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Additional name of conveying party(ies) attached The Yes N	Internal Address:	
Additional name of conveying party(les) attached TRADE	10-21-03	
3. Nature of conveyance:	Street Address: 1006, Oaza Kadoma, Kadoma-shi	
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1. Name(s) of conveying party(ies):

Akihiro TATSURA, Shotaro TANAKA and Koji ARII

2. Name(s) and Address(es) of receiving party(ies):

Matsushita Electric Industrial Co., Ltd. 1006. Oaza Kadoma. Kadoma-shi, Osaka 571-8501 JAPAN

3. Nature of conveyance: Assignment Execution Date: April 10, 2000

4A. Patent Application No.(s): 09/484,441 Application execution date: April 10, 2000

4B. Patent No.(s):

5. Name and Address of Party to whom correspondence regarding this document should be mailed:

Smith, Gambrell & Russell, LLP Beveridge, DeGrandi, Weilacher & Young **Intellectual Property Group** 1850 M Street N.W. (Suite 800) Washington, DC 20036

202 659-2811

6. Total number of applications and patents involved : one

7. Total fee: \$40.00.

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Date: April 24, 2000

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PATENT REEL: 014628 FRAME: 0446

ASSIGNMENT

This assig	gnment agreement is applicable to an invention entitled (Invention Title)			
Transmitting and receiving apparatus capable of the suppression of the microphonic noise in digital transmission system				
mrcrobuonre	noise in digital transmission system			
	ENT RIGHTS referred to in this agreement are:			
(cneck one)	a patent application for this invention, executed by the ASSIGNOR(S)			
!	concurrently with this assignment.			
	■ U.S. patent application Serial No. 09/484,441 , filed 01/18/2000 .			
	☐ a U.S. patent application based on PCT International Application			
	Nofiled on (date) (U.S. patent			
	application Serial No, if known).			
	U.S. patent No, issued			
The PATE	U.S. patent No, issued ENT RIGHTS also include all divisions, reissues, continuations and extensions of			
the patents and patent applications identified above.				
The PATENT RIGHTS assigned under this agreement are:				
	X U.S. patent rights only.			
,	Worldwide patent rights. In this case, the assignee shall have the right to			
	claim the benefit of the filing date of any U.S. or foreign patent application			
	for this invention.			
The ASSI	GNOR(S) referred to in this agreement is (or are) the inventor(s) whose			
signatures appear on page 2 of this Assignment and any Supplemental Sheet(s).				
The ASSIGNEE referred to in this agreement is:				
(Name of Assignee) Matsushita Electric Industrial Co., Ltd.				
(Address) 1006, Oaza Kadoma, Kadoma-shi, Osaka 571-8501 JAPAN				
(Addiess)	ood, ouza radoria, radoria din, odara din dodina din do			
The ASSIGN	FF ic·			
	□ An Individual.			
(Check one)	□ A Partnership.			
	▼ A Corporation of			
	□ (other)			
	u (other)			
The ACC	IGNOR(S), in consideration of \$10.00 paid by the ASSIGNEE, and other good			
and valuable consideration, receipt of which is acknowledged, hereby assign(s) the following				
rights to the ASSIGNEE, its successors and assigns:				
the full and exclusive right to the invention;				
the entire right, title and interest in and to the PATENT RIGHTS;				
the right to sue and recover for any past infringement; and,				
the right to claim priority under 35 USC 119, 35 USC 120, or any other applicable				
provisions, based on any earlier patent applications for this invention.				

PATENT REEL: 014628 FRAME: 0447

THIS IS PAGE 2 OF AN ASSIGNMENT FROM THE INVENTOR(S) TO ASSIGNEE: Matsushita Electric Industrial Co., Ltd.

INVENTION TITLE: Transmitting and receiving apparatus capable of the suppression of the microphonic noise in digital transmission system

As to all U.S. patent applications assigned under this agreement, the ASSIGNOR(S) hereby authorize(s) and request(s) the Commissioner of Patents and Trademarks to issue all Letters Patent to the ASSIGNEE as the assignee of the entire right, title and interest, for the sole use and enjoyment of said ASSIGNEE, its successors and assigns.

Further, the ASSIGNOR(S) agree(s) to communicate to said ASSIGNEE, or its representatives, any facts known to the ASSIGNOR(S) respecting said invention, and testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, substitute, renewal, reexamination and reissue applications, execute all necessary assignment papers to cause any and all Letters Patent to be issued to said ASSIGNEE, make all rightful oaths and generally do everything necessary or desirable to aid said ASSIGNEE, its successors and assigns, to obtain and enforce proper protection for said invention.

The ASSIGNORS authorize any attorneys and agents who have a power of attorney in this application to check any appropriate boxes and to insert the Serial Number and filing date in this document after it has been executed.

Akihiro TATSUTA	Apihiro Tatenta	April 10, 2000
Name of sole or first inventor	Signature	Date
Shotaro TANAKA	Alistano Tamaba	April 10, 2000
Name of second inventor, if any	Signature	Date
Koji ARII	Koji Arii Signature	April 10, 2000
Name of third inventor, if any	Signature	Date
Name of fourth inventor, if any	Signature	Date
Name of fifth inventor, if any	Signature	Date
Name of sixth inventor, if any	Signature	Date
Name of seventh inventor, if any	Signature	Date
Name of eighth inventor, if any	Signature	Date
Name of ninth inventor, if any	Signature	Date

9 1987, 1992 Beveridge, DeGrandi, Weilacher & Young

RECORDED: 10/21/2003

PATENT REEL: 014628 FRAME: 0448