

Attorney Docket No. 020859-010910US

Form PTO-1595 (Rev. 11/08)
OMB No. 0651-0027 (exp. 12/31/2008)

U.S. DEPARTMENT OF COMMERCE
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To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies)

Anxiao Jiang
Moshe Schwartz
Jehoshua Bruck

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

2. Name and address of receiving party(ies)

Name: California Institute of Technology

Internal Address: _____

Street Address: 1200 East California Blvd.

City: Pasadena

State: CA

Country: US Zip: 91125

Additional name(s) & address(es) attached? Yes No

3. Nature of conveyance/Execution Date(s):

Execution Date(s) December 9, 12, 15, 2008

- Assignment Merger
- Security Agreement Change of Name
- Joint Research Agreement
- Government Interest Assignment
- Executive Order 9424, Confirmatory License
- Other _____

4. Application or patent number(s):

This document is being filed together with a new application.

A. Patent Application No.(s)

US Patent Application Serial No. 12/275,190 filed
November 20, 2008

B. Patent No.(s)

Additional numbers attached? Yes No

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

Name: David A. Hall

Internal Address: _____

TOWNSEND AND TOWNSEND AND CREW LLP

Street Address: Two Embarcadero Center,
Eighth Floor

City: San Francisco

State: California Zip: 94111-3834

Phone Number: (415) 576-0200

Fax Number: (415) 576-0300

Email Address: docket@townsend.com

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00

- Authorized to be charged to deposit account
- Enclosed
- None required (government interest not affecting title)

8. Payment Information

Account Number 20-1430

Authorized User Name Townsend and

Townsend and Crew LLP

9. Signature:

David A. Hall
Signature

David A. Hall

Name of Person Signing

Atty. Reg. No. 32,233

Jan. 14, 2009
Date

Total number of pages including cover sheet, attachments, and documents:

5

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1460, Alexandria, VA 22313-1460

PATENT

REEL: 022138 FRAME: 0069

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Attorney Docket No.: 020859-010910US
Client Reference No.: CIT-5063

ASSIGNMENT OF PATENT APPLICATION

JOINT

WHEREAS, Anxiao Jiang; Moshe Schwartz; and Jehoshua Bruck all c/o California Institute of Technology of 1200 East California Blvd., Pasadena, CA 91125, hereinafter referred to as "Assignors," are the inventors of the invention described and set forth in the below-identified application for United States Letters Patent:

Title of Invention: **ERROR CORRECTING CODES FOR RANK
MODULATION**

Date(s) of execution of Declaration:

Filing Date: **November 20, 2008**

Application No.: **12/275,190; and**

WHEREAS, California Institute of Technology, a corporation of the state of California, located at 1200 East California Blvd., Pasadena, CA 91125, hereinafter referred to as "ASSIGNEE," is desirous of acquiring an interest in the invention and application and in any U.S. Letters Patent and Registrations which may be granted on the same;

For good and valuable consideration, receipt of which is hereby acknowledged by Assignors, Assignors have assigned, and by these presents do assign to Assignee all right, title and interest in and to the invention and application and to all foreign counterparts (including patent, utility model and industrial designs), and in and to any Letters Patent and Registrations which may hereafter be granted on the same in the United States and all countries throughout the world, and to claim the priority from the application as provided by the Paris Convention. The right, title and interest is to be held and enjoyed by Assignee and Assignee's successors and assigns as fully and exclusively as it would have been held and enjoyed by Assignors had this Assignment not been made, for the full term of any Letters Patent and Registrations which may be granted thereon, or of any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

Assignors further agree that they will, without charge to Assignee, but at Assignee's expense, (a) cooperate with Assignee in the prosecution of U.S. Patent applications and foreign counterparts on the invention and any improvements, (b) execute, verify, acknowledge and deliver all such further papers, including patent applications and instruments of transfer, and (c) perform such other acts as Assignee lawfully may request to obtain or maintain Letters Patent and Registrations for the invention and improvements in any and all countries, and to vest title thereto in Assignee, or Assignee's successors and assigns.

PATENT
REEL: 022138 FRAME: 0070

Assignment
Attorney Docket No.: 020859-010910US
Page 2

IN TESTIMONY WHEREOF, Assignors have signed their names on the dates indicated.

Dated: 12/15/2008



Anxiao Jiang

SIGNATURE WITNESSED BY:

Dated: _____

Signature of Witness

Printed Name

Dated: _____

Moshe Schwartz

Moshe Schwartz

SIGNATURE WITNESSED BY:

Dated: _____

Signature of Witness

Printed Name

Dated: _____

Jehoshua Bruck

Jehoshua Bruck

SIGNATURE WITNESSED BY:

Dated: _____

Signature of Witness

Printed Name

61707676 v1

Assignment
Attorney Docket No.: 020859-010910US
Page 2

IN TESTIMONY WHEREOF, Assignors have signed their names on the dates indicated.

Dated: _____

Anxiao Jiang

SIGNATURE WITNESSED BY:

Dated: _____

Signature of Witness

Printed Name

Dated: 12/9/2008

Moshe Schwartz
Moshe Schwartz

SIGNATURE WITNESSED BY:

Dated: 12/9/2008

[Signature]
Signature of Witness

SMAN SAPIRO
Printed Name

Dated: _____

Jehoshua Bruck

SIGNATURE WITNESSED BY:

Dated: _____

Signature of Witness

Printed Name

61707676 v1

Assignment
Attorney Docket No.: 020859-010910US
Page 2

IN TESTIMONY WHEREOF, Assignors have signed their names on the dates indicated.

Dated: _____

SIGNATURE WITNESSED BY:

Dated: _____

Anxiao Jiang

Signature of Witness

Printed Name

Dated: _____

SIGNATURE WITNESSED BY:

Dated: _____

Moshe Schwartz

Signature of Witness

Printed Name

Dated: 12/12/08

SIGNATURE WITNESSED BY:

Dated: 12/12/08



Jehoshua Bruck



Signature of Witness

PATAMA TAWEEESUP

Printed Name

61707676 v1