

Based on FORM PTO-1595 (Rev. 08/05)
as modified by Blakely, Sokoloff, Taylor & Zafman (w/r) 11/30/2005

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<p>1. Name of conveying party(ies): Giuseppe Caire; Carl-Erik W. Sundberg; Haralabos Papadopoulos; Sean Ramprashad</p> <p>Additional name(s) of conveying party(ies) attached? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes</p>		<p>2. Name and address of receiving party(ies): Name: DoCoMo Communications Laboratories USA, Inc.</p> <p>Internal Address: _____</p> <p>Street Address: 3240 Hillview Avenue</p> <p>City: Palo Alto State: CA Zip: 94304-1201</p> <p>Country: United States</p> <p>Additional name(s) & address(es) attached? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes</p>	
<p>3. Nature of Conveyance: <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name <input type="checkbox"/> Other</p> <p>Execution Date: 08/17/2009; 08/19/2009; 09/09/2009; 8/19/2009</p>		<p>4. Application number(s) or patent number(s): <input type="checkbox"/> This document is being filed together with a new application.</p> <p>A. Patent Application No.(s) 12/538,736</p> <p>B. Patent No.(s)</p> <p>Additional numbers attached? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes</p>	
<p>5. Name and address of party to whom correspondence concerning document should be mailed: Name: Blakely, Sokoloff, Taylor & Zafman LLP</p> <p>Internal Address: _____</p> <p>Street Address: 1279 Oakmead Parkway</p> <p>City: Sunnyvale State: CA ZIP: 94085 Phone Number: (408) 720-8300 Fax Number: (408) 720-8383 E-mail Address: michael_mallie@bstz.com</p>		<p>6. Total number of applications and patents involved: 1</p> <p>7. Total Fee (37 CFR 3.41).....\$ 40.00 <input type="checkbox"/> Enclosed <input checked="" type="checkbox"/> Authorized to be charged to deposit account</p> <p>8. Deposit Account Number: 02-2666</p>	
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<p>9. Statement and signature. <i>To the best of my knowledge and belief, the foregoing is true and correct and any attached copy is a true copy of the original document</i></p> <p>Michael J. Mallie, Reg. No. 36,591 _____ September 16, 2009</p> <p>Name of Person Signing Signature Date</p> <p>Total number of pages including cover sheet, attachments, and document: 3</p>			

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:
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Docket No. 6655P156

700418082

PATENT
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Attorney's Docket

ASSIGNMENT**PATENT**No.: 006655.P156 (For Execution After Filing Patent Application)

In consideration of good and valuable consideration, the receipt of which is hereby acknowledged, we
the undersigned, Giuseppe Caire, Carl-Erik W. Sundberg, Haralabos Papadopoulos, and Sean Ramprashad

hereby sell, assign, and transfer to DOCOMO Communications Laboratories USA, Inc.
a corporation of Delaware, having a principal place of business at
3240 Hillview Avenue, Palo Alto, California 94304 USA, ("Assignee"),
and its successors, assigns, and legal representatives, the entire right, title, and interest for the
United States and all foreign countries, in and to any and all improvements that are disclosed in
the application for the United States patent that was filed August 10, 2009 and assigned
Application No. 12/538,736 and is entitled

CHANNEL CLASSIFICATION AND RATE ADAPTATION FOR SU-MIMO SYSTEMS

and in and to said application and all divisional applications, continuation applications,
continued prosecution applications, continuation-in-part applications, substitute applications,
renewal applications, reissue applications, reexaminations, extensions, and all other patent
applications that have been or shall be filed in the United States and all foreign countries on
any of said improvements; and in and to all original patents, reissued patents, reexamination
certificates, and extensions that have been or shall be issued in the United States and all
foreign countries on said improvements; and in and to all rights of priority resulting from the
filing of said United States application;

agree that said Assignee may apply for and receive a patent or patents for said
improvements in its own name; and that, when requested, without charge to, but at the
expense of, said Assignee, its successors, assigns, and legal representatives, to carry out in
good faith the intent and purpose of this Assignment, the undersigned will execute all divisional
applications, continuation applications, continued prosecution applications, continuation-in-part
applications, substitute applications, renewal applications, reissue applications, reexaminations,
extensions, and all other patent applications on any and all said improvements; execute all
rightful oaths, assignments, powers of attorney, and other papers; communicate to said
Assignee, its successors, assigns, and representatives all facts known to the undersigned
relating to said improvements and the history thereof; and generally assist said Assignee, its
successors, assigns, or representatives in securing and maintaining proper patent protection
for said improvements and for vesting title to said improvements, and all applications for
patents and all patents on said improvements, in said Assignee, its successors, assigns, and
legal representatives; and

covenant with said Assignee, its successors, assigns, and legal representatives that no
assignment, grant, mortgage, license, or other agreement affecting the rights and property
herein conveyed has been made to others by the undersigned, and that full right to convey the
same as herein expressed is possessed by the undersigned.

Each Inventor: Please Sign and Date Below:

8/17/2009, Giuseppe Caire
 Date Name: Giuseppe Caire

8/19/2009, Carl-Erik W. Sundberg
 Date Name: Carl-Erik W. Sundberg

9/9/2009, Haralabos Papadopoulos
 Date Name: Haralabos Papadopoulos

8/19/2009, Sean Ramprashad
 Date Name: Sean Ramprashad

Each Inventor: Please also list the date that you signed the accompanying DECLARATION AND POWER OF ATTORNEY:

8/17/2009
 Date

8/19/2009
 Date

9/9/2009
 Date

8/19/2009
 Date

Assignment Document Return Address:
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