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Atty Docket No.:

08-01-2003



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FORM PTO-1595 1-31-92 To the Director of the United States Patent and Trademark Office. Please record the attached original documents or copy thereof. 1. Name of conveying party(ies): 2. Name and address of receiving party(ies): Tomohiro MIZUNO Name: MITSUBISHI DENKI KABUSHIKI KAISHA Hirovuki SATOU Address: 2-3, Marunouchi 2-chome, Izuru NAITOU Chiyoda-ku, Soichi MATSUMOTO Tokyo 100-8310 Japan Additional name(s) of conveying party(ies) attached? 

Yes No 3. Nature of Conveyance: Assignment ☐ Merger ☐ Security Agreement ☐ Change of Name ☐ Other Execution Date: October 3, 2002 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) B. Patent No.(s) 10/286,804 Additional numbers attached? 

Yes No 5. Name and address of party to whom correspondence 6. Total applications and patents involved: 1 concerning document should be mailed: 7. Total fee (37 CFR 3.41): \$40.00 Enclosed ☐ Authorized to be charged to deposit account Tel. (703) 413-3000 8. Deposit account number: 15-0030 Fax. (703) 413-2220 (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. Marvin J. Spivak Name of Person Signing Registration Number: 24,913 Total number of pages including this cover sheet: 3 DBYRNE 07/31/2003 00000212 10286804 01 FC:802 40.00 0 Do not detach this portion Mail documents to be recorded with required cover sheet information to:

> Director of the United States Patent and Trademark Office Mail Stop Assignment Recordation Services Alexandria, Virginia. 22313

	WHEREAS, I (WE) Tomohiro MIZUNO, Hiroyuki SATOU, Izuru NAITOU
ISERT NAMES	and Soichi MATSUMOTO all of c/o MITSUBISHI DENKI KABUSHIKI KAISHA,
ND RESIDENCE DDRESSES OF HE INVENTORS:	2-3, Marunouchi 2-chome, Chiyoda-ku, Tokyo 100-8310 Japan
	<del></del>
	, XHADOCKOO ON A
NSERT TITLE F INVENTION:	have invented certain new and useful improvements in: "MULTIBEAM ANTENNA APPARATUS"
ISERT DATE IN- ENTORS SIGNED ECLARATION:	for which an application for Letters Patent was executed on October 3, 2002
	(Application No. 10/286,804 , filed November 4, 2002 ), and
NSERT NAME ND ADDRESS OF OMPANY OR THER ASSIGNEE:	WHEREAS, MITSUBISHI DENKI KABUSHIKI KAISHA
THER ASSIGNEE:	(hereinafter referred to as "ASSIGNEE") having a place of business at:
	2-3, Marunouchi 2-chome, Chiyoda-ku, Tokyo 100-8310 Japan
	is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent that may be granted therefore in the United States and its territorial possessions and in any and all foreign countries;

NOW, THEREFORE, in consideration of the sum of FIVE DOLLARS (\$5.00), the receipt whereof is hereby acknowledged, and for other good and valuable consideration, I (WE), by these presents do sell, assign and transfer unto said ASSIGNEE, the full and exclusive right to the said invention in the United States and its territorial possessions and in all foreign countries and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States and its territorial possessions and in any and all foreign countries and in and to any and all divisions, reissues, continuations, substitutions and renewals thereof.

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PATENT REEL: 014329 FRAME: 0705 I (WE) hereby authorize and request the Patent Office Officials in the United States and its territorial possessions and any and all foreign countries to issue any and all of said Letters Patent, when granted, to said ASSIGNEE as the assignee of my (our) entire right, title and interest in and to the same, for the sole use and behoof of said ASSIGNEE, its (his) successors and assigns, to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held by me (us) had this Assignment and sale not been made.

Further, I (WE) agree that I (WE) will communicate to said ASSIGNEE or its (his) representatives any facts known to me (us) respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuation, substitute, renewal and reissue applications, execute all necessary assignment papers to cause any and all of said Letter Patent to be issued to said ASSIGNEE, make all rightful oaths, and, generally do everything possible to aid said ASSIGNEE, its (his) successors and assigns, to obtain and enforce proper protection for said invention in the United States and its territorial possessions and in any and all foreign countries.

The undersigned hereby grant(s) the firm of Oblon, Spivak, McClelland, Maier & Neustadt, P.C. of Fourth Floor, 1755 Jefferson Davis Highway, Arlington, Virginia 22202 the power to insert on this assignment any further identification, including the application number and filing date, which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

Date: October 3, 2002	Tomohivo Mizuno (Signature of Invenior) Tomohiro MIZUNO
Date: October 3, 2002	Ciroyuki Satou (Signature of Inventor/ HIPOYUKI SATIOU
Date: October 3, 2002	(Signature of Infentior) Izuru NAITOU
Date: October 3, 2002	Signature of Inventor) Soichi MATSUMOTO
Date:	(Signature of Inventor)

OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, P.C.

ATTORNEYS AT LAW FOURTH FLOOR 1755 JEFFERSON DAVIS HIGHWAY ARLINGTON, VIRGINIA 22202

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PATENT REEL: 014329 FRAME: 0706