

FORM PTO-15f5
(Rev. 6-93)

02-22-1999

EET

U.S. DEPARTMENT OF COMMERCE
Patent and Trademark Office

OMB No. 0651-0011 (exp. 4/94)
Tab settings - - - v



100968259

To the Honorable Commissions.

Attached original documents or copy thereof.

1. Name of conveying party(ies):
 Kumar BALACHANDRAN, - January 26, 1999
 Rajaram RAMESH, - January 26, 1999
 Havish KOORAPATY, - January 26, 1999
 Eric WANG, - January 26, 1999
 Sandeep CHENNAKESHU, - January 27, 1999
 Amer HASSAN - February 4, 1999

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

2. Name and address of receiving party(ies):
 Ericsson Inc.
 7001 Development Drive
 P. O. Box 13969
 Research Triangle Park, N.C. 27709

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

3. Nature of conveyance: _____
X Assignment _____ Merger
 _____ Security Agreement _____ Change of Name
 _____ Other _____
 Execution Date: (See Box 1. above)

MRD 2.10.99

10549 U.S. PTO
 09/248506
 02/10/99

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: (See Box 1. above)

A. Patent Application No. (s)

B. Patent No. (s)

Additional numbers attached? ___ Yes X No

5. Name and address of party to whom correspondence concerning document should be mailed:
 Brian D. Walker
 Jenkins & Gilchrist, P.C.
 1445 Ross Avenue, Suite 3200
 Dallas, Texas 75202-2799

6. Total number of applications and patents involved: 1
 7. Total fee (37 CFR 3.41):.... \$ 40.00
X Enclosed
 _____ Authorized to be charged to deposit account

8. Deposit account number: 10-0447

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.
Brian D. Walker, Reg. No. 37,751 [Signature] 2/10/99
 Name of Person Signing Signature Date

Total number of pages including cover sheet, attachments, and document: 40
 Mail documents to be recorded with required cover sheet information to:
 Commissioner of Patents and Trademarks, Box Assignments
 Washington, D.C. 20231

CERTIFICATE OF MAILING BY EXPRESS MAIL
 "EXPRESS MAIL" Mailing Label No. EL177524069US
 Date of Deposit: February 10, 1999
 I hereby certify that this paper or fee is being deposited with the U.S. Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231
 Type or Print Name: Marcy Overstreet
 Signature: [Signature]

02/18/1999 JWRKINS 00000054 09248506
 01 FC:581

ASSIGNMENT

WHEREAS, we, Kumar BALACHANDRAN, Rajaram RAMESH, Havish KOORAPATY, Eric WANG, Sandeep CHENNAKESHU and Amer HASSAN, have invented certain new and useful improvements in the following:

SYSTEM AND METHOD FOR CODING IN A TELECOMMUNICATIONS ENVIRONMENT USING ORTHOGONAL & NEAR-ORTHOGONAL CODES

for which we have made application for United States Letters Patent, said application having been executed by us on or around January 27, 1999.

WHEREAS, ERICSSON INC., a corporation organized and existing under the laws of Delaware, having its principal place of business at 7001 Development Drive, P.O. Box 13969, Research Triangle Park, North Carolina 27709 (hereinafter referred to as "ASSIGNEE"), is desirous of acquiring our entire right, title and interest in and to the invention, in and to said application and any Letters Patent that may issue thereon.

NOW, THEREFORE, for and in consideration of One Dollar (\$1.00) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, we do hereby sell, assign and transfer unto ASSIGNEE, its successors, assigns and legal representatives **our entire right, title and interest** in and to said invention, in and to said application and all patents which

may be granted therefrom and in and to all divisions, reissues, reexaminations, substitutions, continuations, continuations-in-part or extensions thereof; and we hereby authorize and request the Commissioner of Patent and Trademarks or his delegates to issue all patents for said invention, or patents resulting therefrom, insofar as our interest is concerned, to said ASSIGNEE of our entire, right, title and interest, its successors, assigns or legal representatives.

We also hereby sell and assign to said ASSIGNEE, its successors, assigns and legal representatives the full and exclusive right, title and interest to the invention disclosed in said applications throughout the world, including the right to file applications and obtain patents, utility models, industrial models and designs for said invention in its own name throughout the world including all rights of priority, all rights to publish cautionary notices reserving ownership of said invention and all rights to register said invention in appropriate registries; and

We further agree to execute any and all powers of attorney, applications, assignments, declarations, affidavits, and any other papers in connection therewith necessary to perfect such rights, title and interest in said ASSIGNEE, its successors, assigns and legal representatives.

We hereby further agree that each of us will individually communicate to said ASSIGNEE, its successors, assigns and legal representatives, any facts known to us respecting any improvements; and, at the expense of said ASSIGNEE, each of us will testify in any legal proceedings, sign all lawful papers, execute all provisional, divisional, continuation, continuation-in-part, reissue, reexamination or substitute applications, make all lawful oaths, and generally do everything possible to vest title in said ASSIGNEE and to aid said ASSIGNEE, its successors, assigns and legal representatives to obtain and enforce proper protection for said invention in all countries.

We hereby grant the law firm of Jenkins & Gilchrist, P.C., of 1445 Ross Avenue, Suite 3200, Dallas, Texas 75202 and its agents, the power to insert on this assignment document any further identification, including but not limited to application number(s) and filing dates, which may be necessary or desirable in order to comply with any rule or request of the United States Patent and Trademark office for the purposes of recording this assignment document.

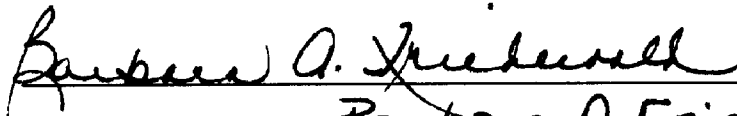
I have EXECUTED this instrument on the 26th day of January 1999 in the County of Wake, State of North Carolina



Kumar BALACHANDRAN

On the 26th day of January, 1999, before me personally appeared Kumar BALACHANDRAN, to me known and known to me to be the individual named in and who executed the foregoing instrument, and acknowledged that he executed the same.

SUBSCRIBED AND SWORN TO before me this 26th day of January, 1999 in the County of Wake, State of NC.



Printed Name: Barbara A. Friedewald
Notary Public in and for the State of NC
My Commission Expires: March 1, 2003

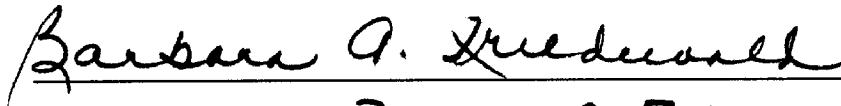
I have EXECUTED this instrument on the 26th day of January 1999 in the County of Wake, State of NC.



Rajaram RAMESH

On the 26th day of January 1999, before us personally appeared Rajaram RAMESH, to ~~us~~ known and known to ~~us~~ to be the individual named in and who executed the foregoing instrument, and acknowledged that he executed the same.

SUBSCRIBED AND SWORN TO before me this 26th day of January 1999.



Printed Name: Barbara A. Friedewald
Notary Public in and for the State of NC
My Commission Expires: March 1, 2003

I have EXECUTED this instrument on the 27 day of January 1999 in the County of WALDE, State of NC.

C. Sandeep

Sandeep CHENNAKESHU

On the 27 day of January 1999, before us personally appeared Sandeep CHENNAKESHU, to us known and known to us to be the individual named in and who executed the foregoing instrument, and acknowledged that he executed the same.

SUBSCRIBED AND SWORN TO before me this 27 day of January 1999.

Cynthia R Coxwell

Printed Name: Cynthia R Coxwell
 Notary Public in and for the State of NC
 My Commission Expires: March 04, 2001

I have EXECUTED this instrument on the 4th day of ~~January~~ 1999 in the County of King, State of WA. February

Amer Hassan
 Amer HASSAN

On the 4 day of ~~January~~ February 1999, before us personally appeared Amer HASSAN, to us known and known to us to be the individual named in and who executed the foregoing instrument, and acknowledged that he executed the same.

SUBSCRIBED AND SWORN TO before me this 4 day of ~~January~~ February 1999.

Brenda K. Geitsbeek

Printed Name: Brenda K. Geitsbeek
 Notary Public in and for the State of Washington
 My Commission Expires: Sept. 10, 2001

I have EXECUTED this instrument on the 26th day of January 1999 in the County of WAKE, State of NORTH CAROLINA

Havish
Havish KOORAPATY

On the 26th day of January 1999, before us personally appeared Havish KOORAPATY, to us known and known to us to be the individual named in and who executed the foregoing instrument, and acknowledged that he executed the same.

SUBSCRIBED AND SWORN TO before me this 26th day of January 1999.

Barbara A. Friedewald
Printed Name: Barbara A. Friedewald
Notary Public in and for the State of NC
My Commission Expires: March 1, 2003

I have EXECUTED this instrument on the 26th day of January 1999 in the County of WAKE, State of North Carolina

Eric WANG
Eric WANG

On the 26th day of January 1999, before us personally appeared Eric WANG, to us known and known to us to be the individual named in and who executed the foregoing instrument, and acknowledged that he executed the same.

SUBSCRIBED AND SWORN TO before me this 26th day of January 1999.

Barbara A. Friedewald
Printed Name: Barbara A. Friedewald
Notary Public in and for the State of NC
My Commission Expires: March 1, 2003