

## PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT												
NATURE OF CONVEYANCE:	ASSIGNMENT												
CONVEYING PARTY DATA													
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>SHAOLIN XIE</td> <td>11/06/2013</td> </tr> <tr> <td>DONGLIN WANG</td> <td>11/06/2013</td> </tr> <tr> <td>JIE HAO</td> <td>11/06/2013</td> </tr> <tr> <td>TAO WANG</td> <td>11/06/2013</td> </tr> <tr> <td>LEIZU YIN</td> <td>11/06/2013</td> </tr> </tbody> </table>		Name	Execution Date	SHAOLIN XIE	11/06/2013	DONGLIN WANG	11/06/2013	JIE HAO	11/06/2013	TAO WANG	11/06/2013	LEIZU YIN	11/06/2013
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Internal Address:	HAI DIAN DISTRICT												
City:	BEIJING												
State/Country:	CHINA												
Postal Code:	100190												
PROPERTY NUMBERS Total: 1													
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>14118452</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	14118452								
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Application Number:	14118452												
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Signature:	/T. Chyau Liang, Ph.D./
Date:	11/18/2013
Total Attachments: 2 source=17266_072001_Assn#page1.tif source=17266_072001_Assn#page2.tif	

## ASSIGNMENT – WORLDWIDE

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned individual(s) (referred to herein as the “INVENTOR(S)”) hereby assign, transfer, and set over to:

Institute of Automation, Chinese Academy of Sciences

having the following address:

No. 95 Zhongguancun East Road,  
Haidian District  
Beijing 100190  
PEOPLE'S REPUBLIC OF CHINA

(referred to herein as “COMPANY”), its successors, and assigns, the entire right, title, and interest, worldwide, in and to the invention known by the following title:

### PARALLEL BIT REVERSAL DEVICES AND METHODS

for which the undersigned has/have executed an application for patent in the United States of America on or about this same day, together with said patent application, all divisions, continuations, continuations-in-part, reissues, and extensions thereof, and all Letters Patent (domestic and foreign) which may be granted therefor. Such interest represents the entire ownership of said applications and Letters Patent when granted and is to be owned by COMPANY, its successors, and assigns, or their legal representatives, for the full and entire term for which such Letters Patent may be granted or extended, as fully and entirely as the same would have been enjoyed by the INVENTOR(S) if this assignment had not been made.

In addition, the undersigned INVENTOR(S) each hereby agrees:

1. To sign and execute any further documents which may be necessary or desirable, lawful, and proper in connection with the prosecution of all applications for patent(s) on the INVENTION in the United States, including without limitation said application and all divisions, continuations, continuations-in-part, amendments thereof, and all interference proceedings associated therewith, or otherwise necessary or desirable to secure the title thereto to COMPANY;
2. To execute all papers and documents and to perform all lawful acts which may be necessary in connection with claims to priority or otherwise under the International Convention for the Protection of Industrial Property or similar treaties or agreements;
3. To perform all lawful affirmative acts which may be necessary to obtain the grant of a valid and enforceable patent to COMPANY.

The undersigned INVENTOR(S) each hereby authorizes and requests the Commissioner of Patents and Trademarks in the United States to issue any and all Letters Patent resulting from said application, including without limitation any division, continuation, continuation-in-part, or reissue thereof to COMPANY.

The undersigned INVENTOR(S) each hereby grants to the firm of OSHA LIANG LLP the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for the recordation of this document.

**OSHALIANG**

Intellectual Property Law

**PATENT**  
**REEL: 031623 FRAME: 0763**

11/06/2013  
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1<sup>st</sup> Inventor Signature: Shaolin Xie  
Print or Type Name: Shaolin Xie

2<sup>nd</sup> Inventor Signature: Donglin Wang  
Print or Type Name: Donglin Wang

3<sup>rd</sup> Inventor Signature: Jic Hao  
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4<sup>th</sup> Inventor Signature: Tao Wang  
Print or Type Name: Tao Wang

5<sup>th</sup> Inventor Signature: Leizu Yin  
Print or Type Name: Leizu Yin

When this Assignment is not filed concurrently with the patent application,  
the following identifying information may be added after execution:

U.S. Application Serial No.: 14/118,452  
Filing Date: November 18, 2013

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