To the Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying parties:
   TOMOHIKO SHIMOYAMA and KOICHI YANO

2. Name and address of receiving party:
   Name: CANON KABUSHIKI KAISHA
   Foreign Address: 30-2, Shimomaruoku 3-chome, Ohta-ku
                   Tokyo, Japan
   Domestic Address:
   City:_________ State _____ ZIP ______

3. Additional names of conveying parties attached?  □ Yes  □ No

4. Nature of conveyance:
   □ Assignment  □ Merger  □ Security Agreement  □ Change of Name
   □ Other
   Execution Date: April 20, 1999 and May 7, 1999

5. 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:
   A. Patent Application Number: 09/277,824
   Filing Date: March 29, 1999
   B. Title of Invention:
      COMMUNICATION APPARATUS, SYSTEM AND METHOD, AND STORAGE MEDIUM THEREFOR
   Additional numbers attached?  □ Yes  □ No

6. Name and address of party to whom correspondence concerning document should be mailed:
   Name: Fitzpatrick, Cella, Harper & Scinto
   30 Rockefeller Plaza
   New York, New York 10112-3801
   Telephone No.: (212) 218-2100
   Facsimile No.: (212) 218-2200

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

8. Deposit account number (for deficiency or excess):
   06-1205
   (Attach duplicate copy of this page if paying by deposit account):

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

   Abigail F. Cousins
   Name of Person Signing
   May 24, 1999
   Signature
   Date

Total number of pages including cover sheet, attachments, and documents: 3
JOINT
(AFTER APPLICATION FILED)

ASSIGNMENT OF PATENT RIGHTS FOR THE UNITED STATES

FOR VALUE RECEIVED, We, Tomohiko SHIMOYAMA and Koichi YANO

citizens of Japan

residing respectively at

c/o Canon Esuperansuhakuraku-ryo, 8-1, Rokkakubashi
5-chome, Kanagawa-ku, Yokohama-shi, Kanagawa-ken,
Japan; and

c/o Canon Puramu IS Hiyoshi-ryo, 12-28, Yagami,
Saiwai-ku, Kawasaki-shi, Kanagawa-ken, Japan

hereby sell, assign, transfer and convey unto Canon Kabushiki Kaisha

a corporation of Japan

having a place of business at

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, Japan

its successors, assigns and legal representatives (hereinafter called the "Assignee"), the entire right, title
and interest, for the United States, in and to certain inventions relating to

COMMUNICATIONS APPARATUS, SYSTEM AND METHOD, AND
STORAGE MEDIUM THEREFOR

and described in an application for Letters Patent of the United States filed by us on March 29, 1999
and which has been accorded Application No. 09/277,824

and in and to said application, and all divisions, renewals and continuations thereof, and all Letters Patent
of the United States which may be granted, thereon, and all reissues and extensions thereof; and we hereby
authorize and request the Commissioner for Patents and Trademarks of the United States to issue all Letters
Patent upon said inventions to the Assignee or to such nominees as it may designate.

AND we authorize and empower the said Assignee or nominees to invoke and claim for any application for
patent or other form of protection for said inventions, the benefit of the right of priority provided by the
International Convention for the Protection of Industrial Property, as amended, or by any convention which may
henceforth be substituted for it, and to invoke and claim such right of priority without further written or oral
authorization from us.

AND we hereby consent that a copy of this assignment shall be deemed a full legal and formal equivalent of any
assignment, consent to file or like document which may be required in the United States for any purpose and
more particularly in proof of the right of Assignee or nominees to claim the aforesaid benefit of the right of
priority provided by the International Convention for the Protection of Industrial Property, as amended, or by any
convention which may henceforth be substituted for it.

AND we hereby covenant that we have the full right to convey the entire right, title and interest herein assigned
and that we have not executed and will not execute any agreement in conflict herewith.
AND we hereby covenant and agree that we will communicate to said Assignee or nominees all facts known to us pertaining to said inventions, and testify in all legal proceedings, sign all lawful papers, execute all divisional, continuing and reissue applications, make all rightful oaths and declarations and in general perform all lawful acts necessary or proper to aid said Assignee or nominees in obtaining, maintaining and enforcing all lawful patent protection for said inventions in the United States.

By: Tomohiko SHIMOYAMA
   Date: April 20, 1999

By: Koichi YANO
   Date: May 7, 1999