

## PATENT ASSIGNMENT

Electronic Version v1.1  
 Stylesheet Version v1.1

| 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>Chuangdong Li</td> <td>03/03/2012</td> </tr> <tr> <td>Zhuhong Zhang</td> <td>03/13/2012</td> </tr> <tr> <td>Fei Zhu</td> <td>03/14/2012</td> </tr> <tr> <td>Yu Sheng Bai</td> <td>03/14/2012</td> </tr> </tbody> </table>                                                        |                              | Name          | Execution Date               | Chuangdong Li       | 03/03/2012        | Zhuhong Zhang     | 03/13/2012 | Fei Zhu | 03/14/2012 | Yu Sheng Bai   | 03/14/2012 |              |       |
| Name                                                                                                                                                                                                                                                                                                                                                                                   | Execution Date               |               |                              |                     |                   |                   |            |         |            |                |            |              |       |
| Chuangdong Li                                                                                                                                                                                                                                                                                                                                                                          | 03/03/2012                   |               |                              |                     |                   |                   |            |         |            |                |            |              |       |
| Zhuhong Zhang                                                                                                                                                                                                                                                                                                                                                                          | 03/13/2012                   |               |                              |                     |                   |                   |            |         |            |                |            |              |       |
| Fei Zhu                                                                                                                                                                                                                                                                                                                                                                                | 03/14/2012                   |               |                              |                     |                   |                   |            |         |            |                |            |              |       |
| Yu Sheng Bai                                                                                                                                                                                                                                                                                                                                                                           | 03/14/2012                   |               |                              |                     |                   |                   |            |         |            |                |            |              |       |
| RECEIVING PARTY DATA                                                                                                                                                                                                                                                                                                                                                                   |                              |               |                              |                     |                   |                   |            |         |            |                |            |              |       |
| <table border="1"> <tr> <td>Name:</td> <td>Futurewei Technologies, Inc.</td> </tr> <tr> <td>Street Address:</td> <td>5340 Legacy Drive</td> </tr> <tr> <td>Internal Address:</td> <td>Suite 175</td> </tr> <tr> <td>City:</td> <td>Plano</td> </tr> <tr> <td>State/Country:</td> <td>TEXAS</td> </tr> <tr> <td>Postal Code:</td> <td>75024</td> </tr> </table>                         |                              | Name:         | Futurewei Technologies, Inc. | Street Address:     | 5340 Legacy Drive | Internal Address: | Suite 175  | City:   | Plano      | State/Country: | TEXAS      | Postal Code: | 75024 |
| Name:                                                                                                                                                                                                                                                                                                                                                                                  | Futurewei Technologies, Inc. |               |                              |                     |                   |                   |            |         |            |                |            |              |       |
| Street Address:                                                                                                                                                                                                                                                                                                                                                                        | 5340 Legacy Drive            |               |                              |                     |                   |                   |            |         |            |                |            |              |       |
| Internal Address:                                                                                                                                                                                                                                                                                                                                                                      | Suite 175                    |               |                              |                     |                   |                   |            |         |            |                |            |              |       |
| City:                                                                                                                                                                                                                                                                                                                                                                                  | Plano                        |               |                              |                     |                   |                   |            |         |            |                |            |              |       |
| State/Country:                                                                                                                                                                                                                                                                                                                                                                         | TEXAS                        |               |                              |                     |                   |                   |            |         |            |                |            |              |       |
| Postal Code:                                                                                                                                                                                                                                                                                                                                                                           | 75024                        |               |                              |                     |                   |                   |            |         |            |                |            |              |       |
| 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>13423959</td> </tr> </tbody> </table>                                                                                                                                                                                                              |                              | Property Type | Number                       | Application Number: | 13423959          |                   |            |         |            |                |            |              |       |
| Property Type                                                                                                                                                                                                                                                                                                                                                                          | Number                       |               |                              |                     |                   |                   |            |         |            |                |            |              |       |
| Application Number:                                                                                                                                                                                                                                                                                                                                                                    | 13423959                     |               |                              |                     |                   |                   |            |         |            |                |            |              |       |
| CORRESPONDENCE DATA                                                                                                                                                                                                                                                                                                                                                                    |                              |               |                              |                     |                   |                   |            |         |            |                |            |              |       |
| <p>Fax Number: (972)731-2289</p> <p>Phone: 972-731-2288</p> <p>Email: dallaspatents@dfw.conleyrose.com</p> <p><i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i></p> <p>Correspondent Name: Grant Rodolph</p> <p>Address Line 1: 5601 Granite Parkway, Suite 750</p> <p>Address Line 4: Plano, TEXAS 75024-6616</p> |                              |               |                              |                     |                   |                   |            |         |            |                |            |              |       |
| ATTORNEY DOCKET NUMBER:                                                                                                                                                                                                                                                                                                                                                                | 4194-47400 (83155373US01)    |               |                              |                     |                   |                   |            |         |            |                |            |              |       |
| NAME OF SUBMITTER:                                                                                                                                                                                                                                                                                                                                                                     | Grant Rodolph                |               |                              |                     |                   |                   |            |         |            |                |            |              |       |

CH \$40.00 13423959

**Total Attachments: 4**

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**ASSIGNMENT**

WHEREAS, the Undersigned has invented certain new and useful improvements as below entitled, for which application for United States Letters Patent is made, said application having been executed on the date set forth below; and

WHEREAS, Futurewei Technologies, Inc. (hereinafter referred to as "Assignee"), a corporation organized and existing under the laws of the State of Texas, United States of America, Assignee, having its principal office and place of business at 5340 Legacy Drive, Suite 175, Plano, Texas 75024, desires to acquire the Undersigned's entire right, title and interest in and to the invention, and in and to said application and any Letters Patent that may issue thereon;

NOW, THEREFORE, for and in consideration of One Dollar (\$1.00), and other good and valuable consideration, the receipt of which is hereby acknowledged, the Undersigned:

Hereby sells, assigns and transfers to Assignee, 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 which are disclosed in the application for United States Letters Patent, Application No. 13/423,959 filed March 19, 2012 or, if not identified here by filing date and application number, executed by me on even date, entitled:

**Method and Apparatus of Using Joint Timing Recovery For A Coherent Optical System**

and in and to said application and all applications that claim priority to said Application No. 13/423,959 and all provisional, non-provisional, divisional, continuing, continuations-in-part, substitute, renewal, reissue and all other applications for Letters Patent which 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 and reissued patents which have been or shall be issued in the United States and all foreign countries on said improvements; and in and to all utility models, industrial models, certificates of invention, and designs on said improvements;

Agrees that said Assignee may apply for and receive Letters Patent 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, continuing, substitute, renewal, reissue and all other patent applications, and all other like rights of exclusion in any country on any and all said improvements; execute all rightful oaths, declarations, 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 do everything possible which said Assignee, its successors, assigns and representatives shall consider desirable for aiding in securing and maintaining proper patent protection for said improvements and 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

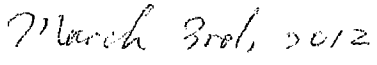
Agrees that the Undersigned will upon request of Assignee, render prompt assistance and cooperation in the prosecution of legal proceedings involving said improvements, said applications and patents granted thereon, including reexaminations, reissues, interferences, priority contests, public use proceedings and court proceedings, and testify in such proceedings if requested, provided, however, that the expense which may be incurred by the Undersigned in lending such assistance and cooperation be paid by Assignee; and

Covenants 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, except as set forth below, and that full right to convey the same as herein expressed is possessed by the Undersigned.

This assignment shall be binding on the heirs and legal representatives of the Undersigned.

Full name of first inventor: Chuandong Li  
Residence Address: 137 Tapestry Drive  
Ottawa, K2J 0H3  
Ontario, Canada  
Citizenship: CA

  
\_\_\_\_\_  
Chuandong Li

  
\_\_\_\_\_  
(Date)

Full name of second inventor: Zhuhong Zhang  
Residence Address: 176 Insmill Circle  
Ottawa, K2T 1G3  
Ontario, Canada

Citizenship: CA

  
\_\_\_\_\_  
Zhuhong Zhang

3/13/2012  
\_\_\_\_\_  
(Date)

Full name of third inventor: Fei Zhu  
Residence Address: 4097 Cortona Court  
San Jose, California 95135

Citizenship: US

  
\_\_\_\_\_  
Fei Zhu

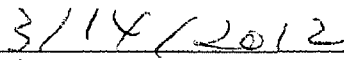
3/14/2012  
\_\_\_\_\_  
(Date)

Full name of fourth inventor: Yu Sheng Bai

Residence Address: 26288 West Fremont Road  
Los Altos Hills, California 94022

Citizenship: US

  
Yu Sheng Bai

  
(Date)