## **ASSIGNMENT**

Atty. Docket No. 7784-000697

WHEREAS, the undersigned, hereinafter referred to collectively as Assignor, has invented:

## DIGITAL SIGNAL CONTROL USING FIRST ORDER HOLDS

for whi patent	ch Assi	ignor is	about to make or has made United States or International application for			
	(a)		executed on even date preparatory to filing (each inventor should sign this Assignment on the same day as he/she signs the Declaration and Power of Attorney);			
	(b)		executed on; or			
	(c)		filed on , and assigned Serial No. or PCT International Application No. , and			
	al plac	e of b	the Boeing Company, a corporation of the State of Delaware, having its usiness at 100 North Riverside Plaza, Chicago, Illinois 60606-1596, as Assignee, is desirous of acquiring an interest therein:			
NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy whereof is hereby acknowledged, Assignor by these presents does sell, assign and transfer unto Assignee and its successors in interest, the full and exclusive right, title and interest in the United States of America and all foreign countries, including the right to claim priority under the laws of the United States, the Paris Convention, and any foreign countries, to the said invention as described in the aforesaid application, said application for patent and all Letters Patent therefor to be held and enjoyed by Assignee to the full end of the term for which said Letters Patent are granted and any extensions thereof as fully and entirely as the same would have been held by Assignor had this assignment and sale not been made;						
United continue patent purpose Letters	uested States uation, any reise of pro	for the sand in continution in the continution in t	by covenants and agrees to execute all instruments or documents required making and prosecution of any applications of any type for patent in the in all foreign countries including, but not limited to, any provisional, ation-in-part, divisional, renewal or substitute thereof, and as to letter e-examination, or extension thereof, and for litigation regarding, or for the title and to the said invention, the United States application for patent, or or, for the benefit of Assignee without further or other compensation than			
been d			by covenants that no assignment, sale or agreement or encumbrance has d into which would conflict with this Assignment; and			
Assignor hereby requests the Commissioner of Patents and Trademarks to issue said Letters Patent of the United States of America to Assignee, and requests that any official of any country or countries foreign to the United States, whose duty it is to issue or grant patents and applications as aforesaid, to issue said Letters Patent, Utility Model Registration or Inventor's Certificate to Assignee.						

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Assignor hereby authorizes and requests my attorney to insert here in parentheses (Application No. \_\_\_\_\_, filed \_\_\_\_) the filing date and application number of said application

when known.

PATENT REEL: 015344 FRAME: 0517 **ASSIGNMENT** 

Douglas B. Kirkland

Date

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**RECORDED: 05/18/2004** 

PATENT REEL: 015344 FRAME: 0518

**SHEET** 

U.S. Department of Commerce Patent and Trademark Office

Our Ref.: 2018-879

## Mail Stop Assignment Recordation Services

Alexandria, VA 22313-1450	<u></u>
To the Honorable Commissioner of Patents and Trademarks:	Please record the attached original documents or copy thereof.
1. Name of conveying party(ies): Shinichiro OKUGAWA  5.14.04	Please record the attached original documents or copy thereof.  2. Name and address of receiving party(ies):  Name: DENSO CORPORATION Internal Address:
Masumi KINUGAWA	Name: DENSO CORPORATION
Kazuo KOBAYASHI	Internal Address:
Tsukasa KUBOSHIMA	Street Address: 1-1, Showa-cho, Kariya-city,
Additional name/s of conveying party/ies attached?	
2. Nature of commence	
3. Nature of conveyance:  ☐ Assignment ☐ Merger	City: Aichi-pref.
	State/Country: Japan Zip: 448-8661
Other	Zip. 440-0001
Execution Date: May 7, 2004	Additional name/s & address/es attached?  Yes No
<ol> <li>Application number(s) or patent number(s):</li> <li>If this document is being filed together with a new application, the execution</li> </ol>	cution date of the application is:  May 7, 2004
A. Patent Application No(s). 108450bb	B. Patent No(s).
(1) (2)	(1) (2)
(3)	(3)
	rs attached Yes No
5. Name and address of party to whom correspondence	6. Total number of applications & patents involved:
concerning document should be mailed:	1 2 3 and matrices of applications of patents involved.
<u> </u>	7. Total fee (37 CFR 3.41) \$ 40.00
Name: Larry S. Nixon	Enclosed
	Authorized to be charged to deposit account #14-114
Internal Address:	
_	8. The Commissioner is hereby authorized to charge any
Street Address: Nixon & Vanderhye P.C.	<u>deficiency</u> in the fee(s) filed, or asserted to be filed, or whic
1100 North Glebe Road	should have been filed herewith (or with any paper thereafte
8 <sup>th</sup> Floor	filed in this application by this firm) to our Account No.
City: Arlington State: VA Zip: 22201	14-1140.
DO NOT I	USE THIS SPACE
9. Statements and signature.	
To the best of my knowledge and belief, the foregoing infor	mation is true and correct and any attached copy is a true copy
of the original document.	по п
<b>\</b>	(N)
Larry S. Nixon	S. Twon May 14, 2004
	gnature Date
Reg. No. 25,640	
Total number of pages including or	riginal cover sheet, attachments, and document: [3]
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Case No. :
82853-US-SK/ns

## ASSIGNMENT OF U.S. PATENT APPLICATION

(Inventors)	Shinichiro Okugawa					
	Masumi Kinugawa		_			
	Kazuo Kobayashi					
	Teukasa Kuboshima		_			
	In consideration of the sum of one dollar (\$1.00) and other good and valuable					
	considerations paid to each of the undersigned, the undersigned agree(s) to assign, and					
	hereby does assign, transfer and set over	to				
(Assignee)	DENSO CORPORATION	a corporation of Japan				
(Address)	1-1, Showa-cho, Kariya-city, Aichi-pref., 448-8661 Japan					
	(hereinafter designated as the Assignee) the undersigned's entire right, title and interest for					
	the United States, its territories, dependencies and possessions in the invention, and all					
	applications for patent and any Letters Patent which may be granted therefore, known as					
(Title)	EXHAUST GAS PURIFICATION SYSTEM	OF INTERNAL COMBUSTION ENGINE				
		cuted on even date herewith an application for	_			
	patent in the United States of America or,	if not on even date, then has executed on				
	or has already file	d U.S. application Serial No, on				
	The density and a slice and a decay are ability as	San all and annual Add to the san the san at the				
	The undersigned acknowledges an obligat					
	assignee at the time the invention was ma	de.				

The undersigned agree(s) to execute all papers and documents necessary in connection with the application or any interference which may be declared and any continuing or divisional applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient and further to perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.

The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States patent to the Assignee.

The undersigned hereby authorize(s) and request(s) the Commissioner of Patents to issue any and all Letters Patent of the United States resulting from said application or any division or divisions or continuing applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has (they have) full right to convey the entire interest herein assigned, and that he has (they have) not executed and will not execute, any agreement in conflict herewith.

The undersigned hereby grant(s) the firm of NIXON & VANDERHYE P.C. the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent Office for recordation of this document. It is understood and agreed that ASSIGNEE'S attomeys Nixon & Vanderhye P.C. have represented only ASSIGNEE and will continue to represent only ASSIGNEE with respect to this invention.

In witness whereof, executed by the undersigned on the date(s) opposite the undersigned signature(s).

Date	may 7, 2004	Signature of inventor	Shiriching Okugawa
			Shinichiro Okugawa
Date	My 7, 2004	Signature of Inventor	Master Mani ala.
	h 2 - 4/		Masumi Kinugawa
Date	May 7, 2004	Signature of inventor	Kazuo Kobayashi Kazuo Kobayashi
	may 7 2004	<b>a</b> : <b>a a</b> :	L .
Date	May 1. 2004	Signature of inventor	Jeukasa Kuboshima Tsukasa Kuboshima

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PATENT REEL: 015344 FRAME: 0520

**RECORDED: 05/14/2004** 

No. 8646 P. 7

Case No.: \_\_\_ 82853-US-SK/ns

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Jac Nobeagaire Date May 7, 2004

Junko Suguki Date May 7, 2004

Usko Jacquin Date May 7, 2004

Ophkako Globiyana Date May 7, 2004 Witnessed by:

Witnessed by:

Witnessed by:

Witnessed by:

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