

11-24-2000

U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

To the Honorable Commissioner of Patents and Tr

ents or copy thereof.

## 1. Name of Conveying party(ies):

Youichi NAKAGAWA  
Masahiro MIMURA  
Takaaki KISHIGAMI  
Makoto HASEGAWA  
Takashi FUKAGAWAAdditional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

## 3. Nature of conveyance:

☒ Assignment ☐ Merger  
☐ Security Agreement ☐ Change of Name  
☐ OtherExecution Date: September 14, 2000

101526229

Name and address of receiving party(ies)

Name: MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.

Internal Address: \_\_\_\_\_

Street Address: 1006, Oaza Kadoma, Kadoma-shi,Osaka 571-8501 Japan

City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP: \_\_\_\_\_

Additional name(s) and address(es) attached? ☐ Yes ☒ No

## 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: \_\_\_\_\_

A. Patent Application No.(s)  
09/639,996

B. Patent No.(s)

Additional numbers attached: ☐ Yes ☒ No

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

Name: Bruce H. BernsteinInternal Address: P19910Street Address: GREENBLUM & BERNSTEIN, P.L.C.1941 Roland Clarke PlaceCity: Reston State: VA ZIP: 201916. Total number of applications and patents involved: 17. Total Fee (37 CFR 3.41).....\$ 40.00☒ Enclosed☐ Authorized to be charged to deposit account

## 8. Deposit account number:

19-0089

(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.

Bruce H. Bernstein, Reg. No. 29,027

Name of Person Signing

Signature

Date

Total number of pages including cover sheet, attachments and document: 3

## ASSIGNMENT

WHEREAS, Youichi NAKAGAWA, a citizen of Japan, whose post office address is 5-28-11, Sendagi, Bunkyo-ku, Tokyo 113-0022 Japan, Masahiro MIMURA, a citizen of Japan, whose post office address is 3-9-8, Nishiogikita, Suginami-ku, Tokyo 167-0042 Japan, Takaaki KISHIGAMI, a citizen of Japan, whose post office address is 3-10-3-201, Ikuta, Tama-ku, Kawasaki-shi, Kanagawa 214-0038 Japan, Makoto HASEGAWA, a citizen of Japan, whose post office address is 6-21-11, Kitami, Setagaya-ku, Tokyo 157-0067 Japan, and Takashi FUKAGAWA, a citizen of Japan, whose post office address is 1-10-1-203, Gorikida, Asao-ku, Kawasaki-shi, Kanagawa 215-0025 Japan, hereinafter referred to as the ASSIGNORS, have invented a certain improvement relating to

DIRECTION ESTIMATING APPARATUS,  
DIRECTIVITY CONTROLLING ANTENNA APPARATUS,  
AND DIRECTION ESTIMATING METHOD

If this Assignment is filed after the filing date of the above-identified application, the undersigned hereby authorize and request any one of the attorneys of record in this application, including Neil F. Greenblum, Reg. No. 28,394, Bruce H. Bernstein, Reg. No. 29,027, Arnold Turk, Reg. No. 33,094, and James L. Rowland, Reg. No. 32,674, of the firm Greenblum & Bernstein, P.L.C., whose address is 1941 Roland Clarke Place, Reston, Virginia 20191, to insert here in parenthesis (Application No. 09/639,996, filed August 17, 2000) the filing date and application number of said application when known.

AND WHEREAS, MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD., organized and existing under the laws of Japan, whose post-office address is 1006, Oaza Kadoma, Kadoma-shi, Osaka 571-8501 Japan, hereinafter known as the ASSIGNEE, is desirous of acquiring the entire right, title and interest for the United States in and to said invention and application, including any and all divisions and continuations thereof, and any and all Letters Patent which may be granted thereon, including any and all renewals, reissues, and prolongations thereof.

NOW, THIS WITNESSETH that for and in consideration of One Dollar (\$1.00) and other good and valuable consideration, the receipt whereof is hereby acknowledged, said ASSIGNORS hereby assign, sell and transfer to said ASSIGNEE, its assigns and legal representatives, the entire and exclusive right, title and interest in and to said invention and application, for the United States including any and all divisions and continuations thereof, and any and all Letters Patent which may be granted therefor, said ASSIGNEE and its assigns and legal representatives to have, hold, exercise and enjoy the said invention and application, including any and all divisions and continuations thereof, and any and all Letters Patent which may be granted thereon, including any and all renewals, reissues and prolongations thereof, with all the rights, powers, privileges, and advantages in any ways arising from or pertaining thereto, for and during the term or terms of any and all such Letters Patent when granted, including any and all renewals, reissues, and prolongations thereof, for the use and benefit of said ASSIGNEE and its assigns and legal representatives in as ample and beneficial a manner to all intents and purposes as the said ASSIGNORS might or could have held and enjoyed the same, if this assignment had not been made.

AND said ASSIGNORS hereby agree to execute all papers necessary to file applications in the United States for said invention and to assign the same to said ASSIGNEE, or any assignee acquiring title to said invention, and to execute any other papers that may be needed in connection with filing said application and securing Letters Patent thereon.

AND said ASSIGNORS authorize and request the Commissioner of Patents to issue Letters Patent on said application, and on any and all divisions and continuations thereof, to said ASSIGNEE, its assigns and legal representatives, in accordance herewith.

IN TESTIMONY WHEREOF, this assignment is executed by said ASSIGNORS, on the respective dates indicated below.

Youichi Nakagawa

Youichi NAKAGAWA

September 14, 2000

Date

Masahiro Mimura

Masahiro MIMURA

September 14, 2000

Date

Takaaki Kishigami

Takaaki KISHIGAMI

September 14, 2000

Date

Makoto Hasegawa

Makoto HASEGAWA

September 14, 2000

Date

Takashi Fukagawa

Takashi FUKAGAWA

September 14, 2000

Date