## 08-19-1998

1-92	1 S. M. S. M.	~ R <b>B</b> C€	
	/	1998	
ocket No:	- L	1030	
	1	244	10070000

2. 1	me:	
sa HARADA, Na	Name and address of receiving party(ies): me:	
	2. Name and address of receiving party(ies): Name: KABUSHIKI KAISHA TOYOTA CHUO KENKYUSHO	
e	dress: 41-1, Aza Yokomichi. Oaza Nagakute, Nagakute-cho, Aichi-gun, Aichi-ken, 480-1100, Japan ditional name(s) & address(es) attached?   Yes No	
	cution date of the application is:N/A	
В.	Patent No.(s)	
dditional numbers attache	ed? □ Yes ■ No	
espondence 6.	Total number of applications and patents involved:	
8. (A	Fotal fee (37 CFR 3.41):\$ 40.00 ■ Enclosed □ Authorized to be charged to deposit account  Deposit account number: 15-0030  Itach duplicate copy of this page if paying by deposit count)	
DO NOT USE THIS	SPACE	
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.  Robert F. Gnuso  Registration Spratting 27,295  Date  Total number of pages including cover sheet:3		
Do not detach this p	ortion	
er sheet information to:		
ommissioner of Patents an	d Trademarks	
1 ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (	Additional numbers attacher espondence  DO NOT USE THIS  going information is true are reported included this parent formation to:	

PATENT REEL: 9383 FRAME: 0355

 $\sim I/I$ 

	WHEREAS, I (WE) Kunitoshi Nishikawa; Tomohisa Harada; Toshiaki Watanaba					
NAMES	Masaru Ogawa and Eiji Teramoto of:					
ESIDENCE ESSES OF IVENTORS:	1) 1135, Monjyu, Motosu-cho, Motosu-gun, Gifu-ken, Japan					
	2) 2-3-20, Asahi, Miyoshigaoka, Miyoshi-cho, Nishikamo-gun, Aichi-ken, Jap					
	3) 1-104, 4-6-4, Toei-cho, Owariasahi-shi, Aichi-ken, Japan					
	4) 1-87-21, Nishiyama-cho, Seto-shi, Aichi-ken, Japan					
	5) 10-2406, 1-23-4, Hoshigaoka, Chikusa-ku, Nagoya-shi, Aichi-ken, Japan					
	, respectively,					
	•					
	. respectively, have invented certain new and useful improvements in: DIRECTIONAL BEAM ANTENNA DEVICE AND DIRECTIONAL BEAM CONTROLLING APPARATUS					
NTION: DATE IN- S SIGNED	have invented certain new and useful improvements in: DIRECTIONAL BEAM ANTENNA					
NTION: DATE IN- S SIGNED	have invented certain new and useful improvements in: DIRECTIONAL BEAM ANTENNA DEVICE AND DIRECTIONAL BEAM CONTROLLING APPARATUS					
DATE IN- IS SIGNED LATION:	have invented certain new and useful improvements in: DIRECTIONAL BEAM ANTENNA DEVICE AND DIRECTIONAL BEAM CONTROLLING APPARATUS  for which an application for Letters Patent was executed on March 12, 1998  (Application No. 09/045,711 , filed March 23, 1998 ), and WHEREAS, KABUSHIKI KAISHA TOYOTA CHUO KENKYUSHO					
DATE IN- RS SIGNED RATION:  NAME DDRESS OF NY OR	have invented certain new and useful improvements in: DIRECTIONAL BEAM ANTENNA DEVICE AND DIRECTIONAL BEAM CONTROLLING APPARATUS  for which an application for Letters Patent was executed on March 12, 1998  (Application No. 09/045,711 , filed March 23, 1998 ), and WHEREAS, KABUSHIKI KAISHA TOYOTA CHUO KENKYUSHO					
DATE IN- RS SIGNED RATION:  NAME DDRESS OF LIVY OR ASSIGNEE	have invented certain new and useful improvements in: DIRECTIONAL BEAM ANTENNA  DEVICE AND DIRECTIONAL BEAM CONTROLLING APPARATUS  for which an application for Letters Patent was executed on March 12, 1998  (Application No. 09/045,711 , filed March 23, 1998 ), and					

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.

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:_	March 12, 1998	Kuntuhi Malitawa
		(Signature of Inventor)
Date:_	March 12, 1998	Tomohisa Harada
		(Signature of Inventor)
Date:_	March 12, 1998	Joshicke Lutarior
		(Signature of Inventor)
Date:_	March 12, 1998	Missira Gigwa
		(digitality)
Date:	March 12, 1998	Eije Jerumoti (Signature of Topensor)
		(Signature of Inventor)
Date:_		
		(Signature of Inventor)
Date:		
		(Signature of Inventor)
Date:_		
Juic		(Signature of Inventor)

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

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

1/95

**PATENT** REEL: 9383 FRAME: 0357

RECORDED: 08/13/1998