501770621 12/28/2011

PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|------------------|----------------|
| Takashi Goh | 11/08/2011 |
| Yoshiyuki Doi | 12/19/2011 |
| Shinji Mino | 11/08/2011 |
| Ken Tsuzuki | 11/08/2011 |
| Hiroshi Yamazaki | 11/08/2011 |
| Takashi Yamada | 11/08/2011 |

RECEIVING PARTY DATA

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| City: | Tokyo |
| State/Country: | JAPAN |
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PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 13381298 |

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501770621

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ATTORNEY DOCKET NUMBER: 14321.151

PATENT

REEL: 027454 FRAME: 0251

F \$40.00 13381298

| | NAME OF SUBMITTER: | Dana L. Tangren | |
|---|--|-----------------|--|
| ш | Total Attachments: 3 source=14321_151_assignment#page1.tif source=14321_151_assignment#page2.tif | | |
| | source=14321_151_assignment#page3.tif | | |

PATENT REEL: 027454 FRAME: 0252

WHEN RECORDED RETURN TO:

PATENT APPLICATION
Docket No:

Workman Nydegger 1000 Eagle Gate Tower 60 East South Temple Salt Lake City, Utah 84111

Form P4

ASSIGNMENT

We the under signed, hereinafter collectively referred to as "Assignor", are the inventors of an invention entitled

OPTICAL MODULATOR

Preferred embodiments of said invention are disclosed in a United States patent application which:

- [] is executed concurrently herewith for filing in the United States Patent and Trademark Office.
- [] was previously filed in the United States Patent and Trademark Office on Application Serial No.
- [X] is a United States National Application of PCT International Application No. <a href="https://pcn.ncbi.nlm.

The Assignees, NIPPON TELEGRAPH AND TELEPHONE CORPORATION, having a principal place of business at 3-1, Otemachi 2-chome, Chiyoda-ku, Tokyo 1008116 Japan desire to secure the entire right, title and interest in said invention.

In consideration of One Dollar (\$1.00) and other good and valuable consideration paid to Assignor by the Assignee, the receipt and sufficiency of which is hereby acknowledge, ASSIGNOR HEREBY ASSIGNS TO THE ASSIGNEE:

The entire right, title, and interest in the above identified United States patent application and in all divisions, continuations and continuations in part of said application, or reissues or extensions of letters patent or patents granted thereon, and in all patents issuing thereon in the United States and foreign countries.

The right to claim the benefits of any prior related United States or foreign patent applications.

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Assignor hereby authorizes and requests the United States Commissioner of Patents and Trademarks, to issue any and all patents on said application to the Assignee as the owner of the entire interest, for the sole use and behoof of the said Assignee, its successors, assigns and legal representatives.

Assignor hereby agrees, without further consideration, to sign all lawful papers and to perform all other lawful acts which the Assignee may request Assignor to make this Assignment fully effective, including, by way of example but not of limitation, the following:

Prompt execution of all original, divisional, substitute, reissue, and other United States applications and all lawful documents requested by the Assignee to further the prosecution of any of such patent applications.

Cooperation to the best of Assignor's ability in the execution of all lawful documents, the production of evidence, nullification, reissue, extension, or infringement proceedings involving said application.

This assignment and agreement shall be binding upon Assignor's heirs and legal representatives.

Full name of sole or first inventor

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PATENT REEL: 027454 FRAME: 0255