RE U.S. Department of Commerce Patent and Trademark Office **PATENT** 102196500 TO: The Commissioner of Patents and original document(s) or copy(ies) Submission Type Conveyance Type New Assignment Resubmission (Non-Recordation) License 8.10.02 Document ID # Merger Correction of PTO Error Security Agreement Reel# Frame # Change of Name ☐ Corrective Document Other: Reel# Frame # Conveying Party(ies) Execution Date(s) 1. Eatherton, William N. 08082002 2. Lee, Jaushin 08072002 3. Priyadarshan, Bangalore L. 08072002 4. Warkhede, Priyank Ramesh 08072002 5. Ertemalp, Fusun 08072002 6. Holbrook, Hugh Weber 08072002 Mark if Additional Names of Conveying Parties Attached Receiving Party 10/215719 Name Cisco Technology, Inc. Name a corporation of California Address 170 W. Tasman Drive Address Address San Jose 95134 State/Country City Zip Code Mark if Additional Names of Receiving Parties Attached **Correspondent Name and Address** Telephone: 303-282-0151 The Law Office of Kirk D. Williams (Customer No. 26327) Facsimile: 303-778-0748 1234 S. Ogden St. Attorney Docket No. 81689 Denver, CO 80210-1713 Enter the total number of pages of the attached conveyance document including any attachments: 5 Mark if additional numbers attached Application Number(s) or Patent Number(s) Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property). **Patent Numbers Patent Application Numbers** If this document is being filed together with a new Patent Application, enter the date the patent Month Day Year application was signed by the first named executing inventor. 08082002 Patent Cooperation Treaty (PCT) PCT PCT Enter PCT application number only if a U.S. Application PCT Number has not been assigned. PCT PCT PCT Enter the total number of properties involved: 1 **Number of Properties** Fee Amount Fee Amount for Properties Listed (37 CFR 3.41): \$40 Method of Payment: in the amount of \$40 Enclosed is check No. Charge Deposit Account No. 501430 in the amount of \$40 Authorization to Charge Additional Fees to Deposit Account No. 501430: X Yes No 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. Charges to deposit account are authorized, as indicated herein. August 10, 2002

Signature

Name of Person Signing 00000141 501430 10215719 08/19/2002 GTOM11

Kirk D. Williams, Esq. (Reg. 42,229)

40.00 CH 01 FC:581

PATENT

REEL: 013198 FRAME: 0779

Date

Attorney Docket No. 81689 CUSTOMER NUMBER 26327 The Law Office of Kirk D. Williams Attorney at Law 1234 S. Ogden St. Denver, CO 80210

ASSIGNMENT

WHEREAS, WE, WILLIAM N. EATHERTON (OF 1266 HICKERSON COURT, SAN JOSE, CA 95127), JAUSHIN LEE (OF 19869 LANARK LANDE, SARATOGA, CA 95070), BANGALORE L. PRIYADARSHAN (OF 4177 POLONIUS CIRCLE, FREMONT, CA 94555), PRIYANK RAMESH WARKHEDE (OF 4355 RENAISSANCE DR. 201, SAN JOSE, CA 95134), FUSUN ERTEMALP (OF 491 CLAREMONT WAY, MENLO PARK, CA 94025), AND HUGH WEBER HOLBROOK (OF 85 BUENA VISTA TERRACE, SAN FRANCISCO, CA 94117), are the joint inventors of an invention entitled "PERFORMING LOOKUP OPERATIONS USING ASSOCIATIVE MEMORIES OPTIONALLY INCLUDING MODIFYING A SEARCH KEY IN GENERATING A LOOKUP WORD AND POSSIBLY FORCING A NO-HIT INDICATION IN RESPONSE TO MATCHING A PARTICULAR ENTRY" as described and claimed in the specification forming part of an application for United States letters patent executed herewith;

WHEREAS, Cisco Technology, Inc. (hereinafter referred to as Assignee), a corporation of the State of California having a place of business at 170 W. Tasman Drive, San Jose, CA 95134 is desirous of acquiring the entire United States domestic and foreign right, title, and interest in and under the invention described in the patent application and in and to any letters patent that may be granted therefore in the United States and in any and all foreign countries;

Now, Therefore, in exchange for good and valuable considerations, the receipt and sufficiency of which are hereby acknowledged, we sell, assign and transfer to the Assignee and the Assignee's legal representatives, successors and assigns the full and exclusive rights, title and interest in and to the invention in the United States and every foreign country and the entire right, title, and interest in and to the patent application and other such applications, including, but not limited to, provisional applications, non-provisional applications, continuations, continuations-in-part, divisionals, reissues, renewals, and extensions, that may be filed in the United States and every foreign country on the invention, and the patents or extensions thereof, both foreign and domestic, that may issue thereon, including the right to file foreign applications directly in the name of Assignee and to claim priority rights deriving from said United States application to which said foreign applications are entitled by virtue of international convention, treaty or otherwise, said invention, application and all letters patent on said invention to be held and enjoyed by Assignee and its successors and assigns for their use and benefit and of their successors and assigns as fully and entirely as the same would have been held and enjoyed by us had this assignment, transfer and sale not been made. We do hereby authorize and request the Commissioner of Patents and Trademarks to issue United States patents on said invention to Assignee.

PERFORMING LOOKUP OPERATIONS USING ASSOCIATIVE MEMORIES
OPTIONALLY INCLUDING MODIFYING A SEARCH KEY IN GENERATING A LOOKUP WORD AND
POSSIBLY FORCING A NO-HIT INDICATION IN RESPONSE TO MATCHING A PARTICULAR ENTRY
ASSIGNMENT PAGE 1 of 5

PATENT REEL: 013198 FRAME: 0780 WE DO HEREBY COVENANT and agree with Assignee that we will not execute any writing or do any act whatsoever conflicting with the terms of this assignment document set forth herein, and that we will at any time upon request, without further or additional consideration, but at the expense of the Assignee, execute such additional assignments and other writings and do such additional acts as the Assignee may deem necessary or desirable to perfect the Assignee's enjoyment of this assignment, and render all necessary assistance in making application for and obtaining patents of the United States and of any and all foreign countries on the invention, including, but not limited to, provisional applications, non-provisional applications, continuations, continuations-in-part, divisionals, reissues, renewals, and extensions, and in enforcing any rights or choses in action accruing as a result of such applications or patents, and by executing statements and other affidavits, including executing all instruments and documents required for the making and prosecution of applications for United States and foreign letters patent on said invention, for litigation regarding said letters patent, or for the purpose of protecting title to said invention or letters patent therefore, it being understood that the foregoing covenant and agreement shall bind, and inure to the benefit of, the assigns and legal representatives of all parties hereto.

WE have hereunder set our hands on the dates shown below.

Date Ang 8 2002 WILLIAM N. EATHERTON

STATE OF

COUNTY OF.

CARMEN E. MONIZ
COMM. NO. 1297812 SANTA CLARA COUNTY
COMM. EXPIRES MARCH 19, 2005

Notary Public

My Commission Expires: 12 wich 19

PERFORMING LOOKUP OPERATIONS USING ASSOCIATIVE MEMORIES
OPTIONALLY INCLUDING MODIFYING A SEARCH KEY IN GENERATING A LOOKUP WORD AND
POSSIBLY FORCING A NO-HIT INDICATION IN RESPONSE TO MATCHING A PARTICULAR ENTRY
ASSIGNMENT PAGE 2 of 5

PATENT REEL: 013198 FRAME: 0781

Date 8/7/2012
TAUGHDI LEE
STATE OF (City) Onen
STATE OF Color) COUNTY OF Sonta (Val) SS:
COUNTY OF ORTHON
On this
said county, appeared Jaushin Lee, who is personally known to me to be the same person whose name
is subscribed to the foregoing assignment document, and acknowledged that he/she signed and delivered the document as his/her free and voluntary act for the uses and purposes therein set forth.
CARMEN E. MONIZ COMM. NO. 1297812 Notary Public
COMM. NO. 1297812 Notary Public
SE NOTARY PUBLIC - CALIFORNIA & SANTA CLARA COUNTY
SANTA CLARA COUNTY COMM. EXPIRES MARCH 19, 2005 My Commission Expires: 7724-6 19, 2005
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4 1 6
Date Avj. 07, 2002 BANGALORE L. PRIVADARSHAN
Date #1, 01, 2002
BANGALORE L. PRIVADARSHAN
STATE OF (Chi) Drug) COUNTY OF 4 denty (1/c/7) SS:
COUNTY OF Agrica (1617) SS:
On this day of, 2002, before me, a Notary Public in and for said county, appeared Bangalore L. Priyadarshan, who is personally known to me to be the same
said county, appeared Bangalore L. Priyadarshan, who is personally known to me to be the same person whose name is subscribed to the foregoing assignment document, and acknowledged that
ne/she signed and delivered the document as his/her free and voluntary act for the uses and purposes
herein set forth.
-
CARMEN E. MONIZ
COMM. NO. 1297812 Notary Public Notary Public
(Name and Managery) (1 to 1 t

PERFORMING LOOKUP OPERATIONS USING ASSOCIATIVE MEMORIES
OPTIONALLY INCLUDING MODIFYING A SEARCH KEY IN GENERATING A LOOKUP WORD AND
POSSIBLY FORCING A NO-HIT INDICATION IN RESPONSE TO MATCHING A PARTICULAR ENTRY
ASSIGNMENT PAGE 3 of 5

SANTA CLARA COUNTY

COMM. EXPIRES MARCH 19, 2005

PATENT REEL: 013198 FRAME: 0782

My Commission Expires: 17 Circle 19 2005

Date 07 Aug. 2002	
PRIYANK RAMESH WARKHEDE	
STATE OF Closura)	į
PRIYANK RAMESH WARKHEDE STATE OF Clown a) SS: COUNTY OF	
On this	
COMM. NO. 1297812 Notary Public SANTA CLARA COUNTY COMM. EXPIRES MARCH 19, 2005 My Commission Expires: My Commission Expires:	
Date 8/7/2002 Julian Frederick ERTEMALP	
STATE OF Colored SS:	
· · · · · · · · · · · · · · · · · · ·	
On this day of,	
CARMEN E. MONIZ COMM. NO. 1297812 Notary Public NOTARY PUBLIC - CALFORNIA Z ARA COUNTY BY MARCH 19, 2005 CARACOUNTY BY MARCH 19, 2005 CARACOUNTY CA	Š
CARMEN E. MONIZ COMM. NO. 1297812 NOTARY PUBLIC - CALIFORNIA & SANTA CLARA COUNTY COMM. EXPIRES MARCH 19, 2005 OPERATIONS USING ASSOCIATIVE MEMORIES	

OPTIONALLY INCLUDING MODIFYING A SEARCH KEY IN GENERATING A LOOKUP WORD AND POSSIBLY FORCING A NO-HIT INDICATION IN RESPONSE TO MATCHING A PARTICULAR ENTRY ASSIGNMENT PAGE 4 of 5

PATENT

REEL: 013198 FRAME: 0783

Date Aug. 7, 2002 HUGH WEBER HOLBROOK
STATE OF (Elejonia)
COUNTY OF Lanta Clasa) SS:
.a
On this day of August, 2002, before me, a Notary Public in and for
said county, appeared Hugh Weber Holbrook, who is personally known to me to be the same person
whose name is subscribed to the foregoing assignment document, and acknowledged that he she signed
and acknowledged that he sile signed

and delivered the document as his/her free and voluntary act for the uses and purposes therein set forth.

COMM. EXPIRES MARCH 19, 2005

RECORDED: 08/10/2002

My Commission Expires:

PERFORMING LOOKUP OPERATIONS USING ASSOCIATIVE MEMORIES OPTIONALLY INCLUDING MODIFYING A SEARCH KEY IN GENERATING A LOOKUP WORD AND POSSIBLY FORCING A NO-HIT INDICATION IN RESPONSE TO MATCHING A PARTICULAR ENTRY ASSIGNMENT PAGE 5 of 5

> **PATENT** REEL: 013198 FRAME: 0784