FORM PTO-1619A U.S. Department of Commerce Expires 06/30/99 **Patent and Trademark Office** 01-09-2003 OMB 0651-0027 **PATENT** OFFICE OF PUBLIC RECORDS 7th JM -7 M 10 40 102332592 3HEET FINANCE SECTION PATENTS ONLY TO: The Commissioner of Patents and Trademarks: Please record the attached original document(s) or copy(ies) **Conveyance Type** Submission Type New **Assignment Security Agreement** Resubmission (Non-Recordation License Change of Name Document ID# Correction of PTO Error Merger Other Reel# Frame # U.S. Government **Corrective Document** (For Use ONLY by U.S. Government Agencies) Reel# Frame # **Departmental File** Secret File Mark if additional names of conveying parties attached Execution Date Month Day Conveying Party(ies) Year Name (line 1) Vincent J. Troy July 22, 2002 Name (line 2) Execution Date h Day Year Second Party Month Name (line 1) Anthony Scanlan July 22, 2002 Name (line 2) Receiving Party Mark if additional names of receiving parties attached Name (line 1) Analog Devices, Inc. If document to be recorded is an assignment and the receiving party is not domiciled in the United Name (line 2) States, an appointment of a domestic representative is attached. Address (line 1) One Technology Way (Designation must be a separate document from Assignment.) Address (line 2) Address (line 3) Norwood MA 02062 State/Country Zip Code **Domestic Representative Name and Address** Enter for the first Receiving Party only. Name Address (line 1) Address (line 2) Address (line 3)

01/09/2003 GTON11 00000028 10166927

Address (line 4)

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Washington,
D.C. 2023 and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Paperwork Reduction Project (0651-0027), Washington, D.C. 20503. See OMB Mail documents to be recorded with required cover sheet(s) information to:

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FORM PTO-1 Expires 06/30/99 OMB 0651-0027	1619B	Page 2	U.S. Department of Commerce Patent and Trademark Office PATENT
Correspond	dent Name and Address	Area Code and Telephone Number	er (781)890-5678
Name	Jason D. Shanske		
Address (line 1)	Iandiorio & Teska		
Address (line 2)	260 Bear Hill Road, Waltham, MA	02451-1018	
Address (line 3)			
Address (line 4)			
Pages	Enter the total number of particular including any attachments.	ages of the attached conveyance doc	ument # 5
Application	Number(s) or Patent Nu	ımber(s) 🔲 Mar	k if additional numbers attached
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10/166,927	atent Application Number(s)		tent Number(s)
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If this document was	is being filed together with a new Pa	atent Application, enter the date the patent app	lication Month Day Year
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	Jason D. Shanske	(/www.	12/3/100
Name	e of Person Signing	Signature	Date
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FORM PTO-1619C Expires 06/30/99 OMB 0651-0027

RECORDATION FORM COVER SHEET CONTINUATION PATENTS ONLY

U.S. Department of Commerce Patent and Trademark Office PATENT

Conveying Pa		onal names of conveying parties attached
-		Execution Date Month Day Year
Name (line 1) Jos	seph Michael Barry	07/22/2002
Name (line 2)		Execution Date Month Day Year
Name (line 1) Join	nn Patrick Purcell	07/22/2002
Name (line 2)		Execution Date
Name (line 1) M	artin Gerard Cotter	Month Day Year 07/22/2002
Name (line 2)		
Receiving Par	ty	Mark if additional names of receiving parties attached
Name (line 1)		If document to be recorded is an assignment and the
		receiving party is not domiciled in the United
Name (line 2)		States, an appointment of a domestic
Address (line 1)		representative is attached. (Designation must be a
		separate document from Assignment.)
Address (line 2)		
Address (line 3)		
, , ,	City State/Coun	Zip Code
Name (line 1)		If document to be recorded
reame (inte 1)		is an assignment and the receiving party is not
Name (line 2)		domiciled in the United States, an appointment
Address (See 4)		of a domestic representative is attached.
Address (line 1)		(Designation must be a separate document from
Address (line 2)		Assignment.)
Address (line 3)	City State/Coun	ntry Zip Code
		2.0000
Application N	umber(s) or Patent Number(s)	Mark if additional numbers attached
Enter either the l	Patent Application Number or the Patent Number (DO NOT E	
Pate	nt Application Number(s)	Patent Number(s)

ASSIGNMENT

THIS ASSIGNMENT is made BETWEEN

- VINCENT J. TROY an Irish citizen of 65 Cragaun, Fr. Russell Road, Limerick, Ireland, of the First Part,
- ANTHONY SCANLAN an Irish citizen of 7 Kilterragh, Dooradoyle, Limerick, Ireland, of the Second Part,
- JOSEPH MICHAEL BARRY an Irish citizen of Lisnalty, Rossbrien, County Limerick, Ireland of the Third Part,
- JOHN PATRICK PURCELL an Irish citizen of 39 Cul Crannagh, Dooradoyle,
- Limerick, Ireland of the Fourth Part AND
- MARTIN GERARD COTTER an Irish citizen of 71 Westfield, Clare Road, Ennis, County Clare, Ireland, of the Fifth Part (hereinafter the First, Second, Third, Fourth and Fifth Parts are collectively referred to as the "Inventors", which expression shall include their successors and assigns where the context so requires or admits)
- AND ANALOG DEVICES, INC., a Massachusetts corporation having a place of business at One Technology Way, Norwood, Massachusetts 02062 U.S.A. (hereinafter referred to as the "Assignee", which expression shall include its successors and assigns and subsidiaries where the context so requires or admits) of the Sixth Part.

WHEREAS

- (a) The Inventors have made certain inventions or discoveries (or both) set forth in an application for Letters Patent as set forth in the Schedule hereto;
- (b) The Inventors are, or were at the time the invention was made, employees of the Assignee or were under contractual obligation with the Assignee, and made the said inventions and/or discoveries in the course of carrying out their duties as such employees or contractual duties;
- (c) The Inventors agree that the said duties were such that the same inventions and/or discoveries might reasonably be expected to result therefrom and that in consideration of such employment or contract their interest in and to the said inventions and/or discoveries is held in trust for and is the absolute property of the Assignee or whomsoever the Assignee may nominate; and
- (d) The Assignee had requested the Inventors agree to execute the ratification of

assignment hereinafter contained.

NOW THIS DEED WITNESSETH that in consideration of the premises and without reservations:

- 1. The Inventors hereby assign, transfer and convey unto the Assignee the entire right and title and interest in and to the said inventions and/or discoveries, the said application for Letters Patent and any and all other applications for Letters Patent or otherwise on the said Inventions and/or discoveries in whatsoever countries, including all divisional, renewal, substitute, continuation applications and applications under the International (Paris) Convention, European Patent Convention, Patent Cooperation Treaty, Community Patent Convention, or otherwise, based in whole or in part upon said inventions and/or discoveries, or upon the said application, and in and to any and all Letters Patent, reissues and extensions of Letters Patent granted for said inventions and/or discoveries or upon the said application, and every priority right that is or may be predicated upon or arise from said inventions and/or discoveries, said application and Letters Patent;
- 2. The Inventors hereby authorize the Assignee to file and assent to the Assignee filing patent applications in any or all countries on any or all of said inventions and/or discoveries in the name of the Inventors or in the name of the Assignee or otherwise as the Assignee may deem advisable, under the terms of the International (Paris) Convention, European Patent Convention, Patent Cooperation Treaty, Community Patent Convention or otherwise;
- 3. The Inventors hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America and the official empowered by all other governments and under the aforesaid Conventions, Treaties or otherwise, to issue or transfer all said Letters Patent to the Assignee.
- 4. The Inventors hereby warrant that they have not knowingly conveyed to others any right in the said inventions and/or discoveries, applications or patents or any license to use the same or to make, use or sell anything embodying or utilizing any of said inventions and/or discoveries; and that the Inventors have good right to assign the same unto the Assignee without encumbrance;

5. The Inventors hereby bind their heirs, legal representatives and assigns, as well as themselves, to do, upon the Assignee's request and at the Assignee's expense, but without additional consideration to them or to the Assignee, all acts reasonably serving to assure that the said inventions and/or discoveries, the said patent application and the said Letters Patent shall be held and enjoyed by the Assignee as fully and entirely as the same could have been held and enjoyed by the Inventors, their heirs, legal representatives and assigns if this assignment had not been made; and particularly to execute and deliver to the Assignee all lawful application documents including petitions, specifications, oaths, powers of attorney, and all assignments, disclaimers and lawful affidavits in form and substance as may be required by the Assignee; to communicate to the Assignee all facts known to the Inventors relating to said Inventions and/or discoveries or the history thereof; and to furnish the Assignee with any and all documents, photographs, models, samples and other physical exhibits in the Inventors' control or in the control of their heirs, legal representatives or assigns which may be useful for establishing the facts of the conceptions, disclosures, and reduction to practice of said inventions and/or discoveries.

THE SCHEDULE ABOVE REFERRED TO

Attorneys	U.S. Appln.	Filing	Title
File	Number	Date	
AD-269J	10/166,927	6/11/02	"A method for converting a video
			signal from one of an analogue and
			digital form to the other of the
			analogue and digital form with
			enhanced signal to noise ratio"

Permission is hereby granted to Iandiorio & Teska to enter any identifying information missing in said schedule.

IT IS HEREBY CERTIFIED that the transaction hereby effected does not form part of a larger transaction or a series of transactions in respect of which the amount or values or the aggregate amount or value of the consideration exceeds Six thousand three hundred and fifty Euro (ϵ 6,350).

SIGNED by the said	
VINCENT J. TROY	in the presence of:
Uncent Troy	his bull
VINCENT J. TROY	
this 22 day of July 2002	(WITNESSES)
SIGNED by the said	
ANTHONY SCANLAN	in the presence of:
Anthony Scenter	West was
Anthony Scanlow ANTHONY SCANLAN	
this 22 day of 9	(WITNESSES)
SIGNED by the said	
JOSEPH MICHAEL BARRY	in the presence of:
Loodh Burs	Mark a Charle
JOSEPH MICHAEL BARRY	
this 212 day of 2 cr 2002	(WITNESSES)
SIGNED by the said	
JOHN PATRICK PURCELL	in the presence of:
Solve Phroell	March a locall
JOHN PATRICK PURCELL	
this 22 day of 2:2 2002	(WITNESSES)
SIGNED by the said	
MARTIN GERARD COTTER	in the presence of:
MA CC	That a beaut
MARTIN GERARD COTTER	
this 22 day of 2	(WITNESSES)

IN WITNESS WHEREOF the parties hereto have set their hand.

Signed for and on b	chair or	
ANALOG DEVICE	ES, INC.	in the presence of:
BY: He	ese	Jusureen Deforma
Name: WAWes	<u> E</u>	The Grant
CAPACITY:	SANT CLERK	(WITNESSES)
·		
BY:		
Name:		
CAPACITY:		(WITNESSES)
this 25 da	y of	02

RECORDED: 01/07/2003