

10-13-1998

FR SHEET



To the Honorable commissione

Please record the attached orig 100848369

1. Name of conveying party(ies):  
 Daniel Ullum  
 Thomas J. Edsall  
 Soei-Shin Hang

09/29/98

Additional name(s) of conveying party(ies) attached? Yes  No

2. Name and address of receiving party(ies):

Name: Cisco Technology, Inc.

Street Address: 170 West Tasman Drive, Building D

City: San Jose

State: CA Zip: 95134-1706

Additional name(s) & address(es) attached? Yes  No

3. Nature of conveyance:

Assignment  
 Merger  
 Security Agreement  
 Change of Name  
 Other

Execution Date: September 24, 1998



4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: September 24, 1998

A. Patent Application No.(s) \_\_\_\_\_

B. Patent No. (s) **09/162730**

Additional numbers attached? Yes  No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Charles J. Barbas  
 Cesari and McKenna, LLP  
 Street Address: 30 Rowes Wharf

City: Boston State: MA Zip: 02110

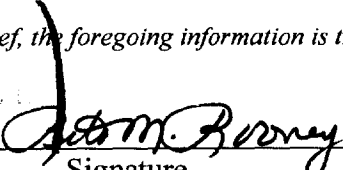
6. Total number of applications and patents involved:..... 1

7. Total fee (37 CFR 3.41) ..... \$40.00  
 Enclosed  
 Authorized to be charged to deposit account

8. Deposit account no. 03-1237 (Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

9. Statement and signature.  
*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*

Rita M. Rooney  September 29, 1998  
 Name of Person Signing Signature Date

Total number of pages comprising cover sheet: 1

### ASSIGNMENT

Whereas We, Daniel Ullum, who resides at 834 Kyle Street, San Jose, CA 95127, Thomas J. Edsall, who resides at 471 Mountain View Avenue, Mountain View, CA 94041, and Soei-Shin Hang, who resides at 1360 Sage Hen Way, Sunnyvale, CA 94087, have made certain inventions or discoveries (or both) set forth in an application for Letters Patent of the United States of America entitled IMPROVED LOOK UP MECHANISM AND ASSOCIATED HASH TABLE FOR A NETWORK SWITCH, identified by Cesari and McKenna File No. 112025-0081, which application was executed by us on September 24, 1998; and

Whereas Cisco Technology, Inc., whose address is 170 West Tasman Drive, Building D, San Jose, CA 95134-1706, and which, together with its successors and assigns, is hereinafter called "Assignee," is desirous of acquiring the title, rights, benefits, and privileges hereinafter recited;

Now, Therefore, for valuable consideration furnished by Assignee to us, receipt and sufficiency of which we hereby acknowledge, we hereby, without reservation:

1. Assign, transfer, and convey to Assignee our entire right, title, and interest in and to said inventions and discoveries, said application for Letters Patent of the United States of America, any and all other applications for Letters Patent on said inventions and discoveries in whatsoever countries, including all divisional, renewal, substitute, continuation, continuation-in-part, and Convention applications based in whole or in part upon said inventions or discoveries, or upon said applications, and any and all Letters Patent, reissues, reexaminations, and extensions of Letters Patent granted for said inventions and discoveries or upon said applications, and every priority right that is or may be predicated upon or arise from said inventions, said discoveries, said applications, and said Letters Patent;

2. Authorize Assignee to file patent applications in any or all countries on any or all of said inventions and discoveries in our names or in the name of Assignee or otherwise as Assignee may deem advisable, under the International Convention or otherwise;

3. Authorize and request the Commissioner of Patents and Trademarks of the United States of America and the empowered officials of all other governments to issue or transfer all said Letters Patent to Assignee, as assignee of the entire right, title, and interest therein or otherwise as Assignee may direct;

4. Warrant that we have not knowingly conveyed to others any right in said inventions, discoveries, applications, or patents or any license to use the same or to make, use, or sell anything embodying or utilizing any of said inventions or discoveries; and that we have good right to assign the same Assignee without encumbrance;

5. Bind our heirs, legal representatives and assigns, as well as ourselves, to do, upon Assignee's request and at Assignee's expense, but without additional consideration to us or them, all acts reasonably serving to assure that the said inventions and discoveries, the said patent applications, and the said Letters Patent shall be held and enjoyed by Assignee as fully and entirely as the same could have been held and enjoyed

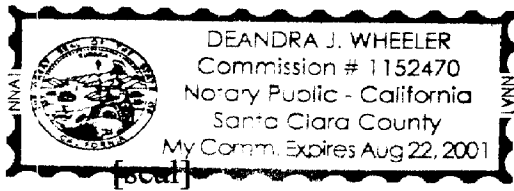
by us, our heirs, legal representatives, and assigns if this assignment had not been made; and particularly to execute and deliver to Assignee all lawful application documents including petitions, specifications, and oaths, and all assignments, disclaimers, and lawful affidavits in form and substance as may be requested by Assignee; to communicate to Assignee all facts known to us relating to said inventions and discoveries or the history thereof; and to furnish Assignee with any and all documents, photographs, models, samples, and other physical exhibits in our control or in the control of our heirs, legal representatives or assigns which may be useful for establishing the facts of our conceptions, disclosures, and reduction to practice of said inventions and discoveries.

In testimony of which we have executed this Assignment as an instrument under seal on the dates indicated next to our names.

9-24-98                      *Daniel Ullum*  
Date                              Daniel Ullum, Inventor

State of California                      )  
County of Santa Clara                      ) ss.

On this 24<sup>th</sup> day of September, 1998, before me appeared Daniel Ullum, to me known and known to me to be the person described in and who executed the foregoing instrument, and he acknowledged the same to be his free act and deed.



*Deandra J. Wheeler*  
Notary Public

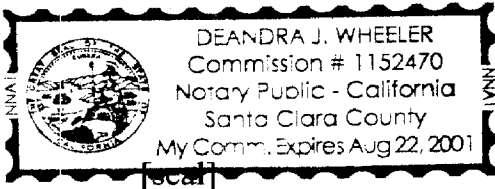
9/24/98

Date

Thomas J. Edsall  
Thomas J. Edsall, Inventor

State of California )  
County of Santa Clara )ss.

On this 24<sup>th</sup> day of September, 1998, before me appeared Thomas J. Edsall, to me known and known to me to be the person described in and who executed the foregoing instrument, and he acknowledged the same to be his free act and deed.



Deandra J. Wheeler  
Notary Public

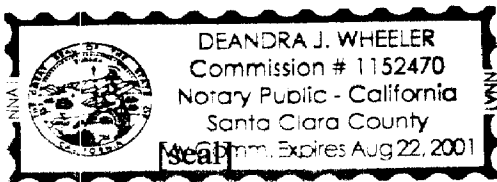
9/24 - 98

Date

Soei-Shin Hang  
Soei-Shin Hang, Inventor

State of California )  
County of Santa Clara )ss.

On this 24<sup>th</sup> day of September, 1998, before me appeared Soei-Shin Hang, to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she acknowledged the same to be his/her free act and deed.



Deandra J. Wheeler  
Notary Public