| FORM PTO- | U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE |
|---|--|
| To the Honorable Commissioner of | est record the attached original documents or copy thereof |
| 1. Name of conveying party(ies): George H. Thompson Additional name(s) of conveying party(ies) attached? Yes X No 3. Nature of conveyance: X AssignmentMerger Security AgreementChange of Name Other Execution Date: December 21, 2001 4. Application number(s) or patent number(s). If this document is being filed together with a new application, the execution | Additional name(s) & address(es) attached? _ Yes _X_ No |
| A. Patent Application No.(s) 09/993,822 | B. Patent No.(s) |
| Additional numbers atta | ched: Yes X_No |
| 5. Name and address of party to whom correspondence concerning document should be mailed: Name: William M. Lee, Jr. Internal Address: Lee, Mann, Smith, McWilliams, Sweeney & Ohlson Street Address: P.O. Box 2786 City: Chicago State: Illinois Zip: 60690-2786 | 6. Total number of applications and patents involved: one 7. Total fee (37 CFR 3.41) \$ 40.00 X Enclosed Authorized to be charged to deposit account 8. Deposit account number: 12-0913 (Attach duplicate copy of this form if paying by deposit account.) |
| po not use i | THIS SPACE |
| 9. Statement and signature. To the best of my knowledge and belief, the foregoing information is the and continue my knowledge and belief, the foregoing information is the and continue my knowledge and belief, the foregoing information is the and continue my knowledge and belief, the foregoing information is the and continue my knowledge and belief, the foregoing information is the and continue my knowledge and belief, the foregoing information is the and continue my knowledge and belief, the foregoing information is the and continue my knowledge and belief, the foregoing information is the and continue my knowledge and belief, the foregoing information is the and continue my knowledge and belief, the foregoing information is the and continue my knowledge and belief, the foregoing information is the and continue my knowledge and belief, the foregoing information is the and continue my knowledge and belief. Do not detach | Date tal number of pages including cover sheet, attachments and document 3 |
| Commissioner of Pate Box Assi Washington, Public burden reporting for this sample cover sheet is estimated to average ab document and gathering the data needed, and completing and reviewing the sa Patent and Trademark Office, Office of Information Systems, PK2-1000C, Was Reduction Project (0651-0011), Washington, D. C. 20503. | ignments , D.C. 20231 bout 30 minutes per document to be recorded, including time for reviewing to the U.S. which hardes estimate to the U.S. which hardes estimate to the U.S. |
| 12/2002 LMJELLER 00000231 09993822 | |
| FC::561 40.00 CP | |

PATENT REEL: 012652 FRAME: 0312

CASE: 13659IDUS02U

ASSIGNMENT NORTEL NETWORKS LIMITED

For value received, I (we) the undersigned, whose full post office addresses is (are) adjacent my (our) name(s), hereby sell, assign and transfer to

NORTEL NETWORKS LIMITED

the address of whose registered office is:

2351 Boulevard Alfred-Nobel,

St Laurent,

Ouebec H4S 2A9

Canada

(hereinafter called "Nortel"), its successors, assigns and legal representatives, the entire right, title and interest for all countries, including any and all priority rights, in and to certain inventions relating to

ARRAYED WAVEGUIDE GRATING

identified in Nortel's records as 13659IDUS02U and set forth in an application for letters patent of the United States of America Serial No. filed November 6, 2001.

and all rights and privileges under any and all letters patent in all countries that may be granted for said inventions, to the intent that any such patent or other intellectual property protection shall be issued to Nortel alone or to its successors, assigns or legal representatives.

I (We) undertake without charge to Nortel but at its request and expense to execute all documents, take all oaths and do all reasonable acts to enable Nortel, its successors, assigns and legal representatives to procure and maintain patent or other intellectual property protection for said inventions in any and all countries and to vest title thereto in Nortel, its successors, assigns or legal representatives.

I (We) agree that a copy of this Assignment shall be deemed a full legal and formal equivalent of any assignment, consent or the like which may be required in any country for any purpose and more particularly in proof of the irrevocable right of Nortel, its successors, assigns and legal representatives to apply for and maintain patent or other intellectual property protection for said inventions in any and all countries and to claim the benefit of any right of priority.

This Assignment does not form part of a larger transaction or series of transactions in respect of which the amount or value or aggregate amount or value of the consideration exceeds £60,000.

| | | Date: | |
|----------------------|--|----------|--|
| Withess Signature | James E. Whiteaway 62 Pishiobury Drive Sawbridgeworth, Hertfordshire | Assignor | |
| Witness Name (print) | CM21 0AF United Kingdom | | |
| | | | |

Additional Assignors on attached Page 2

PATENT REEL: 012652 FRAME: 0313

CASE: 13659IDUS02U Date: 21.12.01 George H. Thompson 20 Hoestock Road Sawbridgeworth, Hertfordshire CM21 0DZ United Kingdom Witness Name (print) Date: Witness Signature Alan Fielding Assignor 11 Pynchbek Bishops Stortford, Hertfordshire CM23 4DH United Kingdom Witness Name (print) Date: Witness Signature Assignor

2

PATENT REEL: 012652 FRAME: 0314

Date: Assignor

Witness Name (print)

Witness Signature

Witness Name (print)