PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Yasuyuki HATAKAWA	11/12/2010
Tadayuki FUKUHARA	11/12/2010
Riichirou NAGAREDA	11/12/2010

RECEIVING PARTY DATA

Name:	KDDI CORPORATION	
Street Address:	Address: 3-2, Nishi-Shinjuku 2-chome, Shinjuku-ku	
City: Tokyo		
State/Country:	JAPAN	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	12948323

CORRESPONDENCE DATA

Fax Number: (202)739-3001

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Phone: 2027393000

Email: patents@morganlewis.com

Correspondent Name: Robert J. Gaybrick

Address Line 1: 1111 Pennsylvania Avenue NW

Address Line 4: Washington, DISTRICT OF COLUMBIA 20004

ATTORNEY DOCKET NUMBER: 056819-5035

NAME OF SUBMITTER: Robert J. Goodell

Total Attachments: 2

source=056819-5035_Assignment_11172010#page1.tif source=056819-5035_Assignment_11172010#page2.tif

PATENT REEL: 025369 FRAME: 0249 CH \$40.00 12

501353695

ATTORNEY DOCKET NO.: 056819-5020 SOLE/JOINT INVENTION

(U.S. Rights Only)

ASSIGNMENT

A	SSEGINIMENT	
WHEREAS I/We, the below named in made an invention entitled:	ventor(s), [hereinafter referred to as Assign	nor(s)], have
CHANNEL STATE INFORMATION COMPI STATE INFORMATION EXPANDING APPA RECEIVER, AND TRANSMITTER		
for which I/WE executed an application for Un application for United States Letters Patent on	ited States Letters Patent concurrently here, (Application No	ewith; or filed an); and
WHEREAS, KDDI CORPORATION, Nishi-Shinjuku 2-chome, Shinjuku-ku, Tokyo, securing the entire right, title, and interest in an Letters Patent on this invention and the Letters upon this application;	nd to this invention, the application for Uni	, is desirous of
NOW THEREFORE, be it known that, from assignee is hereby acknowledged, I/WE, a and do hereby sell, assign, transfer, and set ove MY/OUR entire right, title, and interest in and continuations thereof, and all Letters Patent of reissues thereof; and I/WE hereby authorize an the United States to issue all Letters Patent for accordance with the terms of this Assignment;	or unto the assignee, its lawful successors a to this invention and this application, and the United States which may be granted the drequest the Commissioner of Patents and	rred, and set over, nd assigns, all divisions, and ereon, and all l Trademarks of
AND, I/WE HEREBY further covenant communicate with assignee, its successors and invention and testify in any legal proceeding, so and deliver all papers that may be necessary or assignee, its successors and assigns, execute all all rightful oaths and generally do everything pound enforce proper patent protection for this in expense incident to the execution of such papers.	ign all lawful papers when called upon to desirable to perfect the title to this inventional divisional, continuation, and reissue applicossible to aid assignee, its successors and evention in the United States, it being under	cting this do so, execute on in said cations, make assigns, to obtain rstood that any
AND, I/WE HEREBY authorize and reand Power of Attorney in this application, to in filed Nov. 17, 2010) the filing date and application		12/948,323
IN TESTIMONY WHEREOF, I/WE h		
Full Name of Sole or First Assignor Yasuyuki HATAKAWA	Assignor's Signature	Date November 12,2010
Address c/o KDDI R&D Laboratories Inc., 1-15, Ohara 2	2-chome, Fujimino-shi, Saitama-ken,Japan	Citizenship Japan
Full Name of Second Assignor	Assignor's Signature	Date
Tadayuki FUKUHARA Address	Jadayaki Tukuhara	November 12,2010
c/o KDDI R&D Laboratories Inc., 1-15, Ohara 2	2-chome, Fujimino-shi, Saltama-ken, Japai	Citizenship Japan
Names of additional inventors attached Yes	□No	A.i.i.F.
Manual Control of the		

DB1/63708580.1

PATENT REEL: 025369 FRAME: 0250

Full Name of Third Assignor	Assignor's Signature	Date
Riichirou NAGAREDA	Riichirou Nagareda	November 12,2010
Address	Citizenship	
c/o KDDI R&D Laboratories Inc., 1-15, 0	Dhara 2-chome, Fujimino-shi, Saitama-ken,	
	Japan	
Full Name of Fourth Assignor	Assignor's Signature	Date
Address		Citizenship
Full Name of Fifth Assignor	Assignor's Signature	Date
Address	Citizenship	
Full Name of Sixth Assignor	Assignor's Signature	Date
Address		Citizenship
Full Name of Seventh Assignor	Assignor's Signature	Date
Address	Citizenship	
Full Name of Eighth Assignor	Assignor's Signature	Date
Address		Citizenship
Full Name of Ninth Assignor	Assignor's Signature	Date
Address		Citizenship
Full Name of Tenth Assignor	Assignor's Signature	Date
Address		Citizenship
Full Name of Eleventh Assignor	Assignor's Signature	Date
Address		Citizenship
Names of additional inventors attached	∏Yes ⊠No	

DB1/63708580.1

PATENT REEL: 025369 FRAME: 0251