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PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Paul T. HURLEY	02/12/2013
Krzysztof KRYSZCZUK	01/22/2013
Robin SCHEIBLER	01/24/2013
Davide SCHIPANI	02/12/2013

RECEIVING PARTY DATA

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State/Country:	NEW YORK	
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PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	13765304

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ATTORNEY DOCKET NUMBER:	CH920100020US2	
NAME OF SUBMITTER:	JON A. GIBBONS	
	This document serves as an Oath/Declaration (37 CFR 1.63).	

PATENT

REEL: 029798 FRAME: 0525

Total Attachments: 4

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PATENT REEL: 029798 FRAME: 0526

DECLARATION (37 C.F.R. 1.63) FOR UTILITY PATENT APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. 1.76) AND ASSIGNMENT

Title of Invention: METHOD AND SYSTEM FOR COMPUTING FOURIER SERIES COEFFICIENTS FOR MASK LAYOUTS USING FFT

As a below named inventor, I hereby declare that:
This declaration is directed to the attached application, or (if following box is checked):
United States application or PCT international application numberfiled on
The above-identified application was made or authorized to be made by me.
I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.
I have reviewed and understand the contents of the application, including the claims.
I am aware of the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR Section 1.56.
Whereas, the undersigned inventor(s) has/have made certain inventions, improvements, and discoveries (herein referred to as the "invention") disclosed in the above-identified patent application and further identified by the IBM Docket Number provided above in the header of this document;
Whereas, International Business Machines Corporation, a corporation of New York having a place of business at Armonk, New York (herein referred to as "IBM"), desires to acquire, and each undersigned inventor desires to grant to IBM, the entire worldwide right, title, and interest in and to the invention and in and to any and all patents.

applications and patents directed thereto:

Now, therefore, for good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, each undersigned inventor ("ASSIGNOR") hereby sells or has sold, assigns or has assigned, and otherwise transfers or has transferred to IBM (the "ASSIGNEE"), its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the Invention, the above-identified United States patent application, and any and all other patent applications and patents for the Invention which may be applied for or granted therefor in the United States and in all foreign countries and jurisdictions, including all divisions, continuations, reissues, reexaminations, renewals, extensions, counterparts, substitutes, and extensions thereof, and all rights of priority resulting from the filing of such applications and granting of such patents. In addition, each undersigned inventor hereby authorizes and requests the Director of the United States Patent and Trademark Office to issue any United States Patent, and foreign patent authorities to issue any foreign patent, granted for the Invention, to IBM, its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the same to be held and enjoyed by IBM, its successors, legal representatives, and assigns to the full end of the terms for which any and all such patents may be granted, as fully and entirely as would have been held and enjoyed by the undersigned had this Assignment not been made; and each undersigned inventor agrees to execute any and all documents and instruments and perform all lawful acts reasonably related to recording this Assignment or perfecting title to the Invention and all related patents and applications, in IBM, its successors, legal representatives, and assigns, whenever requested by IBM, its successors, legal representatives, or assigns.

Each undersigned inventor acknowledges their prior and ongoing obligations to sell, assign, and transfer the rights under this Assignment to IBM and is unaware of any reason why they may not have the full and unencumbered right to sell, assign, and transfer the rights hereby sold, assigned, and transferred, and has not executed, and will not execute, any document or instrument in conflict herewith. Each undersigned inventor also hereby grants IBM, its successors, legal representatives, and assigns, the right to insert in this Assignment DECLARATION (37 C.F.R. 4.63) FOR UTILITY PATENT APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. 1.78) AND ASSIGNMENT

Title of invention: METHOD AND SYSTEM FOR COMPUTING FOURIER SERIES COEFFICIENTS FOR MASK LAYOUTS USING FFT

As a below named inventor, I hereby declare that:

This declaration is directed to the attached application, or (if following box is checked).

United States application or PCT international application must made by me. I believe that I am the original inventor or an original joint inventor of a distincted inventor. If a distinct of a distinct inventor of a distinct of a distinct inventor. I have reviewed and understand the contents of the application, indexing the claims. I am powers of the duty to disclose to the United States Patient and Trademark Cyffice at information known to the to the material to patientiability as defined in 37 CFR Section 1.58. Violenas, the understands inventor(s) is shifted to provide above in the beader of this document. Whereas, international Business Machines Corporation, a corporation of New York having a place of business at America, New York given in referred to as the "Invention") disclosed in the above-identitied by the ISM Docket Number provided above in the beader of this document. Whereas, international Business Machines Corporation, a corporation of New York having a place of business at America, New York given in referred to a situation of the provided above the resource of the plant of the inventor depreted in grant to ISM. the entire workhows girth, site, and interests in and to the inventor depreted in grant to ISM. the entire workhows girth, site, and interests in and to the inventor depreted in grant to ISM. the entire workhows girth, site, and either post and explications and provided above the resource of the provided above the provided above the provided above the resource of the provided above th	
I believe that I am the original inventor or an original joint inventor of a claimed invention in the application. I have reviewed and understand the contents of the application, including the claims. I am overse of the duty to disclore to the United States Patient and Trademark Critice at information known to me to be material to patientiability as defined in 37 CFR Section 1.55. Wiscess, the understand inventor(s) healthave made certain inventions, improvements, and discoveries (hardin referred to as the "Invention") disclosed in the above-identified patient application and further identified by the ISM Doctex Numbers provided above in the header of this discoverent in the ISM object Number of the patient of this discoverent inventor degrees to great to ISM, the entire workbride (right, side, and intens) in a corporation of New York having a place of business at Aerrock. New York ferrein referred to as 1BM*, cestres to adjust, and entire the inventor and inventor degrees to great to ISM. The entire workbride (right, side, and intens) in the entire workbride (right, side, and intens), the receipt and disclose of the medical patient application and application and patients of the fundering the inventor of patients and the entire workbride (right, side, and intens) in the law of the patients of the fundering the inventor of the patients of the fundering the inventor of the patients of the United States and a declaration of the ASSIGNEET, the successors, legal representations, and explain for organization and inventor deportant in the United States and and entire patients of the Inventor which make Patients from comparison the United States port and organization, and only patients. I and other the Inventor on the Inventors which make Patients of Trademark Office to United States port and IT organization, and a characterization with the Inventors, to Eldi (in the United States port and IT organization and IT orga	C) United States application or PCT international application number filed on
I have reviewed and understand the contents of the application, including the claims. I am pivers of the duty to diadose to the United States Patient and Trademark (office all information known to the to the material to patentiality as defined in 37 CFR Section 1.55. Westerss, the understanded investor(s) insufave made certain investions, ingrovereisins, and discoveries (herein referred to as the "Investion") disclosed in the above-identified patient application and further destrictions of the Docket Number provided above in the header of this discoveries. Whaves, international Business Mischines Corporation, a corporation of New York having a place of business at Americk, New York development of patient of the pa	The above-identified application was made or sutitionized to be made by me.
I am aware of the duty to disclose to the United States Patient and Trademark Cyffice at information known to me to be material to platentability as defined in 37 CFR Section 1.55. Whereas, the undersigned inventor(s) heafther compared to a site "Invention") disclosed in the above-identified patient application and further identified by the IBM Docket Number provided above in the header of this document. Whereas, international Business Machines Comparation of Securities of Machines Comparation of Securities of Securities (Securities). The securities of Securities (Securities). The entire vertication of the inventor devices to grant to IBM, the entire vertication of the inventor devices to grant to IBM. The entire vertication of the inventor devices to grant to IBM, the entire vertication of the securities of Securities of Securities (Securities). The securities of Securities of Securities of Securities (Securities) and securities of Securities of IBM (Securities) (Securities) (Securities) and securities of Securities of IBM (Securities) (Securitie	I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.
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Manetes, international Business Méchines Corporation, a corporation of New York having a place of business at Amrock, New York development referred to as 18M1), desires to adquire, and each undersigned inventor Ceseres to grant to ISM, the entire workwise (right, title, and interest in and to the invention and mand to any and all patent applications and peterns directed thereos. Now therefore, for good and valuable consideration, the receipt and sufficiency thereof being havinty adknowledged, each undersigned inventor ("ASSIGNOR") hereby sells or has said, assigns or has assigned, and otherwise transfers or has transferred to ISM (the "ASSIGNEE") its successors, legal representatives, and easigns, the children development of the United States assigned, and otherwise transfers or has transferred to ISM (the "ASSIGNEE") its successors, legal representatives, and easigns, the children development of the United States and in all foreign countries and plantage of the United States and any one at children patent applications and period by the Information which may be applicated for a granted and all rights of plantage and granting of the United States and granting of such patents. In addition, each understigned uncertified which is a successor in the United States and Indiance of the United States and granting of such patents. In addition, each understigned uncertified the record of the United States and granting of such patents. In addition, each understigned uncertainty of the United States and granting of the United States and grant and patents of the United States and grantage of the United States and grant and patents and	
inventor desires to grant to ISM, the entire workdwide sight, site, and interest in and to the investion and manufacture and part and part of the interest. Now therefore, for good and valuable consideration, the receipt and cultivations of the investion and otherwise transfers or has transferred to ISM (the "ASSIGNEE") its superssorts, legal representatives, and easigns, the childre workdod right, title, and interest in and to the lawerition, the above identified United States percent application, and any and all other pastent applications and particular to the invention which may be applied for or granted director in the United States and in all foreign countries and investions, including all divisions, commitmations, reliable, accessors, logal representatives, and extensions thereof, and all rights of pricing transfer in the United States and particular to the states of the United States and particular to investion and particular to the United States and Un	identified by the IBM Docket Number provided above in the header of this document;
assigned, and otherwise transferred to IBM (the "ASSIGNES"), its suppressons, legal representatives, and assigns, the drawn application, and only and applications, and part and a to the pattern applications, and patterns applications, and applications and presentatives and patterns are full to the Steries person applications, and applications and patterns are full to the steries person applications, and applications and patterns are full to the steries person and patterns are full to the steries person and granting of such patterns. In addition, essues any United States Paterns and foreign patent authorities to listus any toroign gallent, granted for the invention, to IBM, its successors, logal representatives, and assigns, the entire workwork origin title, and interest in and to the patents and to the legis and enjoyed by IBM, its successors logal representatives, and assigns to the fill end of the terms for which any and all such patents and so this year entirely as would have been held and enjoyed by the undersigned had this Assignment not been made; and each undersigned inventor agrees to execute any and all occurrents and instruments and perform all lawful acts reasonably the patents and applications, in IBM, its successors, logal representatives, or assigns. Whenever requested by terms to twinted and applications, in IBM, its successors, logal representatives, and assigns, and transfer the rights before a patent and and all related patents and applications, in IBM, its successors, logal representatives, and assigns which the fill and enjoyed by the undersigned inventor accordance to the patents and transfer the rights hereby advantages their prior and ongoing utilities to sell assign, and transfer the rights hereby advantages their prior and ongoing utilities (patents) and transfer the rights hereby advantages of the patents and transfer the rights hereby advantages of the patents and transfer the rights and tr	Whereas, international Business Machinea Corporation, a corporation of New York having a place of business at Armonk, New York french referred to as "IBM"), desires to acquire, and each undersigned inventor desires to grant to IBM, the entire worldwide right, title, and interest in and to the inventor desires and patent applications and patents directed thereso.
and unencombard right to sell, assign, and transfer the rights hereby sold, assigned, and transferred; and nash of severand, and transferred; and undersigned inventor size hereby grids. IBM, its successors, legal-representatives, and assigns, the right to insert it his Assignitive in dentification (including, but not limited to, potent Application Number) which may be necessary for desirable for recordation of this Assignment. This Assignment is governed by the substantive laws of the State of New York, and any disputes will be resolved in a New York state court or federal board shed in New York. I hereby acknowledge that any willout takes statement made in this declaration is punishable whiter 16 U.S.C. 1001 by fine or imposement of tiot more than five (5) years, or both. (b) Legal Name of lifetimes Paul-T, HURLEY Signature: Date:	assigned, and otherwise transfers or has transferred to IRM (the "ASSIGNES") its successors, legal representatives, and assigns, the chaire wondwise fight, then, and mineral manufactures in and to the pasted applications and partial their may be applied for or granted disorder in the United States and institutions, continuations, recipitations, including all divisions, confinuations, recipitations, recipitations, and granting of such patients. In addition, each undersigned inventor hereby, subjects and excessors, the United of the United States Peterts, and Implies of such patients. In addition, each undersigned inventor hereby, subjects and requests the Director of the United States Peterts, and Implies of the United States Peterts, and Implies the Implies of the United States Peterts, and Implies the Implies of the United States Peterts, and Implies the Implies of the United States Peterts, and Implies the Implies the Implies of the Implies the Impli
Signature:	and unencumbered right to sell, assign, and transfer the rights hereby sold, assigned, and transferred; and transferred; and fish not executed, and will not execute, any document or abundant in considerations and transferred; and transferred; and the right to insent it has been been been dentification (including, but not limited to patent Applications of the Number) which may be necessary or destribute for recordation of this Assignment is governed by the substantive laws of the State of New York, and any disputes will be resolved in a New
Signature:	I hereby acknowledge that any wildul take statement made in this declaration is punishable when 16 U.S.O. 1001 by fine or impresentation of slot more than five (5) years, or both.
Signature:	12. Feb. 7017
(3) Lupei Nation of Investor Robin SCHEIBLER	(2) Lagol Name of Inventor Krzycztof KRYSZCZUK
	Signature:Detc:
Springhorte:	(3) Jugai Notic of Innexon Robin SCHEIBLER
	Signature:

any further identification (including, but not limited to, patent Application Number) which may be necessary or desirable for recordation of this Assignment. This Assignment is governed by the substantive laws of the State of New York, and any disputes will be resolved in a New York state court or federal court sited in New York.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

Signature:		Date:	
(2) Legal Name of In	ventyf: Krzyszieł KRYSZCZUK		
Signature:	K.Kl	Date: _22.01.	2013
(3) Legal Name of In	ventor: Robin SCHEIBLER		
Signature:	K. Whither	Date: <u>24.</u>	01.2013
(4) Legal Name of In	ventor: Davide SCHIPANI		
Signature:		Date:	

(1) Legal Name of Inventor. Paul T. HURLEY

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any further identification (including, but not limited to, patent Application Number) which may be necessary or desirable for recordation of this Assignment. This Assignment is governed by the substantive laws of the State of New York, and any disputes will be resolved in a New York state court or federal court sited in New York.

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(1) Legal Name	of Inventor: Paul T. HURLEY		
Signature:		·	Date:
(2) Legal Name	of Inventor: Krzysztof KRYSZCZUK	en in de la companya	
Signature: _			Date:
(3) Legal Name	of Inventor: Robin SCHEIBLER		en e
Signature: _			Date:
(4) Legal Name	of Inventor: Davide SCHIPANI		
Signature:	Dande blef		Date: 12.02.2013

2 of 2