) acknowledgements (ACKs) to the WTRU via the at least one cell; and

transmitting HARQ negative acknowledgements (NACKs) to the WTRU via the at least one cell only if the at least one cell is the primary cell for the WTRU.

34. (New) The method of claim 33, wherein whether the at least one cell is the primary cell or the non-primary cell for the WTRU is determined by a radio network controller (RNC) in communication with the cell Node-B.

35. (New) The method of claim 34, wherein the cell Node-B is controlled by the RNC.

36. (New) The method of claim 35, further comprising:
transmitting correctly received enhanced uplink data to the RNC.

37. (New) The method of claim 35, further comprising the step of:
performing, by the cell Node-B, an error check on the received enhanced
uplink data,

wherein the cell Node-B transmits a HARQ ACK via the at least one cell
when the cell Node-B correctly receives the enhanced uplink data, and the cell
Node-B transmits the HARQ NACK via the at least one cell if cell Node-B does not
receive the uplink enhanced data correctly and the at least one cell is a primary cell.

38. (New) The method of claim 37, wherein the error check is a cyclic
redundancy check.

39. (New) The method of claim 34, further comprising the steps of:
receiving, from the WTRU, downlink power measurements of transmissions
received by the WTRU from the plurality of cells; and

transmitting the WTRU downlink power measurements to the RNC,
wherein the cell having a highest downlink power measured by the WTRU is
designated by the RNC as the primary cell.

40. (New) The method of claim 33, wherein the enhanced uplink data
includes WTRU identification.

41. (New) The method of claim 33, wherein the scheduling information
includes at least one of a HARQ process identification and a maximum transmit

power level of the WTRU.

42. (New) An apparatus, comprising:

a receiver configured to receive, during soft handover, enhanced uplink data from a wireless transmit/receive unit (WTRU) via at least one cell of a plurality of cells, wherein the at least one cell is either a primary cell for the WTRU or a non-primary cell for the WTRU; and

a transmitter configured to send scheduling information, hybrid automatic repeat request (HARQ) acknowledgements (ACKs), and HARQ negative acknowledgements (NACKs) to the WTRU via the at least one cell,

wherein scheduling information and the NACKs are sent to the WTRU via the at least one cell only if the at least one cell is the primary cell for the WTRU.

43. (New) The apparatus of claim 42, further comprising:

an interface configured to communicate with a radio network controller (RNC) that determines whether the at least one cell is a primary cell or a non-primary cell for the WTRU.

44. (New) The apparatus of claim 43, wherein the interface is further configured to send correctly received enhanced uplink data to the RNC.

45. (New) The apparatus of claim 43, wherein the receiver is further configured to perform an error check on the received enhanced uplink data, and wherein the transmitter transmits the HARQ ACK when the receiver correctly receives the enhanced uplink data.

46. (New) The apparatus of claim 45, wherein the error check is a cyclic redundancy check.

47. (New) The apparatus of claim 44, wherein the interface is further configured to:

send a message generated by the WTRU to the RNC, the message containing WTRU downlink power measurements of transmissions received by the WTRU from a plurality of cells;

wherein the cell having a highest downlink power measured by the WTRU is designated by the RNC as the primary cell.

48. (New) The apparatus of claim 42, wherein the enhanced uplink data includes WTRU identification.

49. (New) The apparatus of claim 42, wherein the scheduling information includes at least one of a HARQ process identification and a maximum transmit power level of the WTRU.

50. (New) A method of operating a cell Node-B configured to communicate with a wireless transmit/receive unit (WTRU) via at least one cell of a plurality of cells, the method comprising:

receiving, via the at least one cell during soft handover, enhanced uplink data from the WTRU, wherein the at least one cell is either a primary cell for the WTRU or a non-primary cell for the WTRU;

transmitting scheduling information to the WTRU via the at least one cell;
and

transmitting hybrid automatic repeat request (HARQ) acknowledgements (ACKs) and negative acknowledgements (NACKs) to the WTRU via the at least one cell,

wherein scheduling information and the NACKs are transmitted to the WTRU via the at least one cell only if the at least one cell is the primary cell for the WTRU.

Applicant: Signal Trust for Wireless Innovation
Application No.: 13/908,242

REMARKS

Early consideration and allowance of the pending claims is respectfully requested.

Respectfully submitted,

SIGNAL TRUST FOR
WIRELESS INNOVATION

By /Abhik A. Huq/
Abhik A. Huq
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Volpe and Koenig, P.C.
United Plaza
30 South 17th Street
Philadelphia, PA 19103-4009

AAH/say

Electronic Patent Application Fee Transmittal

Application Number:	13908242			
Filing Date:	03-Jun-2013			
Title of Invention:	SUPPORTING ENHANCED UPLINK DURING SOFT HANDOVER			
First Named Inventor/Applicant Name:	Guodong Zhang			
Filer:	Abhik A. Huq/Sandy Yi			
Attorney Docket Number:	SIG-2-0674US05			
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	18	80	1440
Independent claims in excess of 3	1201	1	420	420
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1860

Electronic Acknowledgement Receipt

EFS ID:	20163947
Application Number:	13908242
International Application Number:	
Confirmation Number:	5287
Title of Invention:	SUPPORTING ENHANCED UPLINK DURING SOFT HANDOVER
First Named Inventor/Applicant Name:	Guodong Zhang
Customer Number:	3624
Filer:	Abhik A. Huq/Sandy Yi
Filer Authorized By:	Abhik A. Huq
Attorney Docket Number:	SIG-2-0674US05
Receipt Date:	17-SEP-2014
Filing Date:	03-JUN-2013
Time Stamp:	16:38:43
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$ 1860
RAM confirmation Number	3255
Deposit Account	220493
Authorized User	HUQ, ABHIK A.

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		20140917_SIG_2_0674US05_Pr el_Amendment.PDF	81674 2f87c2999d0e0f48240f069e269593d11fbb a0fff	yes	12

Multipart Description/PDF files in .zip description

Document Description	Start	End
Preliminary Amendment	1	1
Claims	2	11
Applicant Arguments/Remarks Made in an Amendment	12	12

Warnings:**Information:**

2	Fee Worksheet (SB06)	fee-info.pdf	32326 12c2be31c794dc4aa86f0f660d49b2b3c4e a4217	no	2
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Warnings:**Information:**

Total Files Size (in bytes):	114000
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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.

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

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 13/908,242	Filing Date 06/03/2013	☐ To be Mailed
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ENTITY: ☒ LARGE ☐ SMALL ☐ MICRO**APPLICATION AS FILED – PART I**

(Column 1)

(Column 2)

FOR	NUMBER FILED	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), (l), 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

(Column 1)

(Column 2)

(Column 3)

	09/17/2014	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE (\$)	ADDITIONAL FEE (\$)
AMENDMENT	Total (37 CFR 1.16(i))	* 38	Minus	** 20	= 18		x \$80 =	1440
	Independent (37 CFR 1.16(h))	* 5	Minus	***4	= 1		x \$420 =	420
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
	TOTAL ADD'L FEE							1860

(Column 1)

(Column 2)

(Column 3)

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

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

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

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

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

LIE
/DIANIECE JACOBS/

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

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

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		13908242
	Filing Date		2013-06-03
	First Named Inventor	Zhang et al.	
	Art Unit	2466	
	Examiner Name	Brian S. Roberts	
	Attorney Docket Number	SIG-2-0674US05	

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

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

Add

U.S.PATENT APPLICATION PUBLICATIONS						Remove
Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20030002470	A1	2003-01-02	Park et al.	
	2	20030031119	A1	2003-02-13	Kim et al.	

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

Add

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

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

Add

NON-PATENT LITERATURE DOCUMENTS								Remove
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		13908242
	Filing Date		2013-06-03
	First Named Inventor	Zhang et al.	
	Art Unit	2466	
	Examiner Name	Brian S. Roberts	
	Attorney Docket Number	SIG-2-0674US05	

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1		☐

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

EXAMINER SIGNATURE

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

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

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

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

Application Number	13908242
Filing Date	2013-06-03
First Named Inventor	Zhang et al.
Art Unit	2466
Examiner Name	Brian S. Roberts
Attorney Docket Number	SIG-2-0674US05

CERTIFICATION STATEMENT

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

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

OR

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

☐ See attached certification statement.

☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

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

Signature	/Abhik A. Huq/	Date (YYYY-MM-DD)	2015-01-12
Name/Print	Abhik A. Huq	Registration Number	40,656

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

Privacy Act Statement

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

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

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

Electronic Acknowledgement Receipt

EFS ID:	21177299
Application Number:	13908242
International Application Number:	
Confirmation Number:	5287
Title of Invention:	SUPPORTING ENHANCED UPLINK DURING SOFT HANDOVER
First Named Inventor/Applicant Name:	Guodong Zhang
Customer Number:	3624
Filer:	Abhik A. Huq/Carey Kulp
Filer Authorized By:	Abhik A. Huq
Attorney Docket Number:	SIG-2-0674US05
Receipt Date:	12-JAN-2015
Filing Date:	03-JUN-2013
Time Stamp:	16:36:48
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	IDS.pdf	61402 1b6fc0bdf519f5eb7b6603c31303f97b4213c67	no	3

Warnings:

Information:

2	Information Disclosure Statement (IDS) Form (SB08)	SB08.pdf	657598 0ac633c03d35b57b120e191a58cb325eb830af9a	no	4
Warnings:					
Information:					
Total Files Size (in bytes):				719000	
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the PATENT APPLICATION of:

Zhang et al.

Application No.: 13/908,242

Confirmation No.: 5287

Filed: June 3, 2013

For: SUPPORTING
ENHANCED UPLINK DURING SOFT
HANDOVER

Group: 2466

Examiner: Brian S. Roberts

Our File: SIG-2-0674US05

Date: January 12, 2015

INFORMATION DISCLOSURE STATEMENT

Mail Stop Amendment (via EFS)
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Madam:

Further to Applicants' Duty of Disclosure pursuant to 37 C.F.R. §1.56, Applicants wish to bring to the Examiner's attention the material cited on the enclosed PTO Form SB-08. Pursuant to 37 C.F.R. §1.98(a)(2)(ii), copies of the newly cited U.S. publications and/or patent documents have not been included.

This Application is a continuation of U.S. Patent Application No. 13/308,950, filed December 1, 2011, which issued June 4, 2013 as U.S. Patent No. 8,457,072, which is a continuation of U.S. Patent Application No. 11/434,330, filed May 15, 2006, which issued March 6, 2012 as U.S. Patent No. 8,130,720, which is a continuation of U.S.

Applicant: Signal Trust For Wireless Innovation
Application No.: 13/908,242

Patent Application No. 10/962,720, filed October 12, 2004, which issued May 16, 2006 as U.S. Patent No. 7,046,648, which claims priority from Provisional Application No. 60/578,674, filed June 10, 2004, Provisional Application No. 60/520,692, filed November 17, 2003, Provisional Application No. 60/519,990, filed November 14, 2003, and Provisional Application No. 60/517,656, filed November 5, 2003.

Applicants would like to bring the following Applications to the Examiner's attention: U.S. Patent Application No. 13/236,133, filed September 19, 2011; U.S. Patent Application No. 10/925,426, filed August 25, 2004, which issued September 20, 2011 as U.S. Patent No. 8,023,463; Provisional Application No. 60/585,174, filed July 2, 2004; Provisional Application No. 60/520,207, filed November 14, 2003; Provisional Application No. 60/508,797, filed October 3, 2003; Provisional Application No. 60/507,554, filed October 1, 2003; and Provisional Application No. 60/497,747, filed August 25, 2003.

Applicant: Signal Trust For Wireless Innovation
Application No.: 13/908,242

It is respectfully requested that the Examiner consider these documents and return an initialed copy of the PTO Form SB-08 indicating consideration of the cited materials.

Respectfully submitted,

Signal Trust For Wireless Innovation

By /Abhik A. Huq/
Abhik A. Huq
Registration No. 40,656
(215) 568-6400

Volpe and Koenig, P.C.
United Plaza, Suite 1800
30 South 17th Street
Philadelphia, PA 19103

AAH/PCK
Enclosure



UNITED STATES PATENT AND TRADEMARK OFFICE

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

NOTICE OF ALLOWANCE AND FEE(S) DUE

3624 7590 03/10/2015
VOLPE AND KOENIG, P.C.
UNITED PLAZA
30 SOUTH 17TH STREET
PHILADELPHIA, PA 19103

EXAMINER

ROBERTS, BRIAN S

ART UNIT

PAPER NUMBER

2466

DATE MAILED: 03/10/2015

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/908,242	06/03/2013	Guodong Zhang	SIG-2-0674US05	5287

TITLE OF INVENTION: SUPPORTING ENHANCED UPLINK DURING SOFT HANDOVER

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	06/10/2015

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)

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.

3624 7590 03/10/2015
VOLPE AND KOENIG, P.C.
UNITED PLAZA
30 SOUTH 17TH STREET
PHILADELPHIA, PA 19103

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.
13/908,242	06/03/2013	Guodong Zhang	SIG-2-0674US05	5287

TITLE OF INVENTION: SUPPORTING ENHANCED UPLINK DURING SOFT HANDOVER

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	06/10/2015

EXAMINER	ART UNIT	CLASS-SUBCLASS
ROBERTS, BRIAN S	2466	370-331000

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, 1 _____
- (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. 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
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

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.

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.

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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www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/908,242	06/03/2013	Guodong Zhang	SIG-2-0674US05	5287

3624 7500 03/10/2015
VOLPE AND KOENIG, P.C.
UNITED PLAZA
30 SOUTH 17TH STREET
PHILADELPHIA, PA 19103

EXAMINER

ROBERTS, BRIAN S

ART UNIT PAPER NUMBER

2466

DATE MAILED: 03/10/2015

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.

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. 13/908,242	Applicant(s) ZHANG ET AL.	
	Examiner BRIAN ROBERTS	Art Unit 2466	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 the application filed on 06/03/2013.
☐ 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 13-50. 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) | 5. ☐ Examiner's Amendment/Comment |
| 2. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 6. ☒ Examiner's Statement of Reasons for Allowance |
| 3. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 7. ☐ Other _____. |
| 4. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____. | |

/BRIAN ROBERTS/
Primary Examiner, Art Unit 2466

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

DETAILED ACTION

Claims 13-50 are allowed.

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

The primary reason independent claim 13 is allowable is because the closest prior art of record, US 7346035 by Lee et al., fails to teach or fairly suggest either alone or in combination with the prior art of record in a wireless network having a plurality of cells, a method including transmitting scheduling information to the WTRU by the primary cell and not by the at least one second cell; and transmitting hybrid automatic repeat request (HARQ) acknowledgements (ACKs) and negative acknowledgements (NACKs) to the WTRU by the primary cell; wherein the at least one second cell does not transmit the HARQ NACKs to the WTRU.

The primary reason independent claim 23 is allowable is because the closest prior art of record, US 7346035 by Lee et al., fails to teach or fairly suggest either alone or in combination with the prior art of record in an apparatus including a plurality of cells served by corresponding cell Node-Bs; wherein the cell Node-Bs are configured to: transmit scheduling information to the WTRU by the primary cell Node-B and not by the

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at least one second cell Node-B; and transmit hybrid automatic repeat request (HARQ) acknowledgements (ACKs) and negative acknowledgements (NACKs) to the WTRU by the primary cell Node-B; wherein the at least one second cell Node-B does not transmit the HARQ NACKs to the WTRU.

The primary reason independent claim 33 is allowable is because the closest prior art of record, US 7346035 by Lee et al., fails to teach or fairly suggest either alone or in combination with the prior art of record in a method of operating a cell Node-B configured to communicate with a wireless transmit/receive unit (WTRU) via at least one cell of a plurality of cells, the method including transmitting scheduling information to the WTRU if the cell is the primary cell for the WTRU, wherein the scheduling information is not transmitted to the WTRU if the cell is the non-primary cell for the WTRU; transmitting hybrid automatic repeat request (HARQ) acknowledgements (ACKs) to the WTRU via the at least one cell; and transmitting HARQ negative acknowledgements (NACKs) to the WTRU via the at least one cell only if the at least one cell is the primary cell for the WTRU.

The primary reason independent claim 42 is allowable is because the closest prior art of record, US 7346035 by Lee et al., fails to teach or fairly suggest either alone or in combination with the prior art of record in an apparatus including a transmitter configured to send scheduling information, hybrid automatic repeat request (HARQ) acknowledgements (ACKs), and HARQ negative acknowledgements (NACKs) to the

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WTRU via the at least one cell, wherein scheduling information and the NACKs are sent to the WTRU via the at least one cell only if the at least one cell is the primary cell for the WTRU.

The primary reason independent claim 50 is allowable is because the closest prior art of record, US 7346035 by Lee et al., fails to teach or fairly suggest either alone or in combination with the prior art of record in a method of operating a cell Node-B configured to communicate with a wireless transmit/receive unit (WTRU) via at least one cell of a plurality of cells, the method including transmitting scheduling information to the WTRU via the at least one cell; and transmitting hybrid automatic repeat request (HARQ) acknowledgements (ACKs) and negative acknowledgements (NACKs) to the WTRU via the at least one cell, wherein scheduling information and the NACKs are transmitted to the WTRU via the at least one cell only if the at least one cell is the primary cell for the WTRU.

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 BRIAN ROBERTS whose telephone number is (571)272-3095. The examiner can normally be reached on M-F 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, FARUK HAMZA can be reached on (571) 272-7969. 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.

/BRIAN ROBERTS/
Primary Examiner, Art Unit 2466
02/20/2015

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)	ATTY. DOCKET NO. I-2-0674US05	SERIAL NO. 13/908,242
	APPLICANT Zhang et al.	
	FILING DATE June 3, 2013	GROUP 2473

U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		6,678,249	01/2004	Toskala et al. ⁴			
		6,778,830	08/2004	Oizumi et al.			
		6,892,071	05/2005	Park et al. ⁶			
		7,013,143	03/2006	Love et al.			
		7,346,035	03/2008	Lee et al.			
		7,414,989	08/2002	Kuchibhotla et al.			
		2002/0095635	07/2002	Wager et al.			
		2002/0191544	12/2002	Cheng et al.			
		2003/0007480	01/2003	Kim et al.			
		2003/0043786	03/2003	Kall et al.			
		2003/0054824	03/2003	Choi et al.			
		2003/0081692	05/2003	Kwan et al.			
		2003/0161284	08/2003	Chen			
		2003/0210668	11/2003	Malladi et al.			
		2004/0004954	01/2004	Terry et al.			
		2004/0072567	04/2004	Cao et al.			
		2004/0085934	05/2004	Balachandran et al.			
		2004/0120306	06/2004	Wigard et al.			
		2004/0160925	08/2004	Heo et al. ¹			
		2004/0202129	10/2004	Kolding et al.			
		2004/0203991	10/2004	Chen et al.			
		2004/0219917	11/2004	Love et al.			
		2004/0219919	11/2004	Whinnett et al.			
		2004/0219920	11/2004	Love et al.			
		2004/0228313	11/2004	Cheng et al.			

EXAMINER /Brian Roberts/ (02/19/2015)	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 applicant.

2150192 ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /B.R./

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)	ATTY. DOCKET NO. I-2-0674US05	SERIAL NO. 13/908,242
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	FILING DATE June 3, 2013	GROUP 2473

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		2005/0041694	02/2005	Liu			
		2005/0047354	03/2005	Zeira et al.			
		2005/0048920	03/2005	Liu			
		2005/0083888	04/2005	Smee et al.			
		2007/0047501	03/2007	Usuda et al. ²			

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
		0 977 393	02/2000	EP ⁵				
		2 353 439	02/2001	GB				
		2001-128209	05/2001	JP			X**	
		2003-163960	06/2003	JP			X**	
		2002-0095231	12/2002	KR			X**	
		2003112283	12/2005	RU			X**	
		2005110767	10/2006	RU			X**	
		00/074263	12/2000	WO ³				
		00/35226	06/2000	WO				
		02/01893	01/2002	WO				
		03/003643	01/2003	WO				
		03/026231	03/2003	WO				
		03/053087	06/2003	WO				
		03/067953	08/2003	WO				
		03/088545	10/2003	WO				

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT		
(Use several sheets if necessary)		

OTHER DOCUMENTS		
EXAMINER INITIAL		DESCRIPTION (Including Author, Title, Date, Pertinent Pages, Etc.)
		3GPP, "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Feasibility Study for Enhanced Uplink for UTRA FDD; (Release 6)," 3GPP TR 25.896 V1.0.2 (October 2003).
		3GPP, "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Feasibility Study for Enhanced Uplink for UTRA FDD (Release 6)," 3GPP TR 25.896 V6.0.0 (March 2004).
		3GPP, "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Multiplexing and channel coding (FDD) (Release 1999)," 3GPP TS 25.212 V3.11.0 (September 2002).
		3GPP, "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Medium Access Control (MAC) protocol specification (Release 1999)," 3GPP TS 25.321 V3.16.0 (September 2003).
		3GPP, "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Multiplexing and channel coding (FDD) (Release 4)," 3GPP TS 25.212 V4.6.0 (September 2002).
		3GPP, "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Multiplexing and channel coding (FDD) (Release 5)," 3GPP TS 25.212 V5.6.0 (September 2003).
		3GPP, "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Multiplexing and channel coding (FDD) (Release 5)," 3GPP TS 25.212 V5.9.0 (June 2004).
		3GPP, "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Multiplexing and channel coding (FDD) (Release 6)," 3GPP TS 25.212 V6.2.0 (June 2004).
		3GPP, "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Medium Access Control (MAC) protocol specification (Release 1999)," 3GPP TS 25.321 V3.17.0 (June 2004).
		3GPP, "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Medium Access Control (MAC) protocol specification (Release 6)," 3GPP TS 25.321 V6.2.0 (June 2004).
		3GPP, "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Medium Access Control (MAC) protocol specification (Release 4)," 3GPP TS 25.321 V4.9.0 (September 2003).

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	3GPP, "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Medium Access Control (MAC) protocol specification (Release 5)," 3GPP TS 25.321 V5.9.0 (June 2004).
	3GPP, "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Medium Access Control (MAC) protocol specification (Release 4)," 3GPP TS 25.321 V4.10.0 (June 2004).
	3GPP, "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Medium Access Control (MAC) protocol specification (Release 5)," 3GPP TS 25.321 V5.6.0 (September 2003).
	3GPP, "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Feasibility Study for Enhanced Uplink for UTRA FDD; (Release 6)," 3GPP TR 25.896 V1.0.1 (October 2003).
	3GPP, "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Radio Resource Control (RRC) protocol specification (Release 1999)," 3GPP TS 25.331 V3.16.0 (September 2003).
	3GPP, "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Radio Resource Control (RRC) protocol specification (Release 1999)," 3GPP TS 25.331 V3.20.0 (September 2004).
	3GPP, "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Radio Resource Control (RRC); Protocol Specification (Release 4)," 3GPP TS 25.331 V4.11.0 (September 2003).
	3GPP, "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Radio Resource Control (RRC); Protocol Specification (Release 4)," 3GPP TS 25.331 V4.15.0 (June 2004).
	3GPP, "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Radio Resource Control (RRC); Protocol Specification (Release 5)," 3GPP TS 25.331 V5.6.0 (September 2003).
	3GPP, "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Radio Resource Control (RRC); Protocol Specification (Release 5)," 3GPP TS 25.331 V5.10.0 (September 2004).
	3GPP, "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Radio Resource Control (RRC); Protocol Specification (Release 6)," 3GPP TS 25.331 V6.3.0 (September 2004).
	3GPP, "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; UTRAN Iub interface NBAP signaling (Release 1999)," 3GPP TS 25.433 V3.14.2 (September 2004).

EXAMINER /Brian Roberts/ (02/19/2015)	DATE CONSIDERED
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(Use several sheets if necessary)		

EXAMINER INITIAL		DESCRIPTION (Including Author, Title, Date, Pertinent Pages, Etc.)
		3GPP, "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; UTRAN lub interface NBAP signaling (Release 1999)," 3GPP TS 25.433 V3.14.0 (September 2003).
		3GPP, "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; UTRAN lub interface NBAP signaling (Release 4)," 3GPP TS 25.433 V4.10.0 (September 2003).
		3GPP, "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; UTRAN lub interface NBAP signaling (Release 4)," 3GPP TS 25.433 V4.13.0 (September 2004).
		3GPP, "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; UTRAN lub interface NBAP signaling (Release 5)," 3GPP TS 25.433 V5.6.0 (September 2003).
		3GPP, "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; UTRAN lub interface NBAP signaling (Release 5)," 3GPP TS 25.433 V5.10.0 (September 2004).
		3GPP, "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; UTRAN lub interface NBAP signaling (Release 6)," 3GPP TS 25.433 V6.3.0 (September 2004).
		3GPP, "Third Generation Partnership Project; Technical Specification Group Radio Access Network; FDD Enhanced Uplink; Overall Description; Stage 2 (Release 6)," 3GPP TS 25.309 V6.0.0 (September 2004).
		3GPP2 C.20003-C, "Medium Access Control (MAC) Standard for cdma2000 Spread Spectrum Systems", 3rd Generation Partnership Project 2 "3GPP2", Version 2.0, Release C, August 2004.
		3GPP2 C.S0004-C, "Signaling Link Access Control (LAC) Standard for cdma2000 Spread Spectrum Systems", 3rd Generation Partnership Project 2 "3GPP2", Version 2.0, Revision C, July 23, 2004.
		3GPP2 C.S0005-C, "Upper Layer (Layer 3) Signaling Standard for cdma2000 Spread Spectrum Systems", 3rd Generation Partnership Project 2 "3GPP2", Version 2.0, Revision c, July 23, 2004.
		GPP2 C.S0002-C, "Physical Layer Standard for cdma2000 Spread Spectrum Systems", 3rd Generation Partnership Project 2 "3GPP2", Version 2.0, Revision C, July 23, 2004.

X** Abstract only

¹ Corresponds to RU2004104196; ² Corresponds to RU 2006130462; ³ Corresponds to RU 2001135846; ⁴ Corresponds to WO 03/067953; ⁵ Corresponds to WO 98/47253; ⁶ Corresponds to US 2002/0045448.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		13908242	
	Filing Date		2013-06-03	
	First Named Inventor	Zhang et al.		
	Art Unit	2466		
	Examiner Name	Brian S. Roberts		
	Attorney Docket Number	SIG-2-0674US05		

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	1	20030002470	A1	2003-01-02	Park et al.	
	2	20030031119	A1	2003-02-13	Kim et al.	

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Signature	/Abhik A. Huq/	Date (YYYY-MM-DD)	2015-01-12
Name/Print	Abhik A. Huq	Registration Number	40,656

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		13908242
	Filing Date		2013-06-03
	First Named Inventor	Zhang et al.	
	Art Unit	2473	
	Examiner Name	Kwang Bin Yao	
	Attorney Docket Number	SIG-2-0674US05	

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	1	5794149	B1	1998-08-11	Hoo	
	2	5946320	B1	1999-08-31	Decker et al.	
	3	6434396	B1	2002-08-13	Rune	
	4	6643813	B1	2003-11-04	Johansson et al.	
	5	6678523	B1	2004-01-13	Ghosh et al.	* Corresponds to WO 02/37872, JP 2004-519122, and KR 2003-0048115
	6	6907245	B2	2005-06-14	Ohlsson et al.	* Corresponds to TW 515212
	7	6915465	B2	2005-07-05	Fujiwara et al.	
	8	6977888	B1	2005-12-20	Frenger et al.	

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	First Named Inventor	Zhang et al.		
	Art Unit	2473		
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	Attorney Docket Number	SIG-2-0674US05		

	9	7046648	B2	2006-05-16	Zhang et al.	
	10	7054633	B2	2006-05-30	Seo et al.	
	11	7103729	B2	2006-09-05	Altahan et al.	
	12	7124350	B2	2006-10-17	Chao et al.	
	13	7158504	B2	2007-01-02	Kadaba et al.	* Corresponds to JP 2002-369261
	14	7185256	B2	2007-02-27	Miki et al.	* Corresponds to JP 2002-009741
	15	7269420	B2	2007-09-11	Heo et al.	
	16	7283508	B2	2007-10-16	Choi et al.	
	17	7315741	B2	2008-01-01	Chun	
	18	7317700	B2	2008-01-08	Hwang	
	19	7403513	B2	2008-07-22	Lee et al.	

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	Attorney Docket Number	SIG-2-0674US05		

	20	8023463	B2	2011-09-20	Dick et al.	
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	1	20020093937	A1	2002-07-18	Kim et al.	* Corresponds to RU 2002116683
	2	20030081692	A1	2003-05-01	Kwan et al.	
	3	20030202500	A1	2003-10-30	Ha et al.	* Corresponds to RU 2003137005
	4	20060045010	A1	2006-03-02	Baker et al.	* Corresponds to RU 2005106865
	5	20060105796	A1	2006-05-18	Malladi et al.	* Corresponds to RU 2005128547
	6	20070079207	A1	2007-04-05	Seidel et al.	* Corresponds to RU 2006107917

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	1	1217777	EP	A1	2002-06-26	Dold et al.		☐
	2	20030003943	KR	A	2003-01-14	Hong et al.	* An English abstract has been provided.	☐
	3	02037872	WO	A2	2002-05-10	Ghosh et al.		☐
	4	02047317	WO	A	2002-06-13	Wigell et al.		☐
	5	02082108	WO	A1	2002-10-17	Cheng et al.		☐
	6	02101966	WO	A2	2002-12-19	Cheng et al.		☐
	7	03047155	WO	A1	2003-06-05	Torsner et al.		☐

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	1	HECK ET AL., "Diversity Effects on the Soft Handover Gain in UMTS Networks," Proceedings of the IEEE Vehicular Technology Conference, volume 2, pp. 1269-1273 (September 2002).	☐
	2	INTERDIGITAL, "Performance Analysis of HARQ in Soft Handover," 3GPP TSG-RAN WG1 #34 meeting, R1-030979 (October 6-10, 2003).	☐

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	Attorney Docket Number	SIG-2-0674US05	

3	NOKIA, "HARQ overhead issues", TSG-RAN1 #33, R1-030733 (August 25-29, 2003).	☐
4	R1-030803, "HARQ operation during Soft Handover", Panasonic, TSG RAN1 #33	☐
5	SAMSUNG, "HARQ performance in soft handover", TSG RAN1 #33, R1-030765 (August 25-29, 2003).	☐
6	THIRD GENERATION PARTNERSHIP PROJECT, "Technical Specification Group Radio Access Network; Feasibility Study for Enhanced Uplink for UTRA FDD; (Release 6," 3GPP TR 25.896 V0.4.2 (R1-030952) (September 2003).	☐
7	THIRD GENERATION PARTNERSHIP PROJECT, "Technical Specification Group Radio Access Network; Requirements for support of radio resource management (FDD) (Release 1999)," 3GPP TS 25.133 V3.19.0 (September 2004).	☐
8	THIRD GENERATION PARTNERSHIP PROJECT, "Technical Specification Group Radio Access Network; Requirements for support of radio resource management (FDD) (Release 4)," 3GPP TS 25.133 V4.10.0 (September 2003).	☐
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12	THIRD GENERATION PARTNERSHIP PROJECT, "Technical Specification Group Radio Access Network; Requirements for support of radio resource management (FDD) (Release 1999)," 3GPP TS 25.133 V3.15.0 (September 2003).	☐
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14	THIRD GENERATION PARTNERSHIP PROJECT, "Technical Specification Group Radio Access Network; Requirements for support of radio resource management (FDD) (Release 6)," 3GPP TS 25.133 V6.3.0 (September 2003).	☐
15	THIRD GENERATION PARTNERSHIP PROJECT, "Technical Specification Group Radio Access Network; Physical layer procedures (FDD) (Release 1999)," 3GPP TS 25.214 V3.12.0 (March 2003).	☐
16	THIRD GENERATION PARTNERSHIP PROJECT, "Technical Specification Group Radio Access Network; Physical layer procedures (FDD) (Release 4)," 3GPP TS 25.214 V4.6.0 (March 2003).	☐
17	THIRD GENERATION PARTNERSHIP PROJECT, "Technical Specification Group Radio Access Network; Physical layer procedures (FDD) (Release 5)," 3GPP TS 25.214 V5.6.0 (September 2003).	☐
18	THIRD GENERATION PARTNERSHIP PROJECT, "Technical Specification Group Radio Access Network; Physical layer procedures (FDD) (Release 5)," 3GPP TS 25.214 V5.9.0 (June 2004).	☐
19	THIRD GENERATION PARTNERSHIP PROJECT, "Technical Specification Group Radio Access Network; Physical channels and mapping of transport channels onto physical channels (FDD) (Release 1999)," 3GPP TS 25.211 V3.12.0 (September 2002).	☐
20	THIRD GENERATION PARTNERSHIP PROJECT, "Technical Specification Group Radio Access Network; Physical channels and mapping of transport channels onto physical channels (FDD) (Release 4)," 3GPP TS 25.211 V4.6.0 (September 2002).	☐
21	THIRD GENERATION PARTNERSHIP PROJECT, "Technical Specification Group Radio Access Network; Physical channels and mapping of transport channels onto physical channels (FDD) (Release 5)," 3GPP TS 25.211 V5.5.0 (September 2003).	☐
22	THIRD GENERATION PARTNERSHIP PROJECT, "Technical Specification Group Radio Access Network; Physical channels and mapping of transport channels onto physical channels (FDD) (Release 5)," 3GPP TS 25.211 V5.6.0 (September 2004).	☐
23	THIRD GENERATION PARTNERSHIP PROJECT, "Technical Specification Group Radio Access Network; Physical channels and mapping of transport channels onto physical channels (FDD) (Release 6)," 3GPP TS 25.211 V6.2.0 (September 2004).	☐
24	THIRD GENERATION PARTNERSHIP PROJECT, "Technical Specification Group Radio Access Network; Physical layer procedures (FDD) (Release 6)," 3GPP TS 25.214 V6.3.0 (September 2004).	☐

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25	THIRD GENERATION PARTNERSHIP PROJECT, "Technical Specification Group Radio Access Network; High Speed Downlink Packet Access (HSDPA); Overall description; Stage 2 (Release 6)," 3GPP TS 25.308 V6.2.0 (September 2004).	☐
26	THIRD GENERATION PARTNERSHIP PROJECT, "Technical Specification Group Radio Access Network; High Speed Downlink Packet Access (HSDPA); Overall description; Stage 2 (Release 5)," 3GPP TS 25.308 V5.6.0 (September 2004).	☐
27	THIRD GENERATION PARTNERSHIP PROJECT, "Technical Specification Group Radio Access Network; High Speed Downlink Packet Access (HSDPA); Overall description; Stage 2 (Release 5)," 3GPP TS 25.308 V5.4.0 (March 2003).	☐
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Signature	/Abhik A. Huq/	Date (YYYY-MM-DD)	2014-08-13
Name/Print	Abhik A. Huq	Registration Number	40,656

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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.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /B.R./

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		13908242	
	Filing Date		2013-06-03	
	First Named Inventor	Zhang et al.		
	Art Unit	2464		
	Examiner Name	Ricky Quoc Ngo		
	Attorney Docket Number	SIG-2-0674US05		

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	1	99027740	WO	A1	1999-06-03	Ericsson Telefon AB LM	* Corresponds to KR 2001-0032521	☐

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		13908242	13908242 - GAU: 2466
	Filing Date		2013-06-03	
	First Named Inventor	Zhang et al.		
	Art Unit	2464		
	Examiner Name	Ricky Quoc Ngo		
	Attorney Docket Number	SIG-2-0674US05		

1		☐
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EXAMINER SIGNATURE

Examiner Signature	/Brian Roberts/ (02/19/2015)	Date Considered	02/19/2015
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***EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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

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

Application Number	13908242	13908242 - GAU: 2466
Filing Date	2013-06-03	
First Named Inventor	Zhang et al.	
Art Unit	2464	
Examiner Name	Ricky Quoc Ngo	
Attorney Docket Number	SIG-2-0674US05	

CERTIFICATION STATEMENT

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

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

OR

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

☐ See attached certification statement.

☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

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

Signature	/Abhik A. Huq/	Date (YYYY-MM-DD)	2014-09-10
Name/Print	Abhik A. Huq	Registration Number	40,656

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

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /B.R./

Issue Classification 	Application/Control No. 13908242	Applicant(s)/Patent Under Reexamination ZHANG ET AL.	
	Examiner BRIAN ROBERTS	Art Unit 2466	

CPC							
Symbol						Type	Version
H04W		36	/	18		F	2013-01-01
H04B		7	/	022		A	2013-01-01
H04L		1	/	1887		I	2013-01-01
H04L		1	/	1893		I	2013-01-01
H04W		36	/	30		A	2013-01-01
H04W		88	/	08		A	2013-01-01
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CPC Combination Sets				
Symbol	Type	Set	Ranking	Version

NONE		Total Claims Allowed:	
(Assistant Examiner)		38	
(Date)			
/BRIAN ROBERTS/ Primary Examiner.Art Unit 2466	02/20/2015	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	3

Issue Classification 	Application/Control No. 13908242	Applicant(s)/Patent Under Reexamination ZHANG ET AL.
	Examiner BRIAN ROBERTS	Art Unit 2466

☐ 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	5	17	21	33	37	49								
	2	6	18	22	34	38	50								
	3	7	19	23	35										
	4	8	20	24	36										
	5	9	21	25	37										
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	7	11	23	27	39										
	8	12	24	28	40										
	9	15	25	29	41										
	10	16	26	30	42										
	11	17	27	31	43										
	12	18	28	32	44										
1	13	13	29	34	45										
2	14	14	30	35	46										
3	15	19	31	33	47										
4	16	20	32	36	48										

NONE		Total Claims Allowed:	
		38	
(Assistant Examiner)	(Date)		
/BRIAN ROBERTS/ Primary Examiner.Art Unit 2466	02/20/2015	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	3

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	8991	(enhanc\$3 near2 uplink or ("e-dch"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/19 15:21
S2	589	(enhanc\$3 near2 uplink or ("e-dch")) and HARQ and soft near2 ((handover) or (handoff) or (hand\$3 near over) or (hand\$3 near2 off))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/19 15:22
S3	637	(enhanc\$3 near2 uplink or ("e-dch")) and ((HARQ) or (hybrid near2 automatic near2 repeat\$3 near2 request\$3)) and soft near2 ((handover) or (handoff) or (hand\$3 near over) or (hand\$3 near2 off))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/19 15:23
S4	637	((enhanc\$3 near2 uplink) or ("e-dch")) and ((HARQ) or (hybrid near2 automatic near2 repeat\$3 near2 request\$3)) and soft near2 ((handover) or (handoff) or (hand\$3 near over) or (hand\$3 near2 off))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/19 15:23
S5	459	H04L1/1887.cpc. and (enhanc\$3 near2 uplink or ("e-dch"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/19 15:58
S6	459	H04L1/1887.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/19 16:04
S7	350	H04W36/18.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/19 16:21
S8	6	"20030002470".pn. "20030031119".pn.	US-PGPUB;	OR	ON	2015/02/19

			USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			16:30
S9	71	"5794149".pn. "5946320".pn. "6434396".pn. "6643813".pn. "6678523".pn. "6907245".pn. "6915465".pn. "6977888".pn. "7046648".pn. "7054633".pn. "7103729".pn. "7124350".pn. "7158504".pn. "7185256".pn. "7269420".pn. "7283508".pn. "7315741".pn. "7317700".pn. "7403513".pn. "8023463".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/19 16:47
S10	70	H04L1/1893.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/19 16:53
S11	16	"20020093937".pn. "20030081692".pn. "20030202500".pn. "20060045010".pn. "20060105796".pn. "20070079207".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/19 16:54
S12	3	"20030003943".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/19 16:55
S13	66	"6678249".pn. "6778830".pn. "6892071".pn. "7013143".pn. "7346035".pn. "7414989".pn. "20020095635".pn. "20020191544".pn. "20030007480".pn. "20030043786".pn. "20030054824".pn. "20030081692".pn. "20030161284".pn. "20030210668".pn. "20040004954".pn. "20040072567".pn. "20040085934".pn. "20040120306".pn. "20040160925".pn. "20040202129".pn. "20040203991".pn. "20040219917".pn. "20040219919".pn. "20040219920".pn. "20040228313".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/19 17:13
S14	15	"20050041694".pn. "20050047354".pn. "20050048920".pn. "20050083888".pn. "20070047501".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/19 17:19
S15	0	H04L1/12.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2015/02/19 20:33

			DERWENT; IBM_TDB			
S16	314	H04L1/12.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/19 20:34
S17	637	((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))and ((HARQ) or (hybrid near2 automatic near2 repeat\$3 near2 request\$3)) and soft near2 ((handover) or (handoff) or (hand\$3 near over) or (hand\$3 near2 off))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/20 10:58
S18	77	H04L1/18.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/20 12:38
S19	884	H04L1/1812.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/20 12:52
S20	107	H04L1/1816.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/20 14:11
S21	178	H04L1/1819.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/20 14:27
S22	201	H04L1/1867.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/20 14:44
S23	49	H04L1/189.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/20 15:01
S24	105	H04L1/1896.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR;	OR	ON	2015/02/20 15:16

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S25	2	H04L1/22.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/20 15:30
S26	101	H04B7/022.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/20 15:34
S27	154	H04W36/30.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/20 16:03
S28	30	H04W36/00.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/20 16:20
S29	71	H04W36/02.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/20 16:37
S30	10	H04W36/16.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/20 16:44
S31	350	H04W36/18.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/20 16:45
S32	10	"8457072".pn. "8130720".pn. "7046648".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/20 17:12
S33	2	"20040219917".pn.	US-PGPUB;	OR	ON	2015/02/20

			USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			17:13
S34	2273255	"73"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/20 17:14
S35	2	"7346035".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/20 17:14
S36	6	"8130720".pn. "8457072".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/20 17:32
S37	19	H04W36/24.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/20 17:44
S38	4	H04W36/26.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/20 17:46
S39	7	H04W36/28.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/20 17:46
S40	4	H04W36/34.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/20 17:47
S41	3	H04W36/38.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	ON	2015/02/20 17:48

			IBM_TDB			
S42	261	H04W88/08.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/20 18:03

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S43	12	enhanced near2 uplink.clm. and soft near2 handover.clm.	USPAT; UPAD	OR	ON	2015/02/20 18:25
S44	4	enhanced near2 uplink.clm. and soft near2 handover.clm. and ((HARQ) or (hybrid near2 automatic near2 repeat\$3 near2 request\$3)).clm.	USPAT; UPAD	OR	ON	2015/02/20 18:26
S45	7	enhanced near2 uplink.clm. and soft near2 handover.clm. and schedul\$.clm.	USPAT; UPAD	OR	ON	2015/02/20 18:27

2/ 20/ 2015 6:28:48 PM
C:\Users\broberts\Documents\EAST\Workspaces\13908242.wsp



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CONFIRMATION NO. 5287

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.	
13/908,242	06/03/2013	370	2466	SIG-2-0674US05	
RULE					
APPLICANTS Signal Trust for Wireless Innovation, Wilmington, DE, Assignee (with 37 CFR 1.172 Interest); INVENTORS Guodong Zhang, Syosset, NY; Sung-Hyuk Shin, Northvale, NJ; Stephen E. Terry, Northport, NY; James M. Miller, Verona, NJ; Stephen G. Dick, Nesconset, NY;					
** CONTINUING DATA ***** This application is a CON of 13/308,950 12/01/2011 PAT 8457072 which is a CON of 11/434,330 05/15/2006 PAT 8130720 which is a CON of 10/962,720 10/12/2004 PAT 7046648 which claims benefit of 60/578,674 06/10/2004 and claims benefit of 60/520,692 11/17/2003 and claims benefit of 60/519,990 11/14/2003 and claims benefit of 60/517,656 11/05/2003					
** FOREIGN APPLICATIONS ***** ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** 06/20/2013					
Foreign Priority claimed ☐ Yes ☒ No 35 USC 119(a-d) conditions met ☐ Yes ☒ No Verified and /BRIAN S ROBERTS/ Acknowledged Examiner's Signature	☐ Met after Allowance BSR Initials	STATE OR COUNTRY NY	SHEETS DRAWINGS 4	TOTAL CLAIMS 6	INDEPENDENT CLAIMS 2
ADDRESS VOLPE AND KOENIG, P.C. UNITED PLAZA 30 SOUTH 17TH STREET PHILADELPHIA, PA 19103 UNITED STATES					
TITLE SUPPORTING ENHANCED UPLINK DURING SOFT HANDOVER					
FILING FEE RECEIVED 4020	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:			☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit	

Search Notes 	Application/Control No. 13908242	Applicant(s)/Patent Under Reexamination ZHANG ET AL.
	Examiner BRIAN ROBERTS	Art Unit 2466

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES		
Search Notes	Date	Examiner
PALM inventor search	2/20/2015	BSR
Search focused on: H04W36/18 H04L1/1887,1893,12,18,1812,1816,1819,1867,189,1896,22 H04B7/022 H04W36/30,00,02,16,18,24,26,28,34,38 H04W88/08	2/20/2015	BSR
EAST text search: see search history printout	2/20/2015	BSR

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
Interference search	see search history printout	2/20/2015	BSR

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

Application Number	13908242	Filing Date	2013-06-03	Docket Number (if applicable)	SIG-2-0674US05	Art Unit	2466
First Named Inventor	Guodong Zhang			Examiner Name	Brian S. Roberts		

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, to any international application that does not comply with the requirements of 35 U.S.C. 371, 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

Form PTO/SB/08a

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 220493

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☒ Patent Practitioner Signature

☐ Applicant Signature

Signature of Registered U.S. Patent Practitioner			
Signature	/Abhik A. Huq/	Date (YYYY-MM-DD)	2015-06-10
Name	Abhik A. Huq	Registration Number	40656

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

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

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

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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.

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the PATENT APPLICATION of:

Zhang et al.

Application No.: 13/908,242

Confirmation No.: 5287

Filed: June 3, 2013

For: SUPPORTING ENHANCED UPLINK
DURING SOFT HANDOVER

Group: 2466

Examiner: Brian S. Roberts

Our File: SIG-2-0674US05

Date: June 10, 2015

RESPONSE PURSUANT TO 37 C.F.R. §1.114

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

A Request for Continued Examination (RCE) is filed herewith in lieu of payment of the Issue Fee.

Please amend the application without prejudice or disclaimer as follows:

AMENDMENTS TO THE CLAIMS

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

1. – 12. (Canceled)

13. (Currently Amended) In a wireless network having a plurality of cells, a method comprising:

receiving, via the plurality of cells during soft handover, enhanced uplink data from a wireless transmit/receive unit (WTRU), wherein a first one of the plurality of cells is a primary cell for the WTRU and at least a second one of the plurality of cells is not a primary cell for the WTRU;

transmitting scheduling information to the WTRU ~~by~~ via the primary cell and not ~~by~~ via the at least one second cell; and

transmitting hybrid automatic repeat request (HARQ) acknowledgements (ACKs) and negative acknowledgements (NACKs) to the WTRU ~~by~~ via the primary cell;

wherein the at least one second cell does not transmit the HARQ NACKs to the WTRU.

14. (Previously Presented) The method of claim 13, further comprising:
designating, by a radio network controller (RNC), the primary cell and the at least one second cell from the plurality of cells.

15. (Currently Amended) The method of claim 14, wherein each cell is served by a ~~cell~~ Node-B, and the ~~cell~~ Node-Bs are controlled by the RNC.

16. (Currently Amended) The method of claim 15, further comprising:
transmitting, by each of the ~~cell~~ Node-Bs, correctly received enhanced uplink data to the RNC.

17. (Currently Amended) The method of claim 15, further comprising:
performing, by at least the ~~primary-cell~~ Node-B serving the primary cell and the ~~second-cell~~ Node-B serving the second cell, an error check on the received enhanced uplink data the ~~cell~~ Node-Bs receive;

wherein each ~~cell~~ Node-B that correctly receives the enhanced uplink data transmits a HARQ ACK, and the ~~primary-cell~~ Node-B serving the primary cell transmits the HARQ NACK if none of the ~~cell~~ Node-Bs receives the uplink enhanced data correctly; and

wherein the error check is a cyclic redundancy check.

18. (Currently Amended) The method of claim 17, further comprising:
soft combining the enhanced uplink data received by the ~~primary-cell~~ Node-B serving the primary cell with additional enhanced uplink data if the enhanced uplink data was not received correctly by any of the ~~cell~~ Node-Bs.

19. (Currently Amended) The method of claim 15, further comprising:
designating, by the RNC, which of the ~~cell~~ Node-Bs form an active set of ~~cell~~ Node-Bs for each of a plurality of WTRUs served by the RNC and the ~~cell~~ Node-Bs controlled thereby;

wherein the primary cell and at least one secondary cell for a WTRU are selected from the cells served by the active set of ~~cell~~ Node-Bs designated for that WTRU.

20. (Previously Presented) The method of claim 14, further comprising:
receiving from the WTRU downlink power measurements of transmissions received by the WTRU from the plurality of cells; and
designating, by the RNC, the cell having a highest downlink power measured by the WTRU as the primary cell.

21. (Previously Presented) The method of claim 13, wherein the enhanced uplink data includes WTRU identification.

22. (Previously Presented) The method of claim 13, wherein the scheduling information includes at least one of a HARQ process identification and a maximum transmit power level of the WTRU.

23. (Currently Amended) An apparatus, comprising:
a plurality of Node-Bs, each Node-B serving at least one cell ~~cells served by corresponding cell Node-Bs;~~
wherein the ~~cell~~ Node-Bs are configured to:

receive, via the cells during soft handover, enhanced uplink data from a wireless transmit/receive unit (WTRU), wherein ~~a first~~ one of the ~~plurality of~~ cells is a primary cell for the WTRU and at least ~~a second~~ one of the ~~plurality of~~ cells is ~~not~~ a non-primary cell for the WTRU;

transmit scheduling information to the WTRU via ~~by~~ the primary cell ~~Node-B~~ and not via ~~by~~ the at least one ~~second non-primary cell Node-B;~~ and

transmit hybrid automatic repeat request (HARQ) acknowledgements (ACKs) and negative acknowledgements (NACKs) to the WTRU via ~~by~~ the

primary cell ~~Node-B~~;

wherein the ~~at least one second cell~~ Node-B serving the at least one non-primary cell does not transmit the HARQ NACKs to the WTRU.

24. (Currently Amended) The apparatus of claim 23, further comprising:
a radio network controller (RNC) coupled to the ~~cell~~ Node-Bs;
wherein the RNC is configured to:

designate which one of the plurality of cells is the primary cell and which of the plurality of cells is the at least one ~~second non-primary cell~~.

25. (Currently Amended) The apparatus of claim 24, wherein each of the ~~cell~~ Node-Bs is further configured to:

transmit correctly received enhanced uplink data to the RNC.

26. (Currently Amended) The apparatus of claim 24, wherein at least the ~~primary cell~~ Node-B serving the primary cell and the ~~at least one second cell~~ Node-Bs serving the at least one non-primary cell are further configured to:

perform an error check on the received enhanced uplink data the ~~cell~~ Node-B receives; and

transmit a HARQ ACK when that Node-B correctly receives the enhanced uplink data;

wherein the ~~primary cell~~ Node-B serving the primary cell transmits the HARQ NACK if none of the plurality of ~~cell~~ Node-Bs receives the enhanced uplink data correctly; and

wherein the error check is a cyclic redundancy check.

27. (Currently Amended) The apparatus of claim 26, wherein the ~~primary cell~~ Node-B serving the primary cell is further configured to:

soft combine the enhanced uplink data with additional enhanced uplink data if the enhanced uplink data was not received correctly by any of the ~~cell~~ Node-Bs.

28. (Currently Amended) The apparatus of claim 26, wherein the RNC is further configured to:

instruct the ~~primary-cell~~ Node-B serving the primary cell to inform the WTRU of missing enhanced uplink data.

29. (Currently Amended) The apparatus of claim 24, wherein the RNC is further configured to:

designate which of the ~~cell~~ Node-Bs form an active set of ~~cell~~ Node-Bs for each of a plurality of WTRUs served by the RNC and the ~~cell~~ Node-Bs controlled thereby;

wherein the primary cell and at least one second cell for a WTRU are selected from the cells served by the active set of ~~cell~~ Node-Bs designated for that WTRU.

30. (Currently Amended) The apparatus of claim 24, wherein the RNC is further configured to:

receive a message generated by the WTRU, the message containing WTRU downlink power measurements of transmissions received by the WTRU from the ~~cell~~ Node-Bs; and

designate the Node-B having a highest downlink power measured by the WTRU as the ~~primary-cell~~ Node-B serving the primary cell.

31. (Previously Presented) The apparatus of claim 23, wherein the enhanced uplink data includes WTRU identification.

32. (Previously Presented) The apparatus of claim 23, wherein the scheduling information includes at least one of a HARQ process identification and a maximum transmit power level of the WTRU.

33. (Currently Amended) A method of operating a ~~cell~~ Node-B ~~configured to communicate with a wireless transmit/receive unit (WTRU) via at least one cell of a plurality of cells~~, the method comprising:

receiving, via ~~the~~ at least one cell of a plurality of cells during soft handover, enhanced uplink data from ~~the WTRU~~ a wireless transmit/receive unit (WTRU), wherein the at least one cell is either a primary cell for the WTRU or a non-primary cell for the WTRU;

transmitting scheduling information to the WTRU only if the at least one cell is the primary cell for the WTRU, ~~wherein the scheduling information is not transmitted to the WTRU if the cell is the non-primary cell for the WTRU;~~

transmitting hybrid automatic repeat request (HARQ) acknowledgements (ACKs) to the WTRU via the at least one cell; and

transmitting HARQ negative acknowledgements (NACKs) to the WTRU via the at least one cell only if the at least one cell is the primary cell for the WTRU.

34. (Currently Amended) The method of claim 33, wherein whether the at least one cell is the primary cell or the non-primary cell for the WTRU is determined by a radio network controller (RNC) in communication with the ~~cell~~ Node-B.

35. (Currently Amended) The method of claim 34, wherein the ~~cell~~ Node-B is controlled by the RNC.

36. (Previously Presented) The method of claim 35, further comprising:
transmitting correctly received enhanced uplink data to the RNC.

37. (Currently Amended) The method of claim 35, further comprising the step of:

performing, by the ~~cell~~ Node-B, an error check on the received enhanced uplink data,

wherein the ~~cell~~ Node-B transmits a HARQ ACK via the at least one cell when the ~~cell~~ Node-B correctly receives the enhanced uplink data, and the ~~cell~~ Node-B transmits the HARQ NACK via the at least one cell if ~~cell~~ the Node-B does not receive the uplink enhanced data correctly and the at least one cell is a primary cell.

38. (Previously Presented) The method of claim 37, wherein the error check is a cyclic redundancy check.

39. (Previously Presented) The method of claim 34, further comprising the steps of:

receiving, from the WTRU, downlink power measurements of transmissions received by the WTRU from the plurality of cells; and

transmitting the WTRU downlink power measurements to the RNC,

wherein the cell having a highest downlink power measured by the WTRU is

designated by the RNC as the primary cell.

40. (Previously Presented) The method of claim 33, wherein the enhanced uplink data includes WTRU identification.

41. (Previously Presented) The method of claim 33, wherein the scheduling information includes at least one of a HARQ process identification and a maximum transmit power level of the WTRU.

42. (Previously Presented) An apparatus, comprising:
a receiver configured to receive, during soft handover, enhanced uplink data from a wireless transmit/receive unit (WTRU) via at least one cell of a plurality of cells, wherein the at least one cell is either a primary cell for the WTRU or a non-primary cell for the WTRU; and
a transmitter configured to send scheduling information, hybrid automatic repeat request (HARQ) acknowledgements (ACKs), and HARQ negative acknowledgements (NACKs) to the WTRU via the at least one cell,
wherein scheduling information and the NACKs are sent to the WTRU via the at least one cell only if the at least one cell is the primary cell for the WTRU.

43. (Previously Presented) The apparatus of claim 42, further comprising:
an interface configured to communicate with a radio network controller (RNC) that determines whether the at least one cell is a primary cell or a non-primary cell for the WTRU.

44. (Previously Presented) The apparatus of claim 43, wherein the interface is further configured to send correctly received enhanced uplink data to the RNC.

45. (Previously Presented) The apparatus of claim 43, wherein the receiver is further configured to perform an error check on the received enhanced uplink data, and wherein the transmitter transmits the HARQ ACK when the receiver correctly receives the enhanced uplink data.

46. (Previously Presented) The apparatus of claim 45, wherein the error check is a cyclic redundancy check.

47. (Previously Presented) The apparatus of claim 44, wherein the interface is further configured to:

send a message generated by the WTRU to the RNC, the message containing WTRU downlink power measurements of transmissions received by the WTRU from a plurality of cells;

wherein the cell having a highest downlink power measured by the WTRU is designated by the RNC as the primary cell.

48. (Previously Presented) The apparatus of claim 42, wherein the enhanced uplink data includes WTRU identification.

49. (Previously Presented) The apparatus of claim 42, wherein the scheduling information includes at least one of a HARQ process identification and a maximum transmit power level of the WTRU.

50. (Currently Amended) A method of operating a ~~cell~~ Node-B configured to communicate with a wireless transmit/receive unit (WTRU) via at least one cell of a plurality of cells, the method comprising:

receiving, via the at least one cell during soft handover, enhanced uplink data from the WTRU, wherein the at least one cell is either a primary cell for the WTRU or a non-primary cell for the WTRU;

transmitting scheduling information to the WTRU via the at least one cell;
and

transmitting hybrid automatic repeat request (HARQ) acknowledgements (ACKs) and negative acknowledgements (NACKs) to the WTRU via the at least one cell,

wherein scheduling information and the NACKs are transmitted to the WTRU via the at least one cell only if the at least one cell is the primary cell for the WTRU.

Applicant: Signal Trust for Wireless Innovation
Application No.: 13/908,242

REMARKS

After the Amendment, claims 13-50 are pending. Claims 13, 15-19, 23-30, 33-35, 37 and 50 are amended to clarify language. No new matter has been added.

Early consideration and allowance of the pending claims is respectfully requested.

Respectfully submitted,

SIGNAL TRUST FOR
WIRELESS INNOVATION

By /Abhik A. Huq/
Abhik A. Huq
Registration No. 40,656
(215) 568-6400

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30 South 17th Street
Philadelphia, PA 19103-4009

AAH/say

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		13908242
	Filing Date		2013-06-03
	First Named Inventor	Guodong Zhang	
	Art Unit	2466	
	Examiner Name	Brian S. Roberts	
	Attorney Docket Number	SIG-2-0674US05	

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	Filing Date		2013-06-03
	First Named Inventor	Guodong Zhang	
	Art Unit	2466	
	Examiner Name	Brian S. Roberts	
	Attorney Docket Number	SIG-2-0674US05	

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

Application Number	13908242
Filing Date	2013-06-03
First Named Inventor	Guodong Zhang
Art Unit	2466
Examiner Name	Brian S. Roberts
Attorney Docket Number	SIG-2-0674US05

CERTIFICATION STATEMENT

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

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

OR

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

☐ See attached certification statement.

☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

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

Signature	/Abhik A. Huq/	Date (YYYY-MM-DD)	2015-06-10
Name/Print	Abhik A. Huq	Registration Number	40656

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

Privacy Act Statement

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

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

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

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the PATENT APPLICATION of:

Zhang et al.

Application No.: 13/908,242

Confirmation No.: 5287

Filed: June 3, 2013

For: SUPPORTING
ENHANCED UPLINK DURING SOFT
HANDOVER

Group: 2466

Examiner: Brian S. Roberts

Our File: SIG-2-0674US05

Date: June 10, 2015

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

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

Madam:

Further to Applicants' Duty of Disclosure pursuant to 37 C.F.R. §1.56, Applicants wish to bring to the Examiner's attention the material cited on the enclosed PTO Form SB/08a. Pursuant to 37 C.F.R. §1.98(a)(2)(ii), copies of the newly cited U.S. publications and/or patent documents have not been included.

This Application is a continuation of U.S. Patent Application No. 13/308,950, filed December 1, 2011, which issued June 4, 2013 as U.S. Patent No. 8,457,072, which is a continuation of U.S. Patent Application No. 11/434,330, filed May 15, 2006, which issued March 6, 2012 as U.S. Patent No. 8,130,720, which is a continuation of U.S.

Applicant: Signal Trust For Wireless Innovation
Application No.: 13/908,242

Patent Application No. 10/962,720, filed October 12, 2004, which issued May 16, 2006 as U.S. Patent No. 7,046,648, which claims priority from Provisional Application No. 60/578,674, filed June 10, 2004, Provisional Application No. 60/520,692, filed November 17, 2003, Provisional Application No. 60/519,990, filed November 14, 2003, and Provisional Application No. 60/517,656, filed November 5, 2003.

Applicants would like to bring the following Applications to the Examiner's attention: U.S. Patent Application No. 13/236,133, filed September 19, 2011; U.S. Patent Application No. 10/925,426, filed August 25, 2004, which issued September 20, 2011 as U.S. Patent No. 8,023,463; Provisional Application No. 60/585,174, filed July 2, 2004; Provisional Application No. 60/520,207, filed November 14, 2003; Provisional Application No. 60/508,797, filed October 3, 2003; Provisional Application No. 60/507,554, filed October 1, 2003; and Provisional Application No. 60/497,747, filed August 25, 2003.

Applicant: Signal Trust For Wireless Innovation
Application No.: 13/908,242

It is respectfully requested that the Examiner consider these documents and return an initialed copy of the PTO Form SB/08a indicating consideration of the cited materials.

Respectfully submitted,

Signal Trust For Wireless Innovation

By /Abhik A. Huq/
Abhik A. Huq
Registration No. 40,656
(215) 568-6400

Volpe and Koenig, P.C.
United Plaza, Suite 1800
30 South 17th Street
Philadelphia, PA 19103

AAH/say
Enclosure (1)

Electronic Patent Application Fee Transmittal				
Application Number:		13908242		
Filing Date:		03-Jun-2013		
Title of Invention:		SUPPORTING ENHANCED UPLINK DURING SOFT HANDOVER		
First Named Inventor/Applicant Name:		Guodong Zhang		
Filer:		Abhik A. Huq/Sandy Yi		
Attorney Docket Number:		SIG-2-0674US05		
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
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:				
Request for Continued Examination	1801	1	1200	1200
Total in USD (\$)				1200

Electronic Acknowledgement Receipt

EFS ID:	22594865
Application Number:	13908242
International Application Number:	
Confirmation Number:	5287
Title of Invention:	SUPPORTING ENHANCED UPLINK DURING SOFT HANDOVER
First Named Inventor/Applicant Name:	Guodong Zhang
Customer Number:	3624
Filer:	Abhik A. Huq/Sandy Yi
Filer Authorized By:	Abhik A. Huq
Attorney Docket Number:	SIG-2-0674US05
Receipt Date:	10-JUN-2015
Filing Date:	03-JUN-2013
Time Stamp:	18:20:04
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$ 1200
RAM confirmation Number	5157
Deposit Account	220493
Authorized User	HUQ, ABHIK A.

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)

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

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

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

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Continued Examination (RCE)	SIG_2_0674US05_RCE_Trans.PDF	1350072	no	3
			42bda67db70be6502ea0609f420e00b51a99e1f		
Warnings:					
Information:					
2		20150610_SIG_2_0674US05_Amendment.pdf	73817	yes	12
			70f2a4ec8a8f4be4b43086debb737a4cb7a4aec5		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Amendment Submitted/Entered with Filing of CPA/RCE		1	1	
	Claims		2	11	
	Applicant Arguments/Remarks Made in an Amendment		12	12	
Warnings:					
Information:					
3	Information Disclosure Statement (IDS) Form (SB08)	SIG_2_0674US05_SB08a.PDF	612310	no	4
			a75e8dde0b4a909a2092906684bc240434ff4bf9		
Warnings:					
Information:					
4	Transmittal Letter	20150610_SIG_2_0674US05_IDS_Trans.pdf	61522	no	3
			2f96059ea9a3ef25c07bf0096333f35bc7f83c72		
Warnings:					
Information:					
5	Fee Worksheet (SB06)	fee-info.pdf	30751	no	2
			1704770455bfa30e1beb996ba06e1cef5098a15f		
Warnings:					
Information:					
Total Files Size (in bytes):			2128472		

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.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 13/908,242	Filing Date 06/03/2013	☐ To be Mailed
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 ENTITY: ☒ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

(Column 1)

(Column 2)

FOR	NUMBER FILED	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), (l), 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

(Column 1)

(Column 2)

(Column 3)

AMENDMENT	06/10/2015	CLAIMS REMAINING AFTER AMENDMENT	MINUS	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	* 38	Minus	** 38	= 0	X \$80 =	0
	Independent (37 CFR 1.16(h))	* 5	Minus	*** 5	= 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	

(Column 1)

(Column 2)

(Column 3)

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

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

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

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

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

 LIE
 /GAIL WOOTEN/

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

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



UNITED STATES PATENT AND TRADEMARK OFFICE

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

NOTICE OF ALLOWANCE AND FEE(S) DUE

3624 7590 07/08/2015
VOLPE AND KOENIG, P.C.
UNITED PLAZA
30 SOUTH 17TH STREET
PHILADELPHIA, PA 19103

EXAMINER

ROBERTS, BRIAN S

ART UNIT

PAPER NUMBER

2466

DATE MAILED: 07/08/2015

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/908,242	06/03/2013	Guodong Zhang	SIG-2-0674US05	5287

TITLE OF INVENTION: SUPPORTING ENHANCED UPLINK DURING SOFT HANDOVER

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	10/08/2015

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)

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.

3624 7590 07/08/2015
VOLPE AND KOENIG, P.C.
UNITED PLAZA
30 SOUTH 17TH STREET
PHILADELPHIA, PA 19103

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.
13/908,242	06/03/2013	Guodong Zhang	SIG-2-0674US05	5287

TITLE OF INVENTION: SUPPORTING ENHANCED UPLINK DURING SOFT HANDOVER

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	10/08/2015

EXAMINER	ART UNIT	CLASS-SUBCLASS
ROBERTS, BRIAN S	2466	370-331000

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, 1 _____
- (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. 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
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

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.

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.

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 PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/908,242	06/03/2013	Guodong Zhang	SIG-2-0674US05	5287

3624 7500 07/08/2015
VOLPE AND KOENIG, P.C.
UNITED PLAZA
30 SOUTH 17TH STREET
PHILADELPHIA, PA 19103

EXAMINER

ROBERTS, BRIAN S

ART UNIT PAPER NUMBER

2466

DATE MAILED: 07/08/2015

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.

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. 13/908,242	Applicant(s) ZHANG ET AL.	
	Examiner BRIAN ROBERTS	Art Unit 2466	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 the RCE filed on 06/10/2015.
☐ 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 13-50. 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)	5. ☐ Examiner's Amendment/Comment
2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____	6. ☒ Examiner's Statement of Reasons for Allowance
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material	7. ☐ Other _____
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____	

/BRIAN ROBERTS/ Primary Examiner, Art Unit 2466	
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The present application is being examined under the pre-AIA first to invent provisions.

Examiner's Statement of Reasons for Allowance

Claims 13-50 are allowed.

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

The primary reason independent claim 13 is allowable is because the closest prior art of record, US 7346035 by Lee et al., fails to teach or fairly suggest either alone or in combination with the prior art of record in a wireless network having a plurality of cells, a method including transmitting scheduling information to the WTRU via the primary cell and not via the at least one second cell; and transmitting hybrid automatic repeat request (HARQ) acknowledgements (ACKs) and negative acknowledgements (NACKs) to the WTRU via the primary cell; wherein the at least one second cell does not transmit the HARQ NACKs to the WTRU.

The primary reason independent claim 23 is allowable is because the closest prior art of record, US 7346035 by Lee et al., fails to teach or fairly suggest either alone or in combination with the prior art of record in an apparatus including a Node-B's, each Node-B serving at least one cell; wherein the Node-Bs are configured to: transmit scheduling information to the WTRU via the primary cell and not via the at least one

Art Unit: 2466

non-primary cell; and transmit hybrid automatic repeat request (HARQ) acknowledgements (ACKs) and negative acknowledgements (NACKs) to the WTRU via the primary cell; wherein the Node-B serving the at least one non-primary cell does not transmit the HARQ NACKs to the WTRU.

The primary reason independent claim 33 is allowable is because the closest prior art of record, US 7346035 by Lee et al., fails to teach or fairly suggest either alone or in combination with the prior art of record in a method of operating a Node-B, the method including transmitting scheduling information to the WTRU only if the at least one cell is the primary cell for the WTRU; transmitting hybrid automatic repeat request (HARQ) acknowledgements (ACKs) to the WTRU via the at least one cell; and transmitting HARQ negative acknowledgements (NACKs) to the WTRU via the at least one cell only if the at least one cell is the primary cell for the WTRU.

The primary reason independent claim 42 is allowable is because the closest prior art of record, US 7346035 by Lee et al., fails to teach or fairly suggest either alone or in combination with the prior art of record in an apparatus including a transmitter configured to send scheduling information, hybrid automatic repeat request (HARQ) acknowledgements (ACKs), and HARQ negative acknowledgements (NACKs) to the WTRU via the at least one cell, wherein scheduling information and the NACKs are sent to the WTRU via the at least one cell only if the at least one cell is the primary cell for the WTRU.

The primary reason independent claim 50 is allowable is because the closest prior art of record, US 7346035 by Lee et al., fails to teach or fairly suggest either alone or in combination with the prior art of record in a method of operating a Node-B configured to communicate with a wireless transmit/receive unit (WTRU) via at least one cell of a plurality of cells, the method including transmitting scheduling information to the WTRU via the at least one cell; and transmitting hybrid automatic repeat request (HARQ) acknowledgements (ACKs) and negative acknowledgements (NACKs) to the WTRU via the at least one cell, wherein scheduling information and the NACKs are transmitted to the WTRU via the at least one cell only if the at least one cell is the primary cell for the WTRU.

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 BRIAN ROBERTS whose telephone number is (571)272-3095. The examiner can normally be reached on M-F 10:00-6:30.

Art Unit: 2466

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, FARUK HAMZA can be reached on (571) 272-7969. 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.

/BRIAN ROBERTS/
Primary Examiner, Art Unit 2466
06/23/2015

Search Notes 	Application/Control No. 13908242	Applicant(s)/Patent Under Reexamination ZHANG ET AL.
	Examiner BRIAN ROBERTS	Art Unit 2466

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES		
Search Notes	Date	Examiner
PALM inventor search	6/23/2015	BSR
Search focused on: H04W36/18 H04L1/1887,1893,12,18,1812,1816,1819,1867,189,1896,22 H04B7/022 H04W36/30,00,02,16,18,24,26,28,34,38 H04W88/08	6/23/2015	BSR
EAST text search: see search history printout	6/23/2015	BSR

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
Interference search	see search history printout	6/23/2015	BSR

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		13908242	
	Filing Date		2013-06-03	
	First Named Inventor	Guodong Zhang		
	Art Unit	2466		
	Examiner Name	Brian S. Roberts		
	Attorney Docket Number	SIG-2-0674US05		

U.S.PATENTS						Remove		
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear		
	1	6754496	B2	2004-06-22	Mohebbi et al.			
	2	7206598	B2	2007-04-17	Attar et al.			
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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	13908242
Filing Date	2013-06-03
First Named Inventor	Guodong Zhang
Art Unit	2466
Examiner Name	Brian S. Roberts
Attorney Docket Number	SIG-2-0674US05

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1		☐

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EXAMINER SIGNATURE

Examiner Signature	/Brian Roberts/ (06/22/2015)	Date Considered	06/22/2015
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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

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

Application Number	13908242
Filing Date	2013-06-03
First Named Inventor	Guodong Zhang
Art Unit	2466
Examiner Name	Brian S. Roberts
Attorney Docket Number	SIG-2-0674US05

CERTIFICATION STATEMENT

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

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

OR

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

☐ See attached certification statement.

☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

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

Signature	/Abhik A. Huq/	Date (YYYY-MM-DD)	2015-06-10
Name/Print	Abhik A. Huq	Registration Number	40656

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

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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.
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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.

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S48	9	"6754496".pn. "7206598".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 15:27
S49	9371	(enhanc\$3 near2 uplink or ("e-dch"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 15:37
S50	614	(enhanc\$3 near2 uplink or ("e-dch")) and HARQ and soft near2 ((handover) or (handoff) or (hand\$3 near over) or (hand\$3 near2 off))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 15:38
S51	665	((enhanc\$3 near2 uplink) or ("e-dch")) and ((HARQ) or (hybrid near2 automatic near2 repeat\$3 near2 request\$3)) and soft near2 ((handover) or (handoff) or (hand\$3 near over) or (hand\$3 near2 off))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 15:38
S52	496	H04L1/1887.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU- DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 15:38
S53	362	H04W36/18.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU- DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 16:11
S54	73	H04L1/1893.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU- DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 16:52
S55	305	H04L1/12.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 17:09
S56	909	H04L1/1812.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-	US-PGPUB; USPAT;	OR	ON	2015/06/22 17:53

		DCH"))	USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S57	909	H04L1/1812.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU- DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 19:40
S58	110	H04L1/1816.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU- DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 20:39
S59	188	H04L1/1819.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU- DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 20:44
S60	111	H04L1/1896.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU- DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 21:05
S61	2	H04L1/22.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 21:13
S62	104	H04B7/022.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 21:13
S63	161	H04W36/30.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU- DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 21:23
S64	72	H04W36/02.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU- DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 21:36
S65	10	H04W36/16.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU- DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 21:44
S66	362	H04W36/18.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-	US-PGPUB; USPAT;	OR	ON	2015/06/22 21:53

		DCH"))	USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S67	20	H04W36/24.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU- DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 22:27
S68	4	H04W36/26.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU- DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 22:28
S69	4	H04W36/26.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU- DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 22:28
S70	7	H04W36/28.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU- DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 22:28
S71	4	H04W36/34.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU- DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 22:29
S72	289	H04W88/08.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU- DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 22:30
S73	614	((enhanc\$3 near2 uplink or ("e-dch")) and HARQ and soft near2 ((handover) or (handoff) or (hand\$3 near over) or (hand\$3 near2 off))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/23 11:55
S74	1148	((enhanc\$3 near2 uplink or ("e-dch")) and soft near2 ((handover) or (handoff) or (hand\$3 near over) or (hand\$3 near2 off))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/23 11:55

EAST Search History (I nterference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S75	12	enhanced near2 uplink.clm. and soft near2 handover.clm.	USPAT; UPAD	OR	ON	2015/06/23 15:38
S76	4	enhanced near2 uplink.clm. and soft near2	USPAT;	OR	ON	2015/06/23

		handover.clm. and ((HARQ) or (hybrid near2 automatic near2 repeat\$3 near2 request\$3)).clm.	UPAD			15:40
S77	7	enhanced near2 uplink.clm. and soft near2 handover.clm. and schedul\$.clm.	USPAT; UPAD	OR	ON	2015/06/23 15:42

6/ 24/ 2015 4:23:46 PM
C:\ Users\ broberts\ Documents\ EAST\ Workspaces\ 13908242a.wsp

Issue Classification 	Application/Control No. 13908242	Applicant(s)/Patent Under Reexamination ZHANG ET AL.	
	Examiner BRIAN ROBERTS	Art Unit 2466	

CPC							
Symbol						Type	Version
H04W		36		18		F	2013-01-01
H04B		7		022		A	2013-01-01
H04L		1		1887		I	2013-01-01
H04L		1		1893		I	2013-01-01
H04W		36		30		A	2013-01-01
H04W		88		08		A	2013-01-01

CPC Combination Sets				
Symbol	Type	Set	Ranking	Version

NONE		Total Claims Allowed:	
(Assistant Examiner)		38	
(Date)			
/BRIAN ROBERTS/ Primary Examiner.Art Unit 2466	06/23/2015	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	3

Issue Classification 	Application/Control No. 13908242	Applicant(s)/Patent Under Reexamination ZHANG ET AL.
	Examiner BRIAN ROBERTS	Art Unit 2466

☐ 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	5	17	21	33	37	49								
	2	6	18	22	34	38	50								
	3	7	19	23	35										
	4	8	20	24	36										
	5	9	21	25	37										
	6	10	22	26	38										
	7	11	23	27	39										
	8	12	24	28	40										
	9	15	25	29	41										
	10	16	26	30	42										
	11	17	27	31	43										
	12	18	28	32	44										
1	13	13	29	34	45										
2	14	14	30	35	46										
3	15	19	31	33	47										
4	16	20	32	36	48										

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	38	
/BRIAN ROBERTS/ Primary Examiner.Art Unit 2466	06/23/2015	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	3

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

Application Number	13908242	Filing Date	2013-06-03	Docket Number (if applicable)	SIG-2-0674US05	Art Unit	2466
First Named Inventor	Guodong Zhang			Examiner Name	Brian S. Roberts		

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, to any international application that does not comply with the requirements of 35 U.S.C. 371, 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 _____

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 220493

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☒ Patent Practitioner Signature

☐ Applicant Signature

Signature of Registered U.S. Patent Practitioner			
Signature	/Abhik A. Huq/	Date (YYYY-MM-DD)	2015-08-11
Name	Abhik A. Huq	Registration Number	40656

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

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

Privacy Act Statement

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

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

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
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3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
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.

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the PATENT APPLICATION of:

Zhang et al.

Application No.: 13/908,242

Confirmation No.: 5287

Filed: June 3, 2013

For: SUPPORTING ENHANCED UPLINK
DURING SOFT HANDOVER

Group: 2466

Examiner: Brian S. Roberts

Our File: SIG-2-0674US05

Date: August 11, 2015

PRELIMINARY AMENDMENT

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

Please amend the application without prejudice or disclaimer as follows:

AMENDMENTS TO THE CLAIMS

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

1. – 12. (Canceled)

13. (Previously Presented) In a wireless network having a plurality of cells, a method comprising:

receiving, via the plurality of cells during soft handover, enhanced uplink data from a wireless transmit/receive unit (WTRU), wherein a first one of the plurality of cells is a primary cell for the WTRU and at least a second one of the plurality of cells is not a primary cell for the WTRU;

transmitting scheduling information to the WTRU via the primary cell and not via the at least one second cell; and

transmitting hybrid automatic repeat request (HARQ) acknowledgements (ACKs) and negative acknowledgements (NACKs) to the WTRU via the primary cell;

wherein the at least one second cell does not transmit the HARQ NACKs to the WTRU.

14. (Previously Presented) The method of claim 13, further comprising:

designating, by a radio network controller (RNC), the primary cell and the at least one second cell from the plurality of cells.

15. (Previously Presented) The method of claim 14, wherein each cell is served by a Node-B, and the Node-Bs are controlled by the RNC.

16. (Previously Presented) The method of claim 15, further comprising:
transmitting, by each of the Node-Bs, correctly received enhanced uplink data to the RNC.

17. (Previously Presented) The method of claim 15, further comprising:
performing, by at least the Node-B serving the primary cell and the Node-B serving the second cell, an error check on the received enhanced uplink data the Node-Bs receive;

wherein each Node-B that correctly receives the enhanced uplink data transmits a HARQ ACK, and the Node-B serving the primary cell transmits the HARQ NACK if none of the Node-Bs receives the uplink enhanced data correctly; and

wherein the error check is a cyclic redundancy check.

18. (Previously Presented) The method of claim 17, further comprising:
soft combining the enhanced uplink data received by the Node-B serving the primary cell with additional enhanced uplink data if the enhanced uplink data was not received correctly by any of the Node-Bs.

19. (Previously Presented) The method of claim 15, further comprising:
designating, by the RNC, which of the Node-Bs form an active set of Node-Bs for each of a plurality of WTRUs served by the RNC and the Node-Bs controlled

thereby;

wherein the primary cell and at least one secondary cell for a WTRU are selected from the cells served by the active set of Node-Bs designated for that WTRU.

20. (Previously Presented) The method of claim 14, further comprising:
receiving from the WTRU downlink power measurements of transmissions received by the WTRU from the plurality of cells; and
designating, by the RNC, the cell having a highest downlink power measured by the WTRU as the primary cell.

21. (Previously Presented) The method of claim 13, wherein the enhanced uplink data includes WTRU identification.

22. (Previously Presented) The method of claim 13, wherein the scheduling information includes at least one of a HARQ process identification and a maximum transmit power level of the WTRU.

23. (Previously Presented) An apparatus, comprising:
a plurality of Node-Bs, each Node-B serving at least one cell;
wherein the Node-Bs are configured to:

receive, via the cells during soft handover, enhanced uplink data from a wireless transmit/receive unit (WTRU), wherein one of the cells is a primary cell for the WTRU and at least one of the cells is a non-primary cell for the WTRU;

transmit scheduling information to the WTRU via the primary cell and

not via the at least one non-primary cell; and

transmit hybrid automatic repeat request (HARQ) acknowledgements (ACKs) and negative acknowledgements (NACKs) to the WTRU via the primary cell;

wherein the Node-B serving the at least one non-primary cell does not transmit the HARQ NACKs to the WTRU.

24. (Previously Presented) The apparatus of claim 23, further comprising:
a radio network controller (RNC) coupled to the Node-Bs;
wherein the RNC is configured to:

designate which one of the plurality of cells is the primary cell and which of the plurality of cells is the at least one non-primary cell.

25. (Previously Presented) The apparatus of claim 24, wherein each of the Node-Bs is further configured to:

transmit correctly received enhanced uplink data to the RNC.

26. (Previously Presented) The apparatus of claim 24, wherein at least the Node-B serving the primary cell and the Node-B serving the at least one non-primary cell are further configured to:

perform an error check on the received enhanced uplink data the Node-B receives; and

transmit a HARQ ACK when that Node-B correctly receives the enhanced uplink data;

wherein the Node-B serving the primary cell transmits the HARQ NACK if none of the plurality of Node-Bs receives the enhanced uplink data correctly; and wherein the error check is a cyclic redundancy check.

27. (Previously Presented) The apparatus of claim 26, wherein the Node-B serving the primary cell is further configured to:

soft combine the enhanced uplink data with additional enhanced uplink data if the enhanced uplink data was not received correctly by any of the Node-Bs.

28. (Previously Presented) The apparatus of claim 26, wherein the RNC is further configured to:

instruct the Node-B serving the primary cell to inform the WTRU of missing enhanced uplink data.

29. (Previously Presented) The apparatus of claim 24, wherein the RNC is further configured to:

designate which of the Node-Bs form an active set of Node-Bs for each of a plurality of WTRUs served by the RNC and the Node-Bs controlled thereby;

wherein the primary cell and at least one second cell for a WTRU are selected from the cells served by the active set of Node-Bs designated for that WTRU.

30. (Previously Presented) The apparatus of claim 24, wherein the RNC is further configured to:

receive a message generated by the WTRU, the message containing WTRU downlink power measurements of transmissions received by the WTRU from the

Node-Bs; and

designate the Node-B having a highest downlink power measured by the WTRU as the Node-B serving the primary cell.

31. (Previously Presented) The apparatus of claim 23, wherein the enhanced uplink data includes WTRU identification.

32. (Previously Presented) The apparatus of claim 23, wherein the scheduling information includes at least one of a HARQ process identification and a maximum transmit power level of the WTRU.

33. (Previously Presented) A method of operating a Node-B, the method comprising:

receiving, via at least one cell of a plurality of cells during soft handover, enhanced uplink data from a wireless transmit/receive unit (WTRU), wherein the at least one cell is either a primary cell for the WTRU or a non-primary cell for the WTRU;

transmitting scheduling information to the WTRU only if the at least one cell is the primary cell for the WTRU;

transmitting hybrid automatic repeat request (HARQ) acknowledgements (ACKs) to the WTRU via the at least one cell; and

transmitting HARQ negative acknowledgements (NACKs) to the WTRU via the at least one cell only if the at least one cell is the primary cell for the WTRU.

34. (Previously Presented) The method of claim 33, wherein whether the at least one cell is the primary cell or the non-primary cell for the WTRU is determined by a radio network controller (RNC) in communication with the Node-B.

35. (Previously Presented) The method of claim 34, wherein the Node-B is controlled by the RNC.

36. (Previously Presented) The method of claim 35, further comprising: transmitting correctly received enhanced uplink data to the RNC.

37. (Previously Presented) The method of claim 35, further comprising the step of:

performing, by the Node-B, an error check on the received enhanced uplink data,

wherein the Node-B transmits a HARQ ACK via the at least one cell when the Node-B correctly receives the enhanced uplink data, and the Node-B transmits the HARQ NACK via the at least one cell if the Node-B does not receive the uplink enhanced data correctly and the at least one cell is a primary cell.

38. (Previously Presented) The method of claim 37, wherein the error check is a cyclic redundancy check.

39. (Previously Presented) The method of claim 34, further comprising the steps of:

receiving, from the WTRU, downlink power measurements of transmissions

received by the WTRU from the plurality of cells; and
transmitting the WTRU downlink power measurements to the RNC,
wherein the cell having a highest downlink power measured by the WTRU is
designated by the RNC as the primary cell.

40. (Previously Presented) The method of claim 33, wherein the enhanced uplink data includes WTRU identification.

41. (Previously Presented) The method of claim 33, wherein the scheduling information includes at least one of a HARQ process identification and a maximum transmit power level of the WTRU.

42. (Previously Presented) An apparatus, comprising:
a receiver configured to receive, during soft handover, enhanced uplink data from a wireless transmit/receive unit (WTRU) via at least one cell of a plurality of cells, wherein the at least one cell is either a primary cell for the WTRU or a non-primary cell for the WTRU; and

a transmitter configured to send scheduling information, hybrid automatic repeat request (HARQ) acknowledgements (ACKs), and HARQ negative acknowledgements (NACKs) to the WTRU via the at least one cell,

wherein scheduling information and the NACKs are sent to the WTRU via the at least one cell only if the at least one cell is the primary cell for the WTRU.

43. (Previously Presented) The apparatus of claim 42, further comprising:
an interface configured to communicate with a radio network controller (RNC) that determines whether the at least one cell is a primary cell or a non-primary cell for the WTRU.

44. (Previously Presented) The apparatus of claim 43, wherein the interface is further configured to send correctly received enhanced uplink data to the RNC.

45. (Previously Presented) The apparatus of claim 43, wherein the receiver is further configured to perform an error check on the received enhanced uplink data, and wherein the transmitter transmits the HARQ ACK when the receiver correctly receives the enhanced uplink data.

46. (Previously Presented) The apparatus of claim 45, wherein the error check is a cyclic redundancy check.

47. (Previously Presented) The apparatus of claim 44, wherein the interface is further configured to:

send a message generated by the WTRU to the RNC, the message containing WTRU downlink power measurements of transmissions received by the WTRU from a plurality of cells;

wherein the cell having a highest downlink power measured by the WTRU is designated by the RNC as the primary cell.

48. (Previously Presented) The apparatus of claim 42, wherein the enhanced uplink data includes WTRU identification.

49. (Previously Presented) The apparatus of claim 42, wherein the scheduling information includes at least one of a HARQ process identification and a maximum transmit power level of the WTRU.

50. (Previously Presented) A method of operating a Node-B configured to communicate with a wireless transmit/receive unit (WTRU) via at least one cell of a plurality of cells, the method comprising:

receiving, via the at least one cell during soft handover, enhanced uplink data from the WTRU, wherein the at least one cell is either a primary cell for the WTRU or a non-primary cell for the WTRU;

transmitting scheduling information to the WTRU via the at least one cell;
and

transmitting hybrid automatic repeat request (HARQ) acknowledgements (ACKs) and negative acknowledgements (NACKs) to the WTRU via the at least one cell,

wherein scheduling information and the NACKs are transmitted to the WTRU via the at least one cell only if the at least one cell is the primary cell for the WTRU.

51. (New) A method, comprising:

transmitting, via a primary cell and at least one non-primary cell during soft handover, enhanced uplink data to a Node-B;

receiving scheduling information from the Node-B via the primary cell only;

and

receiving hybrid automatic repeat request (HARQ) acknowledgements (ACKs) from the Node-B via at least the primary cell and negative acknowledgements (NACKs) from the Node-B via the primary cell only.

52. (New) The method of claim 51, further comprising:
receiving from a radio network controller (RNC) information indicating the primary cell and the at least one non-primary cell from a plurality of cells.

53. (New) The method of claim 52, wherein each cell is served by a Node-B, and the Node-Bs are controlled by the RNC.

54. (New) The method of claim 51, further comprising:
transmitting downlink power measurements of transmissions received by the WTRU.

55. (New) The method of claim 51, wherein the enhanced uplink data includes WTRU identification.

56. (New) The method of claim 51, wherein the scheduling information includes at least one of a HARQ process identification and a maximum transmit power level of the WTRU.

57. (New) The method of claim 51, further comprising:
transmitting the enhanced uplink data using synchronous HARQ.

58. (New) The method of claim 51, wherein enhanced uplink data transmissions are scheduled to limit interference between cells.

59. (New) A wireless transmit/receive unit (WTRU), comprising:
a transmitter configured to transmit, via a primary cell and at least one non-primary cell during soft handover, enhanced uplink data to a Node-B;
a receiver configured to receive scheduling information from the Node-B via the primary cell only; and
the receiver configured to receive hybrid automatic repeat request (HARQ) acknowledgements (ACKs) from the Node-B via at least the primary cell and negative acknowledgements (NACKs) from the Node-B via the primary cell only.

60. (New) The WTRU of claim 59, further comprising:
the receiver configured to receive from a radio network controller (RNC) information indicating the primary cell and the at least one non-primary cell from a plurality of cells.

61. (New) The WTRU of claim 60, wherein each cell is served by a Node-B, and the Node-Bs are controlled by the RNC.

62. (New) The WTRU of claim 59, further comprising:
the transmitter configured to transmit downlink power measurements of transmissions received by the WTRU.

63. (New) The WTRU of claim 59, wherein the enhanced uplink data includes WTRU identification.

64. (New) The WTRU of claim 59, wherein the scheduling information includes at least one of a HARQ process identification and a maximum transmit power level of the WTRU.

65. (New) The WTRU of claim 59, further comprising:
the transmitter configured to transmit the enhanced uplink data using synchronous HARQ.

66. (New) The WTRU of claim 59, wherein enhanced uplink data transmissions are scheduled to limit interference between cells.

Applicant: Signal Trust for Wireless Innovation
Application No.: 13/908,242

REMARKS

Early consideration and allowance of the pending claims is respectfully requested.

Respectfully submitted,

SIGNAL TRUST FOR
WIRELESS INNOVATION

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AAH/say

Electronic Patent Application Fee Transmittal

Application Number:	13908242			
Filing Date:	03-Jun-2013			
Title of Invention:	SUPPORTING ENHANCED UPLINK DURING SOFT HANDOVER			
First Named Inventor/Applicant Name:	Guodong Zhang			
Filer:	Abhik A. Huq/Sandy Yi			
Attorney Docket Number:	SIG-2-0674US05			
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Claims in Excess of 20	1202	16	80	1280
Independent claims in excess of 3	1201	2	420	840
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
RCE- 2nd and Subsequent Request	1820	1	1700	1700
Total in USD (\$)				3820

Electronic Acknowledgement Receipt

EFS ID:	23178099
Application Number:	13908242
International Application Number:	
Confirmation Number:	5287
Title of Invention:	SUPPORTING ENHANCED UPLINK DURING SOFT HANDOVER
First Named Inventor/Applicant Name:	Guodong Zhang
Customer Number:	3624
Filer:	Abhik A. Huq/Sandy Yi
Filer Authorized By:	Abhik A. Huq
Attorney Docket Number:	SIG-2-0674US05
Receipt Date:	11-AUG-2015
Filing Date:	03-JUN-2013
Time Stamp:	16:48:02
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$3820
RAM confirmation Number	3372
Deposit Account	220493
Authorized User	HUQ, ABHIK A.

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)

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

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

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

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Continued Examination (RCE)	SIG_2_0674US05_RCE_Trans.PDF	1350048	no	3
			53fe4d8de3275936f0800c219db5af84b60c1b1d		
Warnings:					
Information:					
2		20150811_SIG_2_0674US05_Prel_Amendment.pdf	85547	yes	15
			e9767b8c4b8bfa2e187d1393b18c8e81641ae29		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Amendment Submitted/Entered with Filing of CPA/RCE		1	1	
	Claims		2	14	
	Applicant Arguments/Remarks Made in an Amendment		15	15	
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	34142	no	2
			4e6047d0e1f8bebe49e6cda6d7424a7bb0ab0b42		
Warnings:					
Information:					
Total Files Size (in bytes):			1469737		

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.

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

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 13/908,242	Filing Date 06/03/2013	☐ To be Mailed
---	---	----------------------------------	---------------------------------------

ENTITY: ☒ LARGE ☐ SMALL ☐ MICRO**APPLICATION AS FILED – PART I**

(Column 1)

(Column 2)

FOR	NUMBER FILED	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), (l), 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))	14 minus 20 =	*	X \$ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	2 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

(Column 1)

(Column 2)

(Column 3)

AMENDMENT	08/11/2015	CLAIMS REMAINING AFTER AMENDMENT	MINUS	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	* 54	Minus	** 38	=	X \$ =	
	Independent (37 CFR 1.16(h))	* 7	Minus	*** 5	=	X \$ =	
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
TOTAL ADD'L FEE							

(Column 1)

(Column 2)

(Column 3)

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

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

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

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

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

LIE
/PEGGY YARBOROUGH/

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

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

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		13908242	
	Filing Date		2013-06-03	
	First Named Inventor	Zhang et al.		
	Art Unit	2466		
	Examiner Name	Brian S. Roberts		
	Attorney Docket Number	SIG-2-0674US05		

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6507567	B1	2003-01-14	Willars	* Corresponds to CN 1356006A

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

Add

U.S.PATENT APPLICATION PUBLICATIONS						Remove
Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20030131124	A1	2003-07-10	Yi et al.	

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

Add

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

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

Add

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

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		13908242
	Filing Date		2013-06-03
	First Named Inventor	Zhang et al.	
	Art Unit	2466	
	Examiner Name	Brian S. Roberts	
	Attorney Docket Number	SIG-2-0674US05	

	1	PANASONIC, "HARQ operation during Soft Handover," 3GPP TSG-RAN WG1 Meeting #33, R1-030802, New York, USA (August 25-29, 2003).	☐
--	---	--	--------------------------

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

EXAMINER SIGNATURE

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

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

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

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

Application Number	13908242
Filing Date	2013-06-03
First Named Inventor	Zhang et al.
Art Unit	2466
Examiner Name	Brian S. Roberts
Attorney Docket Number	SIG-2-0674US05

CERTIFICATION STATEMENT

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

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

OR

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

☐ See attached certification statement.

☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

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

Signature	/Abhik A. Huq/	Date (YYYY-MM-DD)	2015-08-13
Name/Print	Abhik A. Huq	Registration Number	40,656

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

Privacy Act Statement

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

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

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

Electronic Acknowledgement Receipt

EFS ID:	23199955
Application Number:	13908242
International Application Number:	
Confirmation Number:	5287
Title of Invention:	SUPPORTING ENHANCED UPLINK DURING SOFT HANDOVER
First Named Inventor/Applicant Name:	Guodong Zhang
Customer Number:	3624
Filer:	Abhik A. Huq/Carey Kulp
Filer Authorized By:	Abhik A. Huq
Attorney Docket Number:	SIG-2-0674US05
Receipt Date:	13-AUG-2015
Filing Date:	03-JUN-2013
Time Stamp:	14:37:35
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	IDS.pdf	60770 19448b4694127f9a55c26a7702cb3a8781fc a446	no	3

Warnings:

Information:

2	Information Disclosure Statement (IDS) Form (SB08)	SB08.pdf	612422 4b5588758f4ea0c5ab2f03fb6e79014f595a b91b	no	4
Warnings:					
Information:					
3	Non Patent Literature	R1_030802.pdf	280732 1e11705445977f3972ae68f1f6ff0dc8a6af0 98	no	4
Warnings:					
Information:					
Total Files Size (in bytes):			953924		
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.					

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the PATENT APPLICATION of:

Zhang et al.

Application No.: 13/908,242

Confirmation No.: 5287

Filed: June 3, 2013

For: SUPPORTING
ENHANCED UPLINK DURING SOFT
HANDOVER

Group: 2466

Examiner: Brian S. Roberts

Our File: SIG-2-0674US05

Date: August 13, 2015

INFORMATION DISCLOSURE STATEMENT

Mail Stop Amendment (via EFS)
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Madam:

Further to Applicants' Duty of Disclosure pursuant to 37 C.F.R. §1.56, Applicants wish to bring to the Examiner's attention the material cited on the enclosed PTO Form SB-08.

Copies of the cited references are enclosed. Pursuant to 37 C.F.R. §1.98(a)(2)(ii), copies of the cited U.S. publications and/or patent documents have not been included.

This Application is a continuation of U.S. Patent Application No. 13/308,950, filed December 1, 2011, which issued June 4, 2013 as U.S. Patent No. 8,457,072, which is a continuation of U.S. Patent Application No. 11/434,330, filed May 15, 2006, which

Applicant: Signal Trust For Wireless Innovation
Application No.: 13/908,242

issued March 6, 2012 as U.S. Patent No. 8,130,720, which is a continuation of U.S. Patent Application No. 10/962,720, filed October 12, 2004, which issued May 16, 2006 as U.S. Patent No. 7,046,648, which claims priority from Provisional Application No. 60/578,674, filed June 10, 2004, Provisional Application No. 60/520,692, filed November 17, 2003, Provisional Application No. 60/519,990, filed November 14, 2003, and Provisional Application No. 60/517,656, filed November 5, 2003.

Applicants would like to bring the following Applications to the Examiner's attention: U.S. Patent Application No. 13/236,133, filed September 19, 2011; U.S. Patent Application No. 10/925,426, filed August 25, 2004, which issued September 20, 2011 as U.S. Patent No. 8,023,463; Provisional Application No. 60/585,174, filed July 2, 2004; Provisional Application No. 60/520,207, filed November 14, 2003; Provisional Application No. 60/508,797, filed October 3, 2003; Provisional Application No. 60/507,554, filed October 1, 2003; and Provisional Application No. 60/497,747, filed August 25, 2003.

Applicant: Signal Trust For Wireless Innovation
Application No.: 13/908,242

It is respectfully requested that the Examiner consider these documents and return an initialed copy of the PTO Form SB-08 indicating consideration of the cited materials.

Respectfully submitted,

Signal Trust For Wireless Innovation

By /Abhik A. Huq/
Abhik A. Huq
Registration No. 40,656
(215) 568-6400

Volpe and Koenig, P.C.
United Plaza, Suite 1800
30 South 17th Street
Philadelphia, PA 19103

AAH/PCK
Enclosures (2)



UNITED STATES PATENT AND TRADEMARK OFFICE

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

NOTICE OF ALLOWANCE AND FEE(S) DUE

3624 7590 09/02/2015
VOLPE AND KOENIG, P.C.
UNITED PLAZA
30 SOUTH 17TH STREET
PHILADELPHIA, PA 19103

EXAMINER

ROBERTS, BRIAN S

ART UNIT

PAPER NUMBER

2466

DATE MAILED: 09/02/2015

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/908,242	06/03/2013	Guodong Zhang	SIG-2-0674US05	5287

TITLE OF INVENTION: SUPPORTING ENHANCED UPLINK DURING SOFT HANDOVER

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	12/02/2015

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)

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.

3624 7590 09/02/2015
VOLPE AND KOENIG, P.C.
UNITED PLAZA
30 SOUTH 17TH STREET
PHILADELPHIA, PA 19103

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.
13/908,242	06/03/2013	Guodong Zhang	SIG-2-0674US05	5287

TITLE OF INVENTION: SUPPORTING ENHANCED UPLINK DURING SOFT HANDOVER

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	12/02/2015

EXAMINER	ART UNIT	CLASS-SUBCLASS
ROBERTS, BRIAN S	2466	370-331000

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, 1 _____
- (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. 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
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

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.

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.

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.
13/908,242	06/03/2013	Guodong Zhang	SIG-2-0674US05	5287

3624 7500 09/02/2015
VOLPE AND KOENIG, P.C.
UNITED PLAZA
30 SOUTH 17TH STREET
PHILADELPHIA, PA 19103

EXAMINER

ROBERTS, BRIAN S

ART UNIT PAPER NUMBER

2466

DATE MAILED: 09/02/2015

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.

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.
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5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public 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. 13/908,242	Applicant(s) ZHANG ET AL.	
	Examiner BRIAN ROBERTS	Art Unit 2466	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 the RCE filed on 08/11/2015.
☐ 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 13-66. 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) | 5. ☐ Examiner's Amendment/Comment |
| 2. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 6. ☒ Examiner's Statement of Reasons for Allowance |
| 3. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 7. ☐ Other _____. |
| 4. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____. | |

/BRIAN ROBERTS/
Primary Examiner, Art Unit 2466

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

Examiner's Statement of Reasons for Allowance

Claims 13-66 are allowed.

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

The primary reason independent claim 13 is allowable is because the closest prior art of record, US 7346035 by Lee et al., fails to teach or fairly suggest either alone or in combination with the prior art of record in a wireless network having a plurality of cells, a method including transmitting scheduling information to the WTRU via the primary cell and not via the at least one second cell; and transmitting hybrid automatic repeat request (HARQ) acknowledgements (ACKs) and negative acknowledgements (NACKs) to the WTRU via the primary cell; wherein the at least one second cell does not transmit the HARQ NACKs to the WTRU.

The primary reason independent claim 23 is allowable is because the closest prior art of record, US 7346035 by Lee et al., fails to teach or fairly suggest either alone or in combination with the prior art of record an apparatus including a Node-B's, each Node-B serving at least one cell; wherein the Node-Bs are configured to: transmit scheduling information to the WTRU via the primary cell and not via the at least one

Art Unit: 2466

non-primary cell; and transmit hybrid automatic repeat request (HARQ) acknowledgements (ACKs) and negative acknowledgements (NACKs) to the WTRU via the primary cell; wherein the Node-B serving the at least one non-primary cell does not transmit the HARQ NACKs to the WTRU.

The primary reason independent claim 33 is allowable is because the closest prior art of record, US 7346035 by Lee et al., fails to teach or fairly suggest either alone or in combination with the prior art of record a method of operating a Node-B, the method including transmitting scheduling information to the WTRU only if the at least one cell is the primary cell for the WTRU; transmitting hybrid automatic repeat request (HARQ) acknowledgements (ACKs) to the WTRU via the at least one cell; and transmitting HARQ negative acknowledgements (NACKs) to the WTRU via the at least one cell only if the at least one cell is the primary cell for the WTRU.

The primary reason independent claim 42 is allowable is because the closest prior art of record, US 7346035 by Lee et al., fails to teach or fairly suggest either alone or in combination with the prior art of record in an apparatus including a transmitter configured to send scheduling information, hybrid automatic repeat request (HARQ) acknowledgements (ACKs), and HARQ negative acknowledgements (NACKs) to the WTRU via the at least one cell, wherein scheduling information and the NACKs are sent to the WTRU via the at least one cell only if the at least one cell is the primary cell for the WTRU.

The primary reason independent claim 50 is allowable is because the closest prior art of record, US 7346035 by Lee et al., fails to teach or fairly suggest either alone or in combination with the prior art of record a method of operating a Node-B configured to communicate with a wireless transmit/receive unit (WTRU) via at least one cell of a plurality of cells, the method including transmitting scheduling information to the WTRU via the at least one cell; and transmitting hybrid automatic repeat request (HARQ) acknowledgements (ACKs) and negative acknowledgements (NACKs) to the WTRU via the at least one cell, wherein scheduling information and the NACKs are transmitted to the WTRU via the at least one cell only if the at least one cell is the primary cell for the WTRU.

The primary reason independent claim 51 is allowable is because the closest prior art of record, US 7346035 by Lee et al., fails to teach or fairly suggest either alone or in combination with the prior art of record a method that includes transmitting, via a primary cell and at least one non-primary cell during soft handover, enhanced uplink data to a Node-B; receiving scheduling information from the Node-B via the primary cell only; and receiving hybrid automatic repeat request (HARQ) acknowledgements (ACKs) from the Node-B via at least the primary cell and negative acknowledgements (NACKs) from the Node-B via the primary cell only.

Art Unit: 2466

The primary reason independent claim 59 is allowable is because the closest prior art of record, US 7346035 by Lee et al., fails to teach or fairly suggest either alone or in combination with the prior art of record a wireless transmit/receive unit (WTRU), that includes a transmitter configured to transmit, via a primary cell and at least one non- primary cell during soft handover, enhanced uplink data to a Node-B; a receiver configured to receive scheduling information from the Node-B via the primary cell only; and the receiver configured to receive hybrid automatic repeat request (HARQ) acknowledgements (ACKs) from the Node-B via at least the primary cell and negative acknowledgements (NACKs) from the Node-B via the primary cell only.

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 BRIAN ROBERTS whose telephone number is (571)272-3095. The examiner can normally be reached on M-F 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, FARUK HAMZA can be reached on (571) 272-7969. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2466

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.

/BRIAN ROBERTS/
Primary Examiner, Art Unit 2466
08/17/2015

Search Notes 	Application/Control No. 13908242	Applicant(s)/Patent Under Reexamination ZHANG ET AL.
	Examiner BRIAN ROBERTS	Art Unit 2466

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES		
Search Notes	Date	Examiner
PALM inventor search	8/17/2015	BSR
Search focused on: H04W36/18 H04L1/1887,1893,12,18,1812,1816,1819,1867,189,1896,22 H04B7/022 H04W36/30,00,02,16,18,24,26,28,34,38 H04W88/08	8/17/2015	BSR
EAST text search: see search history printout	8/17/2015	BSR

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
Interference search	see search history printout	8/17/2015	BSR

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Issue Classification 	Application/Control No. 13908242	Applicant(s)/Patent Under Reexamination ZHANG ET AL.	
	Examiner BRIAN ROBERTS	Art Unit 2466	

CPC							
Symbol					Type	Version	
H04W		36		18	F	2013-01-01	
H04B		7		022	A	2013-01-01	
H04L		1		1887	I	2013-01-01	
H04L		1		1893	I	2013-01-01	
H04W		36		30	A	2013-01-01	
H04W		88		08	A	2013-01-01	

CPC Combination Sets				
Symbol	Type	Set	Ranking	Version

NONE		Total Claims Allowed:	
(Assistant Examiner)		54	
(Date)			
/BRIAN ROBERTS/ Primary Examiner.Art Unit 2466	08/17/2015	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	3

Issue Classification 	Application/Control No. 13908242	Applicant(s)/Patent Under Reexamination ZHANG ET AL.
	Examiner BRIAN ROBERTS	Art Unit 2466

☐ 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	5	17	21	33	37	49	53	65						
	2	6	18	22	34	38	50	54	66						
	3	7	19	23	35	39	51								
	4	8	20	24	36	40	52								
	5	9	21	25	37	41	53								
	6	10	22	26	38	42	54								
	7	11	23	27	39	43	55								
	8	12	24	28	40	44	56								
	9	15	25	29	41	45	57								
	10	16	26	30	42	46	58								
	11	17	27	31	43	47	59								
	12	18	28	32	44	48	60								
1	13	13	29	34	45	49	61								
2	14	14	30	35	46	50	62								
3	15	19	31	33	47	51	63								
4	16	20	32	36	48	52	64								

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	54	
/BRIAN ROBERTS/ Primary Examiner.Art Unit 2466	08/17/2015	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	3

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		13908242	
	Filing Date		2013-06-03	
	First Named Inventor	Zhang et al.		
	Art Unit	2466		
	Examiner Name	Brian S. Roberts		
	Attorney Docket Number	SIG-2-0674US05		

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	1	20030131124	A1	2003-07-10	Yi et al.	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	13908242	13908242 - GAU: 2466
	Filing Date	2013-06-03	
	First Named Inventor	Zhang et al.	
	Art Unit	2466	
	Examiner Name	Brian S. Roberts	
	Attorney Docket Number	SIG-2-0674US05	

1	PANASONIC, "HARQ operation during Soft Handover," 3GPP TSG-RAN WG1 Meeting #33, R1-030802, New York, USA (August 25-29, 2003).	☐
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If you wish to add additional non-patent literature document citation information please click the Add button **Add**

EXAMINER SIGNATURE

Examiner Signature	/Brian Roberts/ (08/17/2015)	Date Considered	08/17/2015
--------------------	------------------------------	-----------------	------------

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

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

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		13908242	13908242 - GAU: 2466
	Filing Date		2013-06-03	
	First Named Inventor	Zhang et al.		
	Art Unit	2466		
	Examiner Name	Brian S. Roberts		
	Attorney Docket Number	SIG-2-0674US05		

CERTIFICATION STATEMENT

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

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

OR

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

☐ See attached certification statement.

☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

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

Signature	/Abhik A. Huq/	Date (YYYY-MM-DD)	2015-08-13
Name/Print	Abhik A. Huq	Registration Number	40,656

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

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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.
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5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

~~ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /B.R./~~

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S46	0	"6754496".pn. and "7206598".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 15:19
S48	9	"6754496".pn. "7206598".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 15:27
S49	9371	(enhanc\$3 near2 uplink or ("e-dch"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 15:37
S50	614	(enhanc\$3 near2 uplink or ("e-dch")) and HARQ and soft near2 ((handover) or (handoff) or (hand\$3 near over) or (hand\$3 near2 off))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 15:38
S51	665	((enhanc\$3 near2 uplink) or ("e-dch")) and ((HARQ) or (hybrid near2 automatic near2 repeat\$3 near2 request\$3)) and soft near2 ((handover) or (handoff) or (hand\$3 near over) or (hand\$3 near2 off))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 15:38
S52	496	H04L1/1887.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 15:38
S53	362	H04W36/18.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 16:11
S54	73	H04L1/1893.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 16:52
S55	305	H04L1/12.cpc.	US-PGPUB; USPAT;	OR	ON	2015/06/22 17:09

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S56	909	H04L1/1812.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 17:53
S57	909	H04L1/1812.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 19:40
S58	110	H04L1/1816.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 20:39
S59	188	H04L1/1819.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 20:44
S60	111	H04L1/1896.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 21:05
S61	2	H04L1/22.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 21:13
S62	104	H04B7/022.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 21:13
S63	161	H04W36/30.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 21:23
S64	72	H04W36/02.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 21:36
S65	10	H04W36/16.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT;	OR	ON	2015/06/22 21:44

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S66	362	H04W36/18.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 21:53
S67	20	H04W36/24.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 22:27
S68	4	H04W36/26.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 22:28
S69	4	H04W36/26.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 22:28
S70	7	H04W36/28.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 22:28
S71	4	H04W36/34.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 22:29
S72	289	H04W88/08.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/22 22:30
S73	614	((enhanc\$3 near2 uplink or ("e-dch")) and HARQ and soft near2 ((handover) or (handoff) or (hand\$3 near over) or (hand\$3 near2 off))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/23 11:55
S74	1148	((enhanc\$3 near2 uplink or ("e-dch")) and soft near2 ((handover) or (handoff) or (hand\$3 near over) or (hand\$3 near2 off))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/06/23 11:55
S78	936	H04L1/1812.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT;	OR	ON	2015/08/14 14:54

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S79	380	H04W36/18.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/14 17:26
S80	680	((enhanc\$3 near2 uplink) or ("e-dch")) and ((HARQ) or (hybrid near2 automatic near2 repeat\$3 near2 request\$3)) and soft near2 ((handover) or (handoff) or (hand\$3 near over) or (hand\$3 near2 off))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/14 18:05
S81	47	H04L1/18.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/14 19:49
S82	114	H04L1/1816.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/14 20:03
S83	195	H04L1/1819.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/14 20:12
S84	206	H04L1/1867.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/14 20:28
S85	51	H04L1/189.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/14 20:47
S86	115	H04L1/1896.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/14 20:57
S87	103	H04B7/022.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/14 21:08
S88	164	H04W36/30.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT;	OR	ON	2015/08/14 21:23

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S89	307	H04W88/08.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/14 21:39
S90	629	(enhanc\$3 near2 uplink or ("e-dch")) and HARQ and soft near2 ((handover) or (handoff) or (hand\$3 near over) or (hand\$3 near2 off))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/17 10:22
S91	5	"20120155304".pn. "20120039271".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/17 13:30
S92	2	"20120322492".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/17 13:55
S93	2	"20140254516".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/17 14:01
S94	0	"20090247206.pn."	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/17 14:11
S95	0	"20090247206.pn."	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/17 14:11
S96	2	"20090247206".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/17 14:11
S97	5	"6507567".pn. "20030131124".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/08/17 15:39

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S75	12	enhanced near2 uplink.clm. and soft near2 handover.clm.	USPAT; UPAD	OR	ON	2015/06/23 15:38
S76	4	enhanced near2 uplink.clm. and soft near2 handover.clm. and ((HARQ) or (hybrid near2 automatic near2 repeat\$3 near2 request\$3)).clm.	USPAT; UPAD	OR	ON	2015/06/23 15:40
S77	7	enhanced near2 uplink.clm. and soft near2 handover.clm. and schedul\$.clm.	USPAT; UPAD	OR	ON	2015/06/23 15:42
S98	4	enhanced near2 uplink.clm. and soft near2 handover.clm. and ((HARQ) or (hybrid near2 automatic near2 repeat\$3 near2 request\$3)).clm.	USPAT; UPAD	OR	ON	2015/08/17 15:47
S99	7	enhanced near2 uplink.clm. and soft near2 handover.clm. and schedul\$.clm.	USPAT; UPAD	OR	ON	2015/08/17 15:48
S100	1	enhanced near2 uplink.clm. and soft near2 handover.clm. and primary near2 cell.clm.	USPAT; UPAD	OR	ON	2015/08/17 15:48

8/ 17/ 2015 4:19:56 PM
C:\ Users\ broberts\ Documents\ EAST\ Workspaces\ 13908242a.wsp

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

Application Number	13908242	Filing Date	2013-06-03	Docket Number (if applicable)	SIG-2-0674US05	Art Unit	2466
First Named Inventor	Guodong Zhang			Examiner Name	Brian S. Roberts		

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, to any international application that does not comply with the requirements of 35 U.S.C. 371, 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 _____

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 220493

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☒ Patent Practitioner Signature

☐ Applicant Signature

Signature of Registered U.S. Patent Practitioner			
Signature	/Abhik A. Huq/	Date (YYYY-MM-DD)	2015-09-22
Name	Abhik A. Huq	Registration Number	40656

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

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

Privacy Act Statement

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

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

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

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the PATENT APPLICATION of:

Zhang et al.

Application No.: 13/908,242

Confirmation No.: 5287

Filed: June 3, 2013

For: SUPPORTING ENHANCED UPLINK
DURING SOFT HANDOVER

Group: 2466

Examiner: Brian S. Roberts

Our File: SIG-2-0674US05

Date: September 22, 2015

AMENDMENT

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

A Request for Continued Examination (RCE) is filed herewith.

Please amend the application without prejudice or disclaimer as follows:

AMENDMENTS TO THE CLAIMS

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

1. – 12. (Canceled)

13. (Currently Amended) In a wireless network ~~having a plurality of cells,~~
a method comprising:

transmitting scheduling information to a wireless transmit/receive unit (WTRU) via a primary cell and not via a non-primary cell;

receiving, via the primary cell and the non-primary cell ~~the plurality of cells~~
~~during soft handover, enhanced uplink data from the a wireless transmit/receive unit (WTRU), wherein a first one of the plurality of cells is a primary cell for the WTRU and at least a second one of the plurality of cells is not a primary cell for the WTRU;~~

~~transmitting scheduling information to the WTRU via the primary cell and not via the at least one second cell; and~~

transmitting hybrid automatic repeat request (HARQ) acknowledgements (ACKs) to the WTRU via at least the primary cell; and

transmitting HARQ negative acknowledgements (NACKs) to the WTRU via the primary cell and not via the non-primary cell[[:]]

~~wherein the at least one second cell does not transmit the HARQ NACKs to the WTRU.~~

14. (Currently Amended) The method of claim 13, further comprising:
designating, by a radio network controller (RNC), the primary cell and the ~~at least one second~~ non-primary cell for the WTRU from the plurality of cells.

15. (Currently Amended) The method of claim 14, ~~wherein each~~ further comprising:

serving the primary cell and the non-primary cell is served by a Node-B, and the Node-Bs are controlled by the RNC with respective Node-Bs, and wherein the Node-B serving the primary cell and the Node-B serving the non-primary cell are controlled by the RNC.

16. (Currently Amended) The method of claim 15, wherein the enhanced uplink data is received by the Node-B serving the primary cell and Node-B serving the non-primary cell, and wherein the method further comprises ~~comprising:~~

when the enhanced uplink data is correctly received by the Node-B serving the primary cell, transmitting, by each of the Node-Bs, correctly Node-B serving the primary cell, the correctly received enhanced uplink data to the RNC; and

when the enhanced uplink data is correctly received by the Node-B serving the non-primary cell, transmitting, by the Node-B serving the non-primary cell, the correctly received enhanced uplink data to the RNC.

17. (Currently Amended) The method of claim ~~15~~ 16, further comprising:
performing, by ~~at least~~ the Node-B serving the primary cell ~~and the Node-B serving the second cell, an error~~ a cyclic redundancy check on the received enhanced uplink data received by the Node-B serving the primary cell to determine if the

Node-B serving the primary cell correctly received the enhanced uplink data the
Node-Bs receive; and

performing, by the Node-B serving the non-primary cell, a cyclic redundancy
check on the enhanced uplink data received by the Node-B serving the non-primary
cell to determine if the Node-B serving the non-primary cell correctly received the
enhanced uplink data

~~wherein each Node-B that correctly receives the enhanced uplink data~~
~~transmits a HARQ ACK, and the Node-B serving the primary cell transmits the~~
~~HARQ NACK if none of the Node-Bs receives the uplink enhanced data correctly;~~
~~and~~

~~wherein the error check is a cyclic redundancy check.~~

18. (Currently Amended) The method of claim 15 ~~17~~, further comprising:
~~soft~~ combining the enhanced uplink data received by the Node-B serving the
primary cell and the Node-B serving the non-primary cell with additional enhanced
~~uplink data~~ if the enhanced uplink data was not received correctly by ~~any of the~~
~~Node-Bs~~ Node-B serving the primary cell and the Node-B serving the non-primary
cell.

19. (Currently Amended) The method of claim 18, wherein the combining
is performed by the RNC ~~15, further comprising:~~

~~designating, by the RNC, which of the Node-Bs form an active set of Node-Bs~~
~~for each of a plurality of WTRUs served by the RNC and the Node-Bs controlled~~
~~thereby;~~

~~wherein the primary cell and at least one secondary cell for a WTRU are selected from the cells served by the active set of Node-Bs designated for that WTRU.~~

20. (Currently Amended) The method of claim 14, wherein the RNC designates the primary cell and the non-primary cell based on downlink power measurements from the WTRU, and a downlink power measurement for the primary cell is higher than a downlink power measurement for the non-primary cell further comprising:

~~receiving from the WTRU downlink power measurements of transmissions received by the WTRU from the plurality of cells; and~~

~~designating, by the RNC, the cell having a highest downlink power measured by the WTRU as the primary cell.~~

21. (Currently Amended) The method of claim 13, wherein the enhanced uplink data includes identification information for the WTRU ~~identification.~~

22. (Previously Presented) The method of claim 13, wherein the scheduling information includes at least one of a HARQ process identification and a maximum transmit power level of the WTRU.

23. (Currently Amended) An apparatus, comprising:
a plurality of Node-Bs, each Node-B serving at least one cell;
wherein the Node-Bs are configured to:

transmit scheduling information to a wireless transmit/receive unit (WTRU) via a primary cell and not via a non-primary cell;

receive, via the primary cell and the non-primary cell, enhanced uplink data from the WTRU;

transmit hybrid automatic repeat request (HARQ) acknowledgements (ACKs) to the WTRU via at least the primary cell; and

transmit HARQ negative acknowledgements (NACKs) to the WTRU via the primary cell and not via the non-primary cell

~~receive, via the cells during soft handover, enhanced uplink data from a wireless transmit/receive unit (WTRU), wherein one of the cells is a primary cell for the WTRU and at least one of the cells is a non-primary cell for the WTRU;~~

~~transmit scheduling information to the WTRU via the primary cell and not via the at least one non-primary cell; and~~

~~transmit hybrid automatic repeat request (HARQ) acknowledgements (ACKs) and negative acknowledgements (NACKs) to the WTRU via the primary cell;~~

~~wherein the Node-B serving the at least one non-primary cell does not transmit the HARQ NACKs to the WTRU.~~

24. (Currently Amended) The apparatus of claim 23, further comprising:
a radio network controller (RNC) coupled to the Node-Bs[;], wherein the RNC is configured to[[:]] designate ~~which one of the plurality of cells is the primary cell and which of the plurality of cells is the at least one non-primary cell~~ for the WTRU.

25. (Currently Amended) The apparatus of claim 24, wherein ~~each of the Node-Bs is further configured to:~~

the primary cell and the non-primary cell are served by respective ones of the plurality of Node-Bs, and

the Node-B serving the primary cell and the Node-B serving the non-primary cell are controlled by the RNC

~~transmit correctly received enhanced uplink data to the RNC.~~

26. (Currently Amended) The apparatus of claim ~~25~~ 24, wherein ~~at least~~ the Node-B serving the primary cell and the Node-B serving the at least one non-primary cell are each further configured to:

perform a cyclic redundancy check on the enhanced uplink data received by the Node-B to determine if that Node-B correctly received the enhanced uplink data
~~an error check on the received enhanced uplink data the Node-B receives; and~~

transmit a HARQ ACK when that Node-B correctly receives the enhanced uplink data;

wherein the Node-B serving the primary cell transmits the HARQ NACK if none of the plurality of Node-Bs receives the enhanced uplink data correctly; ~~and~~

~~wherein the error check is a cyclic redundancy check.~~

27. (Currently Amended) The apparatus of claim 26, wherein the enhanced uplink data received by the Node-B serving the primary cell and the enhanced uplink data received by the Node-B serving the non-primary cell are combined if the enhanced uplink data was not received correctly by the Node-B serving the primary cell and the Node-B serving the non-primary cell ~~the Node-B serving the primary cell is further configured to:~~

~~soft combine the enhanced uplink data with additional enhanced uplink data if the enhanced uplink data was not received correctly by any of the Node-Bs.~~

28. (Currently Amended) The apparatus of claim ~~27~~ 26, wherein the RNC is further configured to:

combine the enhanced uplink data received by the Node-B serving the primary cell with the enhanced uplink data received by the Node-B serving the non-primary cell

~~instruct the Node-B serving the primary cell to inform the WTRU of missing enhanced uplink data.~~

29. (Currently Amended) The apparatus of claim 24, wherein the RNC is ~~further configured to:~~

designates the primary cell and the non-primary cell based on downlink power measurements from the WTRU, a downlink power measurement for the primary cell is higher than a downlink power measurement for the non-primary cell

~~designate which of the Node-Bs form an active set of Node-Bs for each of a plurality of WTRUs served by the RNC and the Node-Bs controlled thereby;~~

~~wherein the primary cell and at least one second cell for a WTRU are selected from the cells served by the active set of Node-Bs designated for that WTRU.~~

30. (Currently Amended) The apparatus of claim ~~25~~ 24, ~~wherein the RNC is further configured to:~~

wherein the Node-B serving the primary cell is further configured to:

receive enhanced uplink data; and

when the enhanced uplink data is correctly received by the Node-B serving the primary cell, transmit the correctly received enhanced uplink data to the RNC,

and wherein the Node-B serving the non-primary cell is further configured to:
receive the enhanced uplink data; and
when the enhanced uplink data is correctly received by the Node-B
serving the non-primary cell, transmit the correctly received enhanced uplink
data to the RNC

~~receive a message generated by the WTRU, the message containing WTRU~~
~~downlink power measurements of transmissions received by the WTRU from the~~
~~Node-Bs; and~~

~~designate the Node-B having a highest downlink power measured by the~~
~~WTRU as the Node-B serving the primary cell.~~

31. (Currently Amended) The apparatus of claim 23, wherein the enhanced uplink data includes identification information for the WTRU
~~identification.~~

32. (Previously Presented) The apparatus of claim 23, wherein the scheduling information includes at least one of a HARQ process identification and a maximum transmit power level of the WTRU.

33. (Currently Amended) A method of operating a Node-B configured to
communicate with a wireless transmit/receive unit (WTRU) via at least one cell of a
plurality of cells, the method comprising:

receiving, via the at least one cell, enhanced uplink data from the WTRU,
wherein the at least one cell is either a primary cell for the WTRU or a non-primary
cell for the WTRU;

transmitting scheduling information to the WTRU via the at least one cell;

and

transmitting hybrid automatic repeat request (HARQ) acknowledgements (ACKs) and negative acknowledgements (NACKs) to the WTRU via the at least one cell,

wherein scheduling information and the NACKs are transmitted to the WTRU via the at least one cell only if the at least one cell is the primary cell for the WTRU

~~receiving, via at least one cell of a plurality of cells during soft handover, enhanced uplink data from a wireless transmit/receive unit (WTRU), wherein the at least one cell is either a primary cell for the WTRU or a non-primary cell for the WTRU;~~

~~transmitting scheduling information to the WTRU only if the at least one cell is the primary cell for the WTRU;~~

~~transmitting hybrid automatic repeat request (HARQ) acknowledgements (ACKs) to the WTRU via the at least one cell; and~~

~~transmitting HARQ negative acknowledgements (NACKs) to the WTRU via the at least one cell only if the at least one cell is the primary cell for the WTRU.~~

34. (Previously Presented) The method of claim 33, wherein whether the at least one cell is the primary cell or the non-primary cell for the WTRU is determined by a radio network controller (RNC) in communication with the Node-B.

35. (Previously Presented) The method of claim 34, wherein the Node-B is controlled by the RNC.

36. (Previously Presented) The method of claim 35, further comprising:
transmitting correctly received enhanced uplink data to the RNC.

37. (Currently Amended) The method of claim 35, further comprising ~~the~~
~~step of:~~

performing, by the Node-B, an error check on the received enhanced uplink
data,

wherein the Node-B transmits a HARQ ACK via the at least one cell when
the Node-B correctly receives the enhanced uplink data, and the Node-B transmits
the HARQ NACK via the at least one cell if the Node-B does not receive the uplink
enhanced data correctly and the at least one cell is the a primary cell.

38. (Previously Presented) The method of claim 37, wherein the error
check is a cyclic redundancy check.

39. (Currently Amended) The method of claim 34, further comprising ~~the~~
~~steps of:~~

receiving, from the WTRU, downlink power measurements of transmissions
received by the WTRU from the plurality of cells; and

transmitting the WTRU downlink power measurements to the RNC,

wherein the RNC designates as the primary cell the one of the plurality of
cells having a highest downlink power measured by the WTRU ~~is designated by the~~
~~RNC as the primary cell.~~

40. (Currently Amended) The method of claim 33, wherein the enhanced uplink data includes identification information for the WTRU ~~identification~~.

41. (Previously Presented) The method of claim 33, wherein the scheduling information includes at least one of a HARQ process identification and a maximum transmit power level of the WTRU.

42. (Currently Amended) An apparatus, comprising:
a receiver configured to receive, ~~during soft handover~~, enhanced uplink data from a wireless transmit/receive unit (WTRU) via at least one cell of a plurality of cells, wherein the at least one cell is either a primary cell for the WTRU or a non-primary cell for the WTRU; and

a transmitter configured to send scheduling information, hybrid automatic repeat request (HARQ) acknowledgements (ACKs), and HARQ negative acknowledgements (NACKs) to the WTRU via the at least one cell,

wherein scheduling information and the NACKs are sent to the WTRU via the at least one cell only if the at least one cell is the primary cell for the WTRU.

43. (Currently Amended) The apparatus of claim 42, further comprising:
an interface configured to communicate with a radio network controller (RNC), wherein the RNC ~~that~~ determines whether the at least one cell is the a primary cell or the a non-primary cell for the WTRU.

44. (Previously Presented) The apparatus of claim 43, wherein the interface is further configured to send correctly received enhanced uplink data to

the RNC.

45. (Previously Presented) The apparatus of claim 43, wherein the receiver is further configured to perform an error check on the received enhanced uplink data, and wherein the transmitter transmits the HARQ ACK when the receiver correctly receives the enhanced uplink data.

46. (Previously Presented) The apparatus of claim 45, wherein the error check is a cyclic redundancy check.

47. (Currently Amended) The apparatus of claim 43 [[44]], wherein the interface is further configured to:

send a message generated by the WTRU to the RNC, the message ~~containing~~ including WTRU downlink power measurements of transmissions received by the WTRU ~~from a plurality of cells;~~

~~wherein the cell having a highest downlink power measured by the WTRU is designated by the RNC as the primary cell.~~

48. (Currently Amended) The apparatus of claim 42, wherein the enhanced uplink data includes identification information for the WTRU ~~identification.~~

49. (Previously Presented) The apparatus of claim 42, wherein the scheduling information includes at least one of a HARQ process identification and a maximum transmit power level of the WTRU.

50. – 66. Canceled

67. (New) A method, comprising:

receiving, by one or more Node-Bs via a primary cell and at least one non-primary cell, enhanced uplink (EU) data from a wireless transmit/receive unit (WTRU);

transmitting, to the WTRU by the one or more Node-Bs, scheduling information via the primary cell only; and

transmitting, to the WTRU by the one or more Node-Bs, hybrid automatic repeat request (HARQ) acknowledgements (ACKs) via at least the primary cell and negative acknowledgements (NACKs) via the primary cell only.

68. (New) The method of claim 67, further comprising:

transmitting, from a radio network controller (RNC) to the one or more Node-Bs, information indicating the primary cell and the at least one non-primary cell.

69. (New) The method of claim 67, further comprising:

receiving, by the one or more Node-Bs, downlink power measurements of transmissions received by the WTRU.

70. (New) The method of claim 67, wherein the EU data includes identification information for the WTRU.

71. (New) The method of claim 67, wherein the scheduling information includes at least one of a HARQ process identification and a maximum transmit power level of the WTRU.

72. (New) The method of claim 67, wherein the primary cell and the at least one non-primary cell are served by different Node-Bs.

73. (New) A wireless communication system comprising one or more Node-Bs configured to:

receive, via a primary cell and at least one non-primary cell, enhanced uplink (EU) data from a wireless transmit/receive unit (WTRU);

transmit to the WTRU scheduling information via the primary cell only; and

transmit to the WTRU hybrid automatic repeat request (HARQ) acknowledgements (ACKs) via at least the primary cell and negative acknowledgements (NACKs) via the primary cell only.

74. (New) The wireless communication system of claim 73, further comprising:

a radio network controller (RNC) to transmit to the one or more Node-Bs an identifier indicating the primary cell and the at least one non-primary cell.

75. (New) The wireless communication system of claim 73, wherein the one or more Node-Bs are further configured to receive downlink power measurements of transmissions received by the WTRU.

76. (New) The wireless communication system of claim 73, wherein the EU data includes identification information for the WTRU.

77. (New) The wireless communication system of claim 73, wherein the scheduling information includes at least one of a HARQ process identification and a

maximum transmit power level of the WTRU.

78. (New) The wireless communication system of claim 73, wherein the primary cell and the at least one non-primary cell are served by different Node-Bs.

79. (New) The method of claim 13, wherein the primary cell and the non-primary cell are served by different Node-Bs.

80. (New) The apparatus of claim 23, wherein the primary cell and the non-primary cell are served by different Node-Bs.

81. (New) The method of claim 33, wherein the primary cell and the non-primary cell are served by different Node-Bs.

82. (New) The apparatus of claim 42, wherein the primary cell and the non-primary cell are served by different Node-Bs.

83. (New) A method, comprising:
receiving, by one or more Node-Bs via a first cell and at least one second cell, enhanced uplink (EU) data from a wireless transmit/receive unit (WTRU);
transmitting, to the WTRU by the one or more Node-Bs, scheduling information via the first cell only; and
transmitting, to the WTRU by the one or more Node-Bs, hybrid automatic repeat request (HARQ) acknowledgements (ACKs) via at least the first cell and negative acknowledgements (NACKs) via the first cell only.

84. (New) The method of claim 83, further comprising:
transmitting, from a radio network controller (RNC) to the one or more Node-Bs, information indicating the first cell and the at least one second cell.

85. (New) The method of claim 83, further comprising:
receiving, by the one or more Node-Bs, downlink power measurements of transmissions received by the WTRU.

86. (New) The method of claim 83, wherein the EU data includes identification information for the WTRU.

87. (New) The method of claim 83, wherein the scheduling information includes at least one of a HARQ process identification and a maximum transmit power level of the WTRU.

88. (New) The method of claim 83, wherein the first cell and the at least one second cell are served by different Node-Bs.

Applicant: Signal Trust for Wireless Innovation
Application No.: 13/908,242

REMARKS

After the foregoing Preliminary Amendment, claims 13-49 and 67-88 are currently pending in this application. Claims 50-66 are canceled. Claims 13-21, 23-31, 33, 37, 39, 40, 42, 43, 47 and 48 have been amended. New claims 67-88 have been added. No new subject matter has been added.

Conclusion

If the Examiner believes that any additional minor formal matters need to be addressed in order to place this application in condition for allowance, or that a telephonic interview will help to materially advance the prosecution of this application, the Examiner is invited to contact the undersigned by telephone at the Examiner's convenience.

Applicant: Signal Trust for Wireless Innovation
Application No.: 13/908,242

In view of the foregoing, Applicant respectfully submits that the present application, including claims 13-49 and 67-88, is in condition for allowance and a notice to that effect is respectfully requested.

Respectfully submitted,

SIGNAL TRUST FOR
WIRELESS INNOVATION

By /Abhik A. Huq/
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AAH/say

Electronic Patent Application Fee Transmittal				
Application Number:		13908242		
Filing Date:		03-Jun-2013		
Title of Invention:		SUPPORTING ENHANCED UPLINK DURING SOFT HANDOVER		
First Named Inventor/Applicant Name:		Guodong Zhang		
Filer:		Abhik A. Huq/Sandy Yi		
Attorney Docket Number:		SIG-2-0674US05		
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Claims in Excess of 20	1202	5	80	400
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
RCE- 2nd and Subsequent Request	1820	1	1700	1700
Total in USD (\$)				2100

Electronic Acknowledgement Receipt

EFS ID:	23566300
Application Number:	13908242
International Application Number:	
Confirmation Number:	5287
Title of Invention:	SUPPORTING ENHANCED UPLINK DURING SOFT HANDOVER
First Named Inventor/Applicant Name:	Guodong Zhang
Customer Number:	3624
Filer:	Abhik A. Huq/Sandy Yi
Filer Authorized By:	Abhik A. Huq
Attorney Docket Number:	SIG-2-0674US05
Receipt Date:	22-SEP-2015
Filing Date:	03-JUN-2013
Time Stamp:	14:56:16
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$ 2100
RAM confirmation Number	1106
Deposit Account	220493
Authorized User	HUQ, ABHIK A.

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)

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

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Continued Examination (RCE)	SIG_2_0674Us05_RCE_trans. PDF	1350050	no	3
			78761f1b2c91d1884b3aef6a4d2fe42461e56		

Warnings:**Information:**

2		20150922_SIG_2_0674US05_Amendment.pdf	105833	yes	19
			2e38626b0079001cb0e8ca541fa92d16ad785f8		

Multipart Description/PDF files in .zip description

	Document Description	Start	End
	Amendment Submitted/Entered with Filing of CPA/RCE	1	1
	Claims	2	17
	Applicant Arguments/Remarks Made in an Amendment	18	19

Warnings:**Information:**

3	Fee Worksheet (SB06)	fee-info.pdf	32424	no	2
			167e5e7018f9a57298121ccf4abf8c27d0c676		

Warnings:**Information:**

Total Files Size (in bytes):			1488307
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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.

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

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 13/908,242	Filing Date 06/03/2013	☐ To be Mailed
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ENTITY: ☒ LARGE ☐ SMALL ☐ MICRO**APPLICATION AS FILED – PART I**

(Column 1)

(Column 2)

FOR	NUMBER FILED	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), (l), 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

(Column 1)

(Column 2)

(Column 3)

AMENDMENT	09/22/2015	CLAIMS REMAINING AFTER AMENDMENT	MINUS	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	* 59	Minus	** 54	= 5	X \$80 =	400
	Independent (37 CFR 1.16(h))	* 7	Minus	*** 7	= 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	400

(Column 1)

(Column 2)

(Column 3)

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

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

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

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

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

LIE
/SHERRY DAVIS/

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

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

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the **PATENT APPLICATION** of:

Zhang et al.

Application No.: 13/908,242

Confirmation No.: 5287

Filed: June 3, 2013

For: SUPPORTING ENHANCED UPLINK
TRANSMISSION DURING SOFT
HANDOVER

Group: 2466

Examiner: Brian S. Roberts

Our File: SIG-2-0674US05

Date: September 29, 2015

REQUEST FOR CORRECTED FILING RECEIPT

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

Sir:

Enclosed is a marked-up copy of the filing receipt for the above-identified patent application. Upon proofing, it was noted that the filing receipt is incorrect. There is one change that needs to be made.

With respect to the Title:

Please delete:

“SUPPORTING ENHANCED UPLINK DURING SOFT HANDOVER”

and add:

--SUPPORTING ENHANCED UPLINK TRANSMISSION DURING SOFT
HANDOVER--.

Applicant: Signal Trust for Wireless Innovation
Application No.: 13/908,242

Support for this correction can be found on page one of the Specification, as well as the Application Data Sheet submitted herewith. The Title was correct on the Specification, but there was an error of omission of the word "TRANSMISSION" on the Application Data Sheet filed with the application on June 3, 2013.

Applicant respectfully requests that a corrected Filing Receipt be issued.

Respectfully submitted,

Signal Trust for Wireless Innovation

By /Abhik A. Huq/
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AAH/say
Enclosures (2)



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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FILED REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
13/908,242	06/03/2013	2464	2160	SIG-2-0674US05	6	2

CONFIRMATION NO. 5287

CORRECTED FILING RECEIPT



0000000070792793

3624
VOLPE AND KOENIG, P.C.
UNITED PLAZA
30 SOUTH 17TH STREET
PHILADELPHIA, PA 19103

Date Mailed: 09/17/2014

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

Guodong Zhang, Syosset, NY;
Sung-Hyuk Shin, Northvale, NJ;
Stephen E. Terry, Northport, NY;
James M. Miller, Verona, NJ;
Stephen G. Dick, Nesconset, NY;

Applicant(s)

Signal Trust for Wireless Innovation, Wilmington, DE

Power of Attorney: The patent practitioners associated with Customer Number 03624

Domestic Priority data as claimed by applicant

This application is a CON of 13/308,950 12/01/2011 PAT 8457072
which is a CON of 11/434,330 05/15/2006 PAT 8130720
which is a CON of 10/962,720 10/12/2004 PAT 7046648
which claims benefit of 60/578,674 06/10/2004
and claims benefit of 60/520,692 11/17/2003
and claims benefit of 60/519,990 11/14/2003
and claims benefit of 60/517,656 11/05/2003

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.) - None.

Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access - A proper **Authorization to Permit Access to Application by Participating Offices** (PTO/SB/39 or its equivalent) has been received by the USPTO.

If Required, Foreign Filing License Granted: 06/20/2013

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 13/908,242**

Projected Publication Date: Not Applicable

Non-Publication Request: No

Early Publication Request: No

Title

SUPPORTING ENHANCED UPLINK DURING SOFT HANDOVER

TRANSMISSION

Preliminary Class

370

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific

page 2 of 4

countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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technology, manufacture products, deliver services, and grow your business, visit <http://www.SelectUSA.gov> or call +1-202-482-6800.

SUPPLEMENTAL APPLICATION DATA SHEET

PTO/AIA/14 (03-13)

Approved for use through 01/31/2014. OMB 0651-0032

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

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

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	+2-0674US05 SIG-2-0674US05
		Application Number	13/908,242
Title of Invention	TRANSMISSION SUPPORTING ENHANCED UPLINK DURING SOFT HANDOVER		
The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.			

Secrecy Order 37 CFR 5.2

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)
--

Inventor Information:

Inventor 1					Remove
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Guodong		Zhang		
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service					
City	Syosset	State/Province	NY	Country of Residence	US
Mailing Address of Inventor:					
Address 1		14 Walnut Drive			
Address 2					
City	Syosset	State/Province	NY	Postal Code	11791
Country		US			
Inventor 2					Remove
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Sung-Hyuk		Shin		
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service					
City	Northvale	State/Province	NJ	Country of Residence	US
Mailing Address of Inventor:					
Address 1		104 Eidner Way			
Address 2					
City	Northvale	State/Province	NJ	Postal Code	07647
Country		US			
Inventor 3					Remove
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Stephen	E.	Terry		
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service					

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	1-2-0674US05 SIG-2-0674US05
		Application Number	13/908,242
Title of Invention	SUPPORTING ENHANCED UPLINK DURING SOFT HANDOVER		

City	Northport	State/Province	NY	Country of Residence	US
------	-----------	----------------	----	----------------------	----

Mailing Address of Inventor:

Address 1	15 Summit Avenue				
Address 2					
City	Northport	State/Province	NY		
Postal Code	11768	Country	US		
Inventor 4					Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	James	M.	Miller	
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service				

City	Verona	State/Province	NJ	Country of Residence	US
------	--------	----------------	----	----------------------	----

Mailing Address of Inventor:

Address 1	18 Louisburg Square				
Address 2					
City	Verona	State/Province	NJ		
Postal Code	07044	Country	US		
Inventor 5					Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Stephen	G.	Dick	
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service				

City	Nesconset	State/Province	NY	Country of Residence	US
------	-----------	----------------	----	----------------------	----

Mailing Address of Inventor:

Address 1	61 Bobann Drive				
Address 2					
City	Nesconset	State/Province	NY		
Postal Code	11767	Country	US		

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button.

[Add](#)
Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☐ An Address is being provided for the correspondence Information of this application.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	~~1-2-0674US05~~ <u>SIG-2-0674US05</u>	
		Application Number	<u>13/908,242</u>	
Title of Invention	SUPPORTING ENHANCED UPLINK ^{TRANSMISSION} DURING SOFT HANDOVER			
Customer Number	~~24374~~ <u>03624</u>			
Email Address	eoffice@vklaw.com		Add Email	Remove Email

Application Information:

Title of the Invention	SUPPORTING ENHANCED UPLINK ^{TRANSMISSION} DURING SOFT HANDOVER		
Attorney Docket Number	~~1-2-0674US05~~ <u>SIG-2-0674US05</u>	Small Entity Status Claimed ☐	
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	4	Suggested Figure for Publication (if any)	3

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)
☐ Request Not to Publish. I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application has not and will not be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.			
Please Select One:	☒ Customer Number	☐ US Patent Practitioner	☐ Limited Recognition (37 CFR 11.9)
Customer Number	~~-24374-----~~ <u>03624</u>		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.					
Prior Application Status	Pending		Remove		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)		
<u>13908242</u>	Continuation of	13308950	2011-12-01		
Prior Application Status	Patented		Remove		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13308950	Continuation of	11434330	2006-05-15	8130720	2012-03-06

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

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	1-2-0674US05 SIG-2-0674US05
		Application Number	13/908,242
Title of Invention	SUPPORTING ENHANCED UPLINK DURING SOFT HANDOVER <i>TRANSMISSION</i>		

Prior Application Status		Patented			Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
11434330	Continuation of	10962720	2004-10-12	7046648	2006-05-16
Prior Application Status		Expired			Remove
Application Number	Continuity Type		Prior Application Number	Filing Date (YYYY-MM-DD)	
10962720	non provisional of		60578674	2004-06-10	
Prior Application Status		Expired			Remove
Application Number	Continuity Type		Prior Application Number	Filing Date (YYYY-MM-DD)	
10962720	non provisional of		60520692	2003-11-17	
Prior Application Status		Expired			Remove
Application Number	Continuity Type		Prior Application Number	Filing Date (YYYY-MM-DD)	
10962720	non provisional of		60519990	2003-11-14	
Prior Application Status		Expired			Remove
Application Number	Continuity Type		Prior Application Number	Filing Date (YYYY-MM-DD)	
10962720	non provisional of		60517656	2003-11-05	
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.					

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(d). When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX) ⁱ the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(h)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).			
Remove			
Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Access Code ^j (if applicable)
Additional Foreign Priority Data may be generated within this form by selecting the Add button.			

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	~~I-2-0674US05~~ <u>SIG-2-0674US05</u>
		Application Number	~~13/908,242~~ <u>13/908,242</u>
Title of Invention	SUPPORTING ENHANCED UPLINK DURING SOFT HANDOVER		

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.

Authorization to Permit Access:

☒ Authorization to Permit Access to the Instant Application by the Participating Offices

If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the instant patent application is filed access to the instant patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the instant patent application is filed to have access to the instant patent application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the instant patent application with respect to: 1) the instant patent application-as-filed; 2) any foreign application to which the instant patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the instant patent application; and 3) any U.S. application-as-filed from which benefit is sought in the instant patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing this Authorization.

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

Clear

☒ Assignee

☐ Legal Representative under 35 U.S.C. 117

☐ Joint Inventor

☐ Person to whom the inventor is obligated to assign.

☐ Person who shows sufficient proprietary interest

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	~~1-2-0674US05~~ <u>SIG-2-0674US05</u>
		Application Number	13/908,242
Title of Invention	SUPPORTING ENHANCED UPLINK ~~TRANSMISSION~~ DURING SOFT HANDOVER		

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor :

If the Applicant is an Organization check here. ☒

Organization Name ~~InterDigital Technology Corporation~~ Signal Trust for Wireless Innovation

Mailing Address Information For Applicant:

Address 1		~~200 Bellevue Parkway~~ <u>1011 Centre Road</u>	
Address 2		~~Suite 300~~ <u>Suite 327</u>	
City	Wilmington	State/Province	DE
Country	US	Postal Code	~~19809~~ <u>19805</u>
Phone Number		Fax Number	
Email Address			

Additional Applicant Data may be generated within this form by selecting the Add button.

Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Assignee 1

Complete this section only if non-applicant assignee information is desired to be included on the patent application publication in accordance with 37 CFR 1.215(b). Do not include in this section an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest), as the patent application publication will include the name of the applicant(s).

If the Assignee is an Organization check here. ☐

Prefix	Given Name	Middle Name	Family Name	Suffix

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	~~1-2-0674US05~~ <u>SIG-2-0674US05</u>
		Application Number	<u>13/908,242</u>
Title of Invention	SUPPORTING ENHANCED UPLINK ~~TRANSMISSION~~ DURING SOFT HANDOVER		

Mailing Address Information For Non-Applicant Assignee:			
Address 1			
Address 2			
City		State/Province	
Country i		Postal Code	
Phone Number		Fax Number	
Email Address			
Additional Assignee Data may be generated within this form by selecting the Add button.			

Signature:

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications.				2015-09-29
Signature	~~Thomas A. Mattioli~~ / <u>Abhik A. Huq</u>		Date (YYYY-MM-DD)	<u>2013-06-03</u>
First Name	~~Thomas~~ <u>Abhik A.</u>	Last Name	~~Mattioli~~ <u>Huq</u>	Registration Number <u>56773 40656</u>
Additional Signature may be generated within this form by selecting the Add button.				

This collection of information is required by 37 CFR 1.76. 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 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

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

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

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

Electronic Acknowledgement Receipt

EFS ID:	23636616
Application Number:	13908242
International Application Number:	
Confirmation Number:	5287
Title of Invention:	SUPPORTING ENHANCED UPLINK DURING SOFT HANDOVER
First Named Inventor/Applicant Name:	Guodong Zhang
Customer Number:	3624
Filer:	Abhik A. Huq/Sandy Yi
Filer Authorized By:	Abhik A. Huq
Attorney Docket Number:	SIG-2-0674US05
Receipt Date:	29-SEP-2015
Filing Date:	03-JUN-2013
Time Stamp:	16:44:59
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Corrected Filing Receipt	20150929_SIG_2_0674US05_R equest_for_Corrected_FR.PDF	330196 182050b371f685ac47a2e412d58974db94f104a5	no	6

Warnings:

Information:

2	Application Data Sheet	20150929_SIG_2_0674US05_S uppl_ADS.PDF	844589 27#31f857146593bc5fa8966184#e139b154f7e1	no	8
Warnings:					
Information:					
This is not an USPTO supplied ADS fillable form					
Total Files Size (in bytes):				1174785	
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.					



UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
13/908,242	06/03/2013	2466	6540	SIG-2-0674US05	6	2

3624
VOLPE AND KOENIG, P.C.
UNITED PLAZA
30 SOUTH 17TH STREET
PHILADELPHIA, PA 19103

CONFIRMATION NO. 5287
CORRECTED FILING RECEIPT



Date Mailed: 10/05/2015

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

Guodong Zhang, Syosset, NY;
Sung-Hyuk Shin, Northvale, NJ;
Stephen E. Terry, Northport, NY;
James M. Miller, Verona, NJ;
Stephen G. Dick, Nesconset, NY;

Applicant(s)

Signal Trust for Wireless Innovation, Wilmington, DE;

Power of Attorney: The patent practitioners associated with Customer Number 03624

Domestic Priority data as claimed by applicant

This application is a CON of 13/308,950 12/01/2011 PAT 8457072
which is a CON of 11/434,330 05/15/2006 PAT 8130720
which is a CON of 10/962,720 10/12/2004 PAT 7046648
which claims benefit of 60/578,674 06/10/2004
and claims benefit of 60/520,692 11/17/2003
and claims benefit of 60/519,990 11/14/2003
and claims benefit of 60/517,656 11/05/2003

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.) - None.

Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access - A proper **Authorization to Permit Access to Application by Participating Offices** (PTO/SB/39 or its equivalent) has been received by the USPTO.

If Required, Foreign Filing License Granted: 06/20/2013

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 13/908,242**

Projected Publication Date: Not Applicable

Non-Publication Request: No

Early Publication Request: No
Title

SUPPORTING ENHANCED UPLINK TRANSMISSION DURING SOFT HANDOVER

Preliminary Class

370

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific

countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop

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UNITED STATES PATENT AND TRADEMARK OFFICE

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

NOTICE OF ALLOWANCE AND FEE(S) DUE

3624 7500 11/05/2015
VOLPE AND KOENIG, P.C.
UNITED PLAZA
30 SOUTH 17TH STREET
PHILADELPHIA, PA 19103

EXAMINER

ROBERTS, BRIAN S

ART UNIT

PAPER NUMBER

2466

DATE MAILED: 11/05/2015

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/908,242	06/03/2013	Guodong Zhang	SIG-2-0674US05	5287

TITLE OF INVENTION: SUPPORTING ENHANCED UPLINK TRANSMISSION DURING SOFT HANDOVER

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	02/05/2016

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)

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.

3624 7590 11/05/2015
VOLPE AND KOENIG, P.C.
UNITED PLAZA
30 SOUTH 17TH STREET
PHILADELPHIA, PA 19103

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.
13/908,242	06/03/2013	Guodong Zhang	SIG-2-0674US05	5287

TITLE OF INVENTION: SUPPORTING ENHANCED UPLINK TRANSMISSION DURING SOFT HANDOVER

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	02/05/2016

EXAMINER	ART UNIT	CLASS-SUBCLASS
ROBERTS, BRIAN S	2466	370-331000

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, 1 _____
- (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. 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
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

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.

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.

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.
13/908,242	06/03/2013	Guodong Zhang	SIG-2-0674US05	5287

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PHILADELPHIA, PA 19103

EXAMINER

ROBERTS, BRIAN S

ART UNIT PAPER NUMBER

2466

DATE MAILED: 11/05/2015

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.

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. 13/908,242	Applicant(s) ZHANG ET AL.	
	Examiner BRIAN ROBERTS	Art Unit 2466	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 the RCE filed on 09/22/2015.
☐ 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 13-49 and 67-88. 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/gph/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)	5. ☐ Examiner's Amendment/Comment
2. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____	6. ☒ Examiner's Statement of Reasons for Allowance
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material	7. ☐ Other _____
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____	

/BRIAN ROBERTS/ Primary Examiner, Art Unit 2466	
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The present application is being examined under the pre-AIA first to invent provisions.

Examiner's Statement of Reasons for Allowance

Claims 13-49 and 67-88 are allowed.

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

The primary reason independent claim 13 is allowable is because the closest prior art of record, US 7346035 by Lee et al., fails to teach or fairly suggest either alone or in combination with the prior art of record in a wireless network having a plurality of cells, a method that includes transmitting scheduling information to a wireless transmit/receive unit (WTRU) via a primary cell and not via a non-primary cell; receiving, via the primary cell and the non-primary cell enhanced uplink data from the a wireless transmit/receive unit (WTRU); and transmitting hybrid automatic repeat request (HARQ) acknowledgements (ACKs) to the WTRU via at least the primary cell; and transmitting HARQ negative acknowledgements (NACKs) to the WTRU via the primary cell and not via the non-primary cell.

The primary reason independent claim 23 is allowable is because the closest prior art of record, US 7346035 by Lee et al., fails to teach or fairly suggest either alone

Art Unit: 2466

or in combination with the prior art of record an apparatus that includes a plurality of Node-Bs, each Node-B serving at least one cell; wherein the Node-Bs are configured to: transmit scheduling information to a wireless transmit/receive unit (WTRU) via a primary cell and not via a non-primary cell; receive, via the primary cell and the non-primary cell, enhanced uplink data from the WTRU; transmit hybrid automatic repeat request (HARQ) acknowledgements (ACKs) to the WTRU via at least the primary cell; and transmit HARQ negative acknowledgements (NACKs) to the WTRU via the primary cell and not via the non-primary cell

The primary reason independent claim 33 is allowable is because the closest prior art of record, US 7346035 by Lee et al., fails to teach or fairly suggest either alone or in combination with the prior art of record a method of operating a Node-B configured to communicate with a wireless transmit/receive unit (WTRU) via at least one cell of a plurality of cells that includes receiving, via the at least one cell, enhanced uplink data from the WTRU, wherein the at least one cell is either a primary cell for the WTRU or a non-primary cell for the WTRU transmitting scheduling information to the WTRU via the at least one cell and transmitting hybrid automatic repeat request (HARQ) acknowledgements (ACKs) and negative acknowledgements (NACKs) to the WTRU via the at least one cell wherein scheduling information and the NACKs are transmitted to the WTRU via the at least one cell only if the at least one cell is the primary cell for the WTRU.

The primary reason independent claim 42 is allowable is because the closest prior art of record, US 7346035 by Lee et al., fails to teach or fairly suggest either alone or in combination with the prior art of record an apparatus, comprising: a receiver configured to receive enhanced uplink data from a wireless transmit/receive unit (WTRU) via at least one cell of a plurality of cells, wherein the at least one cell is either a primary cell for the WTRU or a non- primary cell for the WTRU; and a transmitter configured to send scheduling information, hybrid automatic repeat request (HARQ) acknowledgements (ACKs), and HARQ negative acknowledgements (NACKs) to the WTRU via the at least one cell, wherein scheduling information and the NACKs are sent to the WTRU via the at least one cell only if the at least one cell is the primary cell for the WTRU.

The primary reason independent claim 67 is allowable is because the closest prior art of record, US 7346035 by Lee et al., fails to teach or fairly suggest either alone or in combination with the prior art of record a method that includes receiving, by one or more Node-Bs via a primary cell and at least one non- primary cell, enhanced uplink (EU) data from a wireless transmit/receive unit (WTRU); transmitting, to the WTRU by the one or more Node-Bs, scheduling information via the primary cell only; and transmitting, to the WTRU by the one or more Node-Bs, hybrid automatic repeat request (HARQ) acknowledgements (ACKs) via at least the primary cell and negative acknowledgements (NACKs) via the primary cell only.

The primary reason independent claim 73 is allowable is because the closest prior art of record, US 7346035 by Lee et al., fails to teach or fairly suggest either alone or in combination with the prior art of record a wireless communication system comprising one or more Node- Bs configured to: receive, via a primary cell and at least one non-primary cell, enhanced uplink (EU) data from a wireless transmit/receive unit (WTRU); transmit to the WTRU scheduling information via the primary cell only; and transmit to the WTRU hybrid automatic repeat request (HARQ) acknowledgements (ACKs) via at least the primary cell and negative acknowledgements (NACKs) via the primary cell only.

The primary reason independent claim 83 is allowable is because the closest prior art of record, US 7346035 by Lee et al., fails to teach or fairly suggest either alone or in combination with the prior art of record a method that includes receiving, by one or more Node-Bs via a first cell and at least one second cell, enhanced uplink (EU) data from a wireless transmit/receive unit (WTRU); transmitting, to the WTRU by the one or more Node-Bs, scheduling information via the first cell only; and transmitting, to the WTRU by the one or more Node-Bs, hybrid automatic repeat request (HARQ) acknowledgements (ACKs) via at least the first cell and negative acknowledgements (NACKs) via the first cell only.

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 BRIAN ROBERTS whose telephone number is (571)272-3095. The examiner can normally be reached on M-F 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, FARUK HAMZA can be reached on (571) 272-7969. 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.

Application/Control Number: 13/908,242
Art Unit: 2466

Page 7

/BRIAN ROBERTS/
Primary Examiner, Art Unit 2466
11/01/2015

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S101	639	((enhanc\$3 near2 uplink or ("e-dch")) and HARQ and soft near2 ((handover) or (handoff) or (hand\$3 near over) or (hand\$3 near2 off))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/05 19:26
S102	970	H04L1/1812.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/05 20:59
S103	311	H04W88/08.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/06 07:31
S104	393	H04W36/18.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/06 08:26
S105	527	H04L1/1887.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/20 19:03
S106	79	H04L1/1893.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/20 19:41
S107	0	H04L1/12.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/20 19:53
S108	170	H04W36/30.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/20 19:54
S109	30	H04W36/00.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/20 20:08
S110	76	H04W36/02.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/20 20:15

S111	11	H04W36/16.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/20 20:24
S112	401	H04W36/18.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/20 20:26
S113	19	H04W36/24.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/20 21:03
S114	4	H04W36/26.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/20 21:12
S115	7	H04W36/28.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/20 21:15
S116	4	H04W36/34.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/20 21:17
S117	4	H04W36/38.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/20 21:22
S118	0	H04W88/00.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/20 21:26
S119	12891	H04W36/18.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/20 21:39
S120	401	H04W36/18.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/21 11:28
S121	1005	H04L1/1812.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/21 12:05
S122	400	H04W36/18.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/27 18:44

S123	527	H04L1/1887.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/27 19:04
S124	79	H04L1/1893.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/27 20:35
S125	0	H04L1/12.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/27 20:43
S126	50	H04L1/18.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/27 20:44
S127	1005	H04L1/1812.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/27 20:50
S128	119	H04L1/1816.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/27 21:49
S129	7623	H04L1/1819.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/27 21:56
S130	242	H04L1/1819.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/28 12:56
S131	209	H04L1/1867.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/28 13:15
S132	54	H04L1/189.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/28 13:44
S133	122	H04L1/1896.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/28 15:41
S134	2	H04L1/22.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/28 17:04

S135	4126	H04L1/22.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/28 19:16
S136	107	H04B7/022.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/29 15:06
S137	169	H04W36/30.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/29 15:35
S138	31	H04W36/00.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/29 16:20
S139	76	H04W36/02.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/29 16:45
S140	11	H04W36/16.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/29 16:49
S141	400	H04W36/18.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/29 16:55
S142	19	H04W36/24.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/29 17:14
S143	4	H04W36/26.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/29 17:15
S144	10	H04W36/28.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/29 17:15
S145	4	H04W36/34.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/29 17:16
S146	4	H04W36/38.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/29 17:16

S147	329	H04W88/08.cpc. and ((enhanc\$3 near2 uplink) or ("e-dch") or ("EU-DCH"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/29 17:16
S148	3580	(enhanc\$3 near2 uplink or ("e-dch")) and ((HARQ) or (hybrid near2 automatic near2 repeat\$3 near2 request\$3))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/29 17:27
S149	3580	(enhanc\$3 near2 uplink or ("e-dch")) and ((HARQ) or (hybrid near2 automatic near2 repeat\$3 near2 request\$3))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/29 19:44
S150	3580	(enhanc\$3 near2 uplink or ("e-dch")) and ((HARQ) or (hybrid near2 automatic near2 repeat\$3 near2 request\$3))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/31 18:36

EAST Search History (I nterference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S151	4	enhanced near2 uplink.clm. and primary near2 cell.clm.	USPAT	OR	ON	2015/11/01 17:50
S152	51	enhanced near2 uplink.clm. and ((HARQ) or (hybrid near2 automatic near2 repeat\$3 near2 request\$3)).clm.	USPAT	OR	ON	2015/11/01 17:52
S153	33	enhanced near2 uplink.clm. and schedul\$4 near2 information.clm.	USPAT	OR	ON	2015/11/01 17:57

11/ 1/ 2015 6:04:37 PM
C:\ Users\ broberts\ Documents\ EAST\ Workspaces\ 13908242c.wsp

Issue Classification 	Application/Control No. 13908242	Applicant(s)/Patent Under Reexamination ZHANG ET AL.
	Examiner BRIAN ROBERTS	Art Unit 2466

CPC						
Symbol					Type	Version
H04W		36		18	F	2013-01-01
H04B		7		022	A	2013-01-01
H04L		1		1887	I	2013-01-01
H04L		1		1893	I	2013-01-01
H04W		36		30	A	2013-01-01
H04W		88		08	A	2013-01-01
						
						
						
						
						
						
						
						

CPC Combination Sets					
Symbol		Type	Set	Ranking	Version
					
					

NONE		Total Claims Allowed: 59	
(Assistant Examiner)	(Date)		
/BRIAN ROBERTS/ Primary Examiner.Art Unit 2466	11/01/2015	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	3

Issue Classification 	Application/Control No. 13908242	Applicant(s)/Patent Under Reexamination ZHANG ET AL.
	Examiner BRIAN ROBERTS	Art Unit 2466

☐ 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	5	17	23	33	40	49		65	32	81				
	2	6	18	24	34		50		66	41	82				
	3	7	19	25	35		51	42	67	54	83				
	4	8	20	26	36		52	43	68	55	84				
	5	9	21	27	37		53	44	69	56	85				
	6	10	22	28	38		54	45	70	57	86				
	7	12	23	29	39		55	46	71	58	87				
	8	13	24	30	40		56	47	72	59	88				
	9	14	25	31	41		57	48	73						
	10	15	26	33	42		58	49	74						
	11	16	27	34	43		59	50	75						
	12	17	28	35	44		60	51	76						
1	13	19	29	36	45		61	52	77						
2	14	18	30	37	46		62	53	78						
3	15	20	31	38	47		63	11	79						
4	16	21	32	39	48		64	22	80						

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	59	
/BRIAN ROBERTS/ Primary Examiner.Art Unit 2466	11/01/2015	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	3

Search Notes 	Application/Control No. 13908242	Applicant(s)/Patent Under Reexamination ZHANG ET AL.
	Examiner BRIAN ROBERTS	Art Unit 2466

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES		
Search Notes	Date	Examiner
PALM inventor search	11/1/2015	BSR
Search focused on: H04W36/18 H04L1/1887,1893,12,18,1812,1816,1819,1867,189,1896,22 H04B7/022 H04W36/30,00,02,16,18,24,26,28,34,38 H04W88/08	11/1/2015	BSR
EAST text search: see search history printout	11/1/2015	BSR
Google; IEEE Xplore search	10/30/2015	BSR

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
Interference search	see search history printout	11/1/2015	BSR

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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)

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.

3624 7590 11/05/2015
VOLPE AND KOENIG, P.C.
UNITED PLAZA
30 SOUTH 17TH STREET
PHILADELPHIA, PA 19103

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.
13/908,242	06/03/2013	Guodong Zhang	SIG-2-0674US05	5287

TITLE OF INVENTION: SUPPORTING ENHANCED UPLINK TRANSMISSION DURING SOFT HANDOVER

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	02/05/2016

EXAMINER	ART UNIT	CLASS-SUBCLASS
ROBERTS, BRIAN S	2466	370-331000

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 Volpe and Koenig, P.C.

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)

Signal Trust for Wireless Innovation

Wilmington, Delaware

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.
- ☒ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number **220493** (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
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

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.

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.

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 /Abhik A. Huq/
 Typed or printed name Abhik A. Huq

Date November 11, 2015
 Registration No. 40,656

Electronic Patent Application Fee Transmittal				
Application Number:		13908242		
Filing Date:		03-Jun-2013		
Title of Invention:		SUPPORTING ENHANCED UPLINK TRANSMISSION DURING SOFT HANDOVER		
First Named Inventor/Applicant Name:		Guodong Zhang		
Filer:		Abhik A. Huq/Sandy Yi		
Attorney Docket Number:		SIG-2-0674US05		
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
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:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Utility Appl Issue Fee	1501	1	960	960
Publ. Fee- Early, Voluntary, or Normal	1504	1	0	0
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				960

Electronic Acknowledgement Receipt

EFS ID:	24041193
Application Number:	13908242
International Application Number:	
Confirmation Number:	5287
Title of Invention:	SUPPORTING ENHANCED UPLINK TRANSMISSION DURING SOFT HANDOVER
First Named Inventor/Applicant Name:	Guodong Zhang
Customer Number:	3624
Filer:	Abhik A. Huq/Sandy Yi
Filer Authorized By:	Abhik A. Huq
Attorney Docket Number:	SIG-2-0674US05
Receipt Date:	11-NOV-2015
Filing Date:	03-JUN-2013
Time Stamp:	15:53:13
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$960
RAM confirmation Number	11879
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1	Issue Fee Payment (PTO-85B)	SIG_2_0674US05_Issue_fee_tr ns.PDF	90903	no	1
			9ac70a63f4c9fbf84414b9a782cbdf62cc43ac7		

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2	Fee Worksheet (SB06)	fee-info.pdf	32556	no	2
			bccce905e495b4b0b2557c3862e0f007e34856064		

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FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)	ATTY. DOCKET NO. I-2-0674US05	SERIAL NO. 13/908,242
	APPLICANT Zhang et al.	
	FILING DATE June 3, 2013	GROUP 2473

U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		6,678,249	01/2004	Toskala et al. ⁴			
		6,778,830	08/2004	Oizumi et al.			
		6,892,071	05/2005	Park et al. ⁶			
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Change(s) applied to document, /S.H./ 4/2/2015		7,414,989	~~08/2008~~	Kuchibhotla et al.	August 19, 2008		
		2002/0095635	07/2002	Wager et al.			
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EXAMINER /Brian Roberts/ (02/19/2015)	DATE CONSIDERED
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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 applicant.

2150192 ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /B.R./



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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/908,242	12/15/2015	9215636	SIG-2-0674US05	5287

3624 7590 11/24/2015
VOLPE AND KOENIG, P.C.
UNITED PLAZA
30 SOUTH 17TH STREET
PHILADELPHIA, PA 19103

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 71 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):

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