Docket No.: FQ5-520 FORM PTO-15% (Modified), 06-25-2001 ΞT U.S. DEPARTMENT OF COMMERCE (Rev. 6-93) OMB No. 0651-0011 (exp.4/94) Patent and Trademark Office Copyright 1996-97 LegalStar P08A/REV02 Tab settings -To the Honorable Commissioner of Paterus and Trademarks. Flease record the attached original documents or copy thereof. 1. Name of conveying party(ies): 2. Name and address of receiving party(ies): Atsushi Iwata TOOS 8 1 HULL Hirokazu Takatama Name: NEC Corporation 1901 Address: 7-1, Shiba 5-chome, Minato-ku Additional names(s) of conveying party(ies) attached AD 3. Nature of conveyance: Assignment Merger □ Security Agreement ☐ Change of Name City: Tokyo _____ State/Prov.: ☐ Other Country: Japan ZIP: Execution Date: March 19, 2001 Additional name(s) & address(es) attached? ☐ Yes X No Application number(s) or registration numbers(s): If this document is being filed together with a new application, the execution date of the application is: B. Patent No.(s) Patent Application No. Filing date March 23, 2001 09/814,854 Additional numbers attached?

Yes
No 6. Total number of applications and patents involved: 5. Name and address of party to whom correspondence concerning document should be mailed: 7. Total fee (37 CFR 3.41):....\$ 40.00 Name: Sean M. McGinn, Esq. ■ Enclosed - Any excess or insufficiency should be Registration No. 34,386 credited or debited to deposit account Address: McGinn & Gibb, PLLC Authorized to be charged to deposit account 8321 Old Courthouse Road, Suite 200 8. Deposit account number: State/Prov.: VA City: Vienna 50-0481 ZIP: 22182-3817 - Country: USA DO NOT USE THIS SPACE 06/25/2001 TDIAZ1 00000022 09814854 40.00 OP To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy 9 Statement and signature. of the original document. June 19, 2001 Sean M. McGinn, Esq. Date Signature Name of Person Signing Total number of pages including cover sheet, attachments, and document:

REEL: 011910 FRAME: 0557

ASSIGNMENT OF APPLICATION FOR PATENT

WHEREAS

ATSUSHI IWATA

c/o NEC Corporation,

7-1, Shiba 5-chome, Minato-ku,

Tokyo, Japan

and

NAME AND ADDRESS OF ASSIGNOR

HIROKAZU TAKATAMA c/o NEC Corporation,

7-1, Shiba 5-chome, Minato-ku,

Tokyo, Japan

(HEREINAFTER REFERRED TO AS ASSIGNOR), have invented and own a certain new and useful invention entitled:

TITLE OF INVENTION:

LINK STATE ROUTING TECHNIQUES

WHEREAS

NEC Corporation

7-1, Shiba 5-chome, Minato-ku,

Tokyo, Japan

FULL NAME AND ADDRESS OF ASSIGNEE

(hereinafter referred to as ASSIGNEE), is desirous of acquiring the entire right, title, and interest in, to and under said invention and the United States Letters Patent to be obtained therefor:

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN: Be it known that in consideration of the payment of ASSIGNEE to ASSIGNOR of the sum of One Dollar (\$1.00), the receipt of which is hereby acknowledged, and for other good and valuable consideration, ASSIGNOR, by these presents, hereby sells, assigns and transfers to ASSIGNEE the entire and exclusive right, title and interest to said invention and all Letters Patent of the United States to be obtained therefor on said application or any continuation, division, renewal, substitute or reissue thereof for the full term or terms for which the same may be granted.

ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks to issue said Letters Patent of the United States Patent obtained therefor on said application or any

(Assignment of Application for Patent -- page 1 of 2)

PATENT REEL: 011910 FRAME: 0558 continuation, division, renewal, substitute or reissue thereof for the full term or terms to said ASSIGNEE, of the entire right, title, and interest in and to the same, for his sole use and behoof, and for the use and behoof of his legal representatives, to the full end of the term or terms for which said Letters Patent obtained therefor on said application or any continuation, division, renewal, substitute or reissue thereof for may be granted, as full and entirely as the same would have been held by ASSIGNOR had this assignment and sale not been made.

ASSIGNOR hereby covenants that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment and sale;

ASSIGNOR further covenants that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said application, said invention and said Letters Patent as may be known and accessible to ASSIGNOR and will testify as to the same in any interference or litigation related thereto and will promptly execute and deliver to ASSIGNEE or its legal representative any and all papers, instruments or affidavits required to apply for, obtain, maintain and enforce said application, said invention and said Letters Patent which may be necessary or desirable to carry out the purposes hereof.

(Assignment of Application for Patent -- page 2 of 2)

RECORDED: 06/19/2001

PATENT REEL: 011910 FRAME: 0559