

08-08-2003

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22212 U.S. PTO
10/629240

To the Assistant Commissioner for Patents: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Andreas Molisch
Jinyun Zhang

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of Conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name

Execution Dates: 07/28/03, 07/29/03

2. Name and address of receiving party(ies):

Name: Mitsubishi Electric Information
Technology Center America, Inc.

Street Address: 201 Broadway

City: Cambridge State: MA Zip: 02139

Additional name(s) and address(es) attached? ☐ Yes ☒ No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: **July 28, 2003**

A. Patent Application No.(s)

B. Patent No.(s)

10/629240

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Mitsubishi Electric Information
Technology Center America, Inc.

Street Address: 201 Broadway

City: Cambridge State: MA Zip: 02139

6. Total number of applications and patents involved: [1]

7. Total fee (37CFR 3.41): \$40.00

☐ Enclosed

☒ Authorized to be charged to
deposit account

8. Deposit account number: 50-0749

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Andrew J. Curtin

Name of Person Signing

Signature

Date

7-29-2003

Total number of pages comprising cover sheet: [1]

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PATENT
REEL: 014353 FRAME: 0230

ASSIGNMENT

WHEREAS, I, have made certain inventions or discoveries (or both) set forth in an Application for Letters Patent of the United States of America entitled RF SIGNAL PROCESSING IN MULTI-ANTENNA SYSTEMS the specification of which:

 X was executed by me on the date indicated below;
 was filed on as Application Serial No. ;
 was patented under U.S. Patent No. on ;

WHEREAS, Mitsubishi Electric Research Laboratories, Inc., a corporation of the State of Delaware, whose address is 201 Broadway, Cambridge, Massachusetts 02139, and who, together with its successors and assigns is hereinafter called "Assignee", is desirous of acquiring the entire right, title, and interest together with the benefits and privileges hereinafter recited;

NOW, THEREFORE, for valuable consideration furnished by Assignee to me, receipt and sufficiency of which I hereby acknowledge, I hereby, without reservation;

1. Assign, transfer and convey to Assignee the entire right, title and interest together with the benefits and privileges in and to said inventions and discoveries, said Application for Letters Patent or similar forms of protection of the United States of America, and all other applications for Letters Patent on said inventions and discoveries in whatsoever countries, including all divisional, renewal, substitute, continuation and convention applications based in whole or in part upon said inventions or discoveries, or upon said application, and any and all Letters Patent, reissues and extensions of Letters Patent or similar forms of protection granted for said inventions and discoveries or upon said applications, and every priority right that is or may be predicated upon or arise from said inventions, said discoveries, said applications and said Letters Patent;

2. Authorize Assignee to file patent applications in any or all countries or groups of countries on any or all of said inventions and discoveries in my name or in the name of Assignee or otherwise as Assignee may deem advisable, under

the International Convention or any other relevant convention or treaty or otherwise;

3. Authorize and request the Assistant Commissioner for Patents of the United States of America and the empowered officials of all other governments to issue or transfer all said Letters Patent to Assignee, as Assignee of the entire right, title and interest therein or otherwise as Assignee may direct;

4. Warrant that I have not knowingly conveyed to others any rights in said inventions, discoveries, applications or patents or any license to use the same or to make, use or sell anything embodying or utilizing any of said inventions or discoveries; and that I have good right to assign the same to Assignee without encumbrance;

5. Bind my heirs, legal representatives and assigns, as well as myself, to do, upon Assignee's request and at Assignee's expense, but without additional consideration to us or them, all acts reasonable serving to assure that said inventions and discoveries, said patent applications and said Letters Patent shall be held and enjoyed by Assignee as fully and entirely as the same could have been held and enjoyed by us, my heirs, legal representatives and assigns if this assignment had not been made; and particularly to execute and deliver to Assignee all lawful application documents including petitions, specifications, and oaths, and all assignments, disclaimers, and lawful affidavits in form and substance as may be requested by Assignee; to communicate to Assignee all facts known to us relating to said inventions and discoveries or the history thereof; and to furnish Assignee with any and all documents, photographs, models, samples and other physical exhibits in my control or in the control of my heirs, legal representatives or assigns which may be useful for establishing any facts of my conceptions, disclosures, and reduction to practice of said inventions or discoveries.

IN WITNESS WHEREOF:

Inventor Signature : Andreas Molisch
Andreas Molisch

Today's Date: 07/28/03

Date Inventor Signed Declaration : 07/28/03

Witnessed: Sinan GEZICI
Printed Name

Sin
Signature

7/28/03
Date

Witnessed: Dilu C. Zhang
Printed Name

[Signature]
Signature

7/28/03
Date

IN WITNESS WHEREOF:

Inventor Signature : _____
Sun Yuan Kung

Today's Date: _____

Date Inventor Signed Declaration : _____

Witnessed: _____
Printed Name

Signature Date

Witnessed: _____
Printed Name

Signature Date

IN WITNESS WHEREOF:

Inventor Signature : _____
Xinying Zhang

Today's Date: _____

Date Inventor Signed Declaration : _____

Witnessed: _____
Printed Name

Signature

Date

Witnessed: _____
Printed Name

Signature

Date

IN WITNESS WHEREOF:

Inventor Signature : Jinyun Zhang
Jinyun ZhangToday's Date : July 29, 2003Date Inventor Signed Declaration : July 29, 2003Witnessed: Michael Jones
Printed NameMichael Jones
SignatureJuly 29, 2003
DateWitnessed: Dilin C. Zhang
Printed Name[Signature]
Signature7/29/03
Date