

PATENT ASSIGNMENT

Electronic Version v1.1
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SUBMISSION TYPE:	NEW ASSIGNMENT												
NATURE OF CONVEYANCE:	ASSIGNMENT												
CONVEYING PARTY DATA													
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Simone Merlin</td> <td>01/28/2013</td> </tr> <tr> <td>Santosh Paul Abraham</td> <td>01/28/2013</td> </tr> <tr> <td>Maarten Menzo Wentink</td> <td>01/29/2013</td> </tr> <tr> <td>Zhi Quan</td> <td>01/23/2013</td> </tr> <tr> <td>Alfred Asterjadhi</td> <td>01/23/2013</td> </tr> </tbody> </table>		Name	Execution Date	Simone Merlin	01/28/2013	Santosh Paul Abraham	01/28/2013	Maarten Menzo Wentink	01/29/2013	Zhi Quan	01/23/2013	Alfred Asterjadhi	01/23/2013
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Alfred Asterjadhi	01/23/2013												
RECEIVING PARTY DATA													
Name:	Qualcomm Incorporated												
Street Address:	5775 Morehouse Drive												
City:	San Diego												
State/Country:	CALIFORNIA												
Postal Code:	92121												
PROPERTY NUMBERS Total: 1													
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13691056</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13691056								
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Application Number:	13691056												
CORRESPONDENCE DATA													
Fax Number:	8586582502												
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>													
Phone:	858-658-4351												
Email:	us-docketing@qualcomm.com												
Correspondent Name:	QUALCOMM INCORPORATED												
Address Line 1:	5775 MOREHOUSE DR.												
Address Line 4:	SAN DIEGO, CALIFORNIA 92121												
ATTORNEY DOCKET NUMBER:	120819												
NAME OF SUBMITTER:	Shae Penturf												
Total Attachments: 15													

CH \$40.00 13691056

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ASSIGNMENT

WHEREAS, WE,

1. **Simone Merlin**, a citizen of **ITALY**, having a mailing address located at **5775 Morehouse Drive San Diego, CA 92121** and a resident of **San Diego, CA**,
2. **Santosh Paul Abraham**, a citizen of **The United States of America**, having a mailing address located at **5775 Morehouse Drive San Diego, CA 92121** and a resident of **San Diego, CA**,
3. **Maarten Menzo Wentink**, a citizen of **The Netherlands**, having a mailing address located at **5775 Morehouse Drive San Diego, CA 92121** and a resident of **Breukelen, The Netherlands**,
4. **Zhi Quan**, a citizen of **CHINA**, having a mailing address located at **6582 Willowview Ct. Livermore, CA 94551** and a resident of **Livermore, CA**,
5. **Alfred Asterjadhi**, a citizen of **Albania**, having a mailing address located at **5775 Morehouse Drive San Diego, CA 92121** and a resident of **Utrecht, The Netherlands**,

have conceived of one or more processes, methods, machines, articles of manufacture, designs, compositions of matter, inventions, discoveries or new or useful improvements relating to **SYSTEMS AND METHODS FOR GENERATING AND DECODING SHORT CONTROL FRAMES IN WIRELESS COMMUNICATIONS** (collectively the "INVENTIONS") for which WE have executed and/or may execute one or more patent applications therefor; and

WHEREAS, QUALCOMM Incorporated (hereinafter "ASSIGNEE"), a Delaware corporation, having a place of business at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A., desires to acquire or otherwise obtain the entire right, title, and interest in and to said INVENTIONS, including all inventions related thereto or thereof, all patent applications therefor, and all patents that have granted or may be granted hereafter thereon, including but not limited to those identified below.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, WE do hereby acknowledge that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto ASSIGNEE, its successors, its legal representatives, and its assigns, the entire right, title, and interest throughout the world in and to said INVENTIONS, including all patent applications therefor that may have been filed or may be filed hereafter for said INVENTIONS in the United States, including but not limited to U.S. Application No(s). **13/691,056**, filed **November 30, 2012**, Qualcomm Reference No. **120819**, and all provisional applications relating thereto, together with U.S. Provisional Application No(s). **61/581,254**, filed **December 29, 2011**, Qualcomm Reference No. **120819P1**, U.S. Provisional Application No(s). **61/591,530**, filed **January 27,**

2012, Qualcomm Reference No. 120819P2, U.S. Provisional Application No(s). 61/605,900, filed March 2, 2012, Qualcomm Reference No. 120819P3, U.S. Provisional Application No(s). 61/648,510, filed May 17, 2012, Qualcomm Reference No. 120819P4, U.S. Provisional Application No(s). 61/691,066, filed August 20, 2012, Qualcomm Reference No. 120819P5, U.S. Provisional Application No(s). 61/731,425, filed November 29, 2012, Qualcomm Reference No. 120819P6, (and do hereby authorize ASSIGNEE and its representative to hereafter add herein such application number(s) and/or filing date(s) when known), and all divisional applications, renewal applications, continuation applications, continuation-in-part applications, and design applications thereof, and all issued patents of the United States which may have granted or may be granted hereafter thereon and all reissues, renewals, reexaminations, and extensions to any of the foregoing and all patents issuing thereon in the United States;

AND WE further do acknowledge and agree that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto ASSIGNEE, its successors, its legal representatives, and its assigns, all rights of priority under International Conventions, Treaties, or Agreements, and the entire right, title, and interest throughout the world in said INVENTIONS, including all inventions related thereto or thereof, and all patent applications therefor that may have been filed or may be filed hereafter for said INVENTIONS in any foreign country, countries, or treaty/union organizations, and all divisional applications, renewal applications, continuation applications, continuation-in-part applications, patent of addition applications, confirmation applications, validation applications, utility model applications, and design applications thereof, and all issued patents which may have granted or may be granted hereafter for said INVENTIONS in any country or countries foreign to the United States, and all reissues, renewals, reexaminations, and extensions thereof;

AND WE DO HEREBY authorize and request the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications or registrations, to issue all patents for said INVENTIONS to said ASSIGNEE, its successors, its legal representatives and its assigns, in accordance with the terms of this instrument;

AND WE DO HEREBY sell, assign, transfer, and convey to said ASSIGNEE, its successors, its legal representatives, and its assigns all claims for damages and all remedies arising out of or relating to any violation(s) of any of the rights assigned hereby that have or may have accrued prior to the date of assignment to said ASSIGNEE, or may accrue hereafter, including, but not limited to the right to sue for, seek, obtain, collect, recover, and retain damages and any ongoing or prospective royalties to which WE may be entitled, or that WE may collect for any infringement or from any settlement or agreement related to any of said patents before or after issuance;

AND WE HEREBY covenant and agree that WE will communicate promptly to said ASSIGNEE, its successors, its legal representatives, and its assigns, any facts known to us respecting said INVENTIONS, and will testify in any legal proceeding, sign all lawful papers, execute all applications and certificates, make all rightful declarations and/or oaths, and provide all lawful assistance to said ASSIGNEE, its successors, its legal representatives and its assigns, to obtain and enforce patent protection for said INVENTIONS in all countries;

AND WE HEREBY represent that WE have full and exclusive, unencumbered right to sell, assign, convey and transfer all subject matter herein, and hereby covenant that WE have not and will not execute any writing or do any act whatsoever conflicting with these presents.

Done at San Diego, CA, on 1/28/13
LOCATION DATE

Simone Merlin

Simone Merlin

Done at _____, on _____
LOCATION DATE

Santosh Paul Abraham

Done at _____, on _____
LOCATION DATE

Maarten Menzo Wentink

Done at _____, on _____
LOCATION DATE

Zhi Quan

Done at _____, on _____
LOCATION DATE

Alfred Asterjadhi

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WHEREAS, WE,

1. **Simone Merlin**, a citizen of **ITALY**, having a mailing address located at **5775 Morehouse Drive San Diego, CA 92121** and a resident of **San Diego, CA**,
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4. **Zhi Quan**, a citizen of **CHINA**, having a mailing address located at **6582 Willowview Ct. Livermore, CA 94551** and a resident of **Livermore, CA**,
5. **Alfred Asterjadhi**, a citizen of **Albania**, having a mailing address located at **5775 Morehouse Drive San Diego, CA 92121** and a resident of **Utrecht, The Netherlands**,

have conceived of one or more processes, methods, machines, articles of manufacture, designs, compositions of matter, inventions, discoveries or new or useful improvements relating to **SYSTEMS AND METHODS FOR GENERATING AND DECODING SHORT CONTROL FRAMES IN WIRELESS COMMUNICATIONS** (collectively the "INVENTIONS") for which WE have executed and/or may execute one or more patent applications therefor; and

WHEREAS, QUALCOMM Incorporated (hereinafter "ASSIGNEE"), a Delaware corporation, having a place of business at **5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A.**, desires to acquire or otherwise obtain the entire right, title, and interest in and to said INVENTIONS, including all inventions related thereto or thereof, all patent applications therefor, and all patents that have granted or may be granted hereafter thereon, including but not limited to those identified below.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, WE do hereby acknowledge that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto ASSIGNEE, its successors, its legal representatives, and its assigns, the entire right, title, and interest throughout the world in and to said INVENTIONS, including all patent applications therefor that may have been filed or may be filed hereafter for said INVENTIONS in the United States, including but not limited to U.S. Application No(s). **13/691,056**, filed **November 30, 2012**, Qualcomm Reference No. **120819**, and all provisional applications relating thereto, together with U.S. Provisional Application No(s). **61/581,254**, filed **December 29, 2011**, Qualcomm Reference No. **120819P1**, U.S. Provisional Application No(s). **61/591,530**, filed **January 27,**

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AND WE further do acknowledge and agree that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto ASSIGNEE, its successors, its legal representatives, and its assigns, all rights of priority under International Conventions, Treaties, or Agreements, and the entire right, title, and interest throughout the world in said INVENTIONS, including all inventions related thereto or thereof, and all patent applications therefor that may have been filed or may be filed hereafter for said INVENTIONS in any foreign country, countries, or treaty/union organizations, and all divisional applications, renewal applications, continuation applications, continuation-in-part applications, patent of addition applications, confirmation applications, validation applications, utility model applications, and design applications thereof, and all issued patents which may have granted or may be granted hereafter for said INVENTIONS in any country or countries foreign to the United States, and all reissues, renewals, reexaminations, and extensions thereof;

AND WE DO HEREBY authorize and request the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications or registrations, to issue all patents for said INVENTIONS to said ASSIGNEE, its successors, its legal representatives and its assigns, in accordance with the terms of this instrument;

AND WE DO HEREBY sell, assign, transfer, and convey to said ASSIGNEE, its successors, its legal representatives, and its assigns all claims for damages and all remedies arising out of or relating to any violation(s) of any of the rights assigned hereby that have or may have accrued prior to the date of assignment to said ASSIGNEE, or may accrue hereafter, including, but not limited to the right to sue for, seek, obtain, collect, recover, and retain damages and any ongoing or prospective royalties to which WE may be entitled, or that WE may collect for any infringement or from any settlement or agreement related to any of said patents before or after issuance;

AND WE HEREBY covenant and agree that WE will communicate promptly to said ASSIGNEE, its successors, its legal representatives, and its assigns, any facts known to us respecting said INVENTIONS, and will testify in any legal proceeding, sign all lawful papers, execute all applications and certificates, make all rightful declarations and/or oaths, and provide all lawful assistance to said ASSIGNEE, its successors, its legal representatives and its assigns, to obtain and enforce patent protection for said INVENTIONS in all countries;

AND WE HEREBY represent that WE have full and exclusive, unencumbered right to sell, assign, convey and transfer all subject matter herein, and hereby covenant that WE have not and will not execute any writing or do any act whatsoever conflicting with these presents.

Done at _____, on _____
LOCATION DATE

Simone Merlin

Done at San Diego, on 1/28/2013
LOCATION DATE



Santosh Paul Abraham

Done at _____, on _____
LOCATION DATE

Maarten Menzo Wentink

Done at _____, on _____
LOCATION DATE

Zhi Quan

Done at _____, on _____
LOCATION DATE

Alfred Asterjadhi

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WHEREAS, **QUALCOMM Incorporated** (hereinafter "**ASSIGNEE**"), a Delaware corporation, having a place of business at **5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A.**, desires to acquire or otherwise obtain the entire right, title, and interest in and to said **INVENTIONS**, including all inventions related thereto or thereof, all patent applications therefor, and all patents that have granted or may be granted hereafter thereon, including but not limited to those identified below.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, WE do hereby acknowledge that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto **ASSIGNEE**, its successors, its legal representatives, and its assigns, the entire right, title, and interest throughout the world in and to said **INVENTIONS**, including all patent applications therefor that may have been filed or may be filed hereafter for said **INVENTIONS** in the United States, including but not limited to U.S. Application No(s). **13/691,056**, filed **November 30, 2012**, Qualcomm Reference No. **120819**, and all provisional applications relating thereto, together with U.S. Provisional Application No(s). **61/581,254**, filed **December 29, 2011**, Qualcomm Reference No. **120819P1**, U.S. Provisional Application No(s). **61/591,530**, filed **January 27,**

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AND WE further do acknowledge and agree that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto ASSIGNEE, its successors, its legal representatives, and its assigns, all rights of priority under International Conventions, Treaties, or Agreements, and the entire right, title, and interest throughout the world in said INVENTIONS, including all inventions related thereto or thereof, and all patent applications therefor that may have been filed or may be filed hereafter for said INVENTIONS in any foreign country, countries, or treaty/union organizations, and all divisional applications, renewal applications, continuation applications, continuation-in-part applications, patent of addition applications, confirmation applications, validation applications, utility model applications, and design applications thereof, and all issued patents which may have granted or may be granted hereafter for said INVENTIONS in any country or countries foreign to the United States, and all reissues, renewals, reexaminations, and extensions thereof;

AND WE DO HEREBY authorize and request the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications or registrations, to issue all patents for said INVENTIONS to said ASSIGNEE, its successors, its legal representatives and its assigns, in accordance with the terms of this instrument;

AND WE DO HEREBY sell, assign, transfer, and convey to said ASSIGNEE, its successors, its legal representatives, and its assigns all claims for damages and all remedies arising out of or relating to any violation(s) of any of the rights assigned hereby that have or may have accrued prior to the date of assignment to said ASSIGNEE, or may accrue hereafter, including, but not limited to the right to sue for, seek, obtain, collect, recover, and retain damages and any ongoing or prospective royalties to which WE may be entitled, or that WE may collect for any infringement or from any settlement or agreement related to any of said patents before or after issuance;

AND WE HEREBY covenant and agree that WE will communicate promptly to said ASSIGNEE, its successors, its legal representatives, and its assigns, any facts known to us respecting said INVENTIONS, and will testify in any legal proceeding, sign all lawful papers, execute all applications and certificates, make all rightful declarations and/or oaths, and provide all lawful assistance to said ASSIGNEE, its successors, its legal representatives and its assigns, to obtain and enforce patent protection for said INVENTIONS in all countries;

AND WE HEREBY represent that WE have full and exclusive, unencumbered right to sell, assign, convey and transfer all subject matter herein, and hereby covenant that WE have not and will not execute any writing or do any act whatsoever conflicting with these presents.


Done at _____, on _____
LOCATION DATE

Simone Merlin

Done at _____, on _____
LOCATION DATE

Santosh Paul Abraham

Done at Naarden, on 29 Jan 2013
LOCATION DATE


Maarten Menzo-Wentink

Done at _____, on _____
LOCATION DATE

Zhi Quan

Done at _____, on _____
LOCATION DATE

Alfred Asterjadhi

ASSIGNMENT

WHEREAS, WE,

1. Simone Merlin, a citizen of ITALY, having a mailing address located at 5775 Morehouse Drive San Diego, CA 92121 and a resident of San Diego, CA,
2. Santosh Paul Abraham, a citizen of The United States of America, having a mailing address located at 5775 Morehouse Drive San Diego, CA 92121 and a resident of San Diego, CA,
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5. Alfred Asterjadhi, a citizen of Albania, having a mailing address located at 5775 Morehouse Drive San Diego, CA 92121 and a resident of Utrecht, The Netherlands,

have conceived of one or more processes, methods, machines, articles of manufacture, designs, compositions of matter, inventions, discoveries or new or useful improvements relating to **SYSTEMS AND METHODS FOR GENERATING AND DECODING SHORT CONTROL FRAMES IN WIRELESS COMMUNICATIONS** (collectively the "INVENTIONS") for which WE have executed and/or may execute one or more patent applications therefor; and

WHEREAS, QUALCOMM Incorporated (hereinafter "ASSIGNEE"), a Delaware corporation, having a place of business at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A., desires to acquire or otherwise obtain the entire right, title, and interest in and to said INVENTIONS, including all inventions related thereto or thereof, all patent applications therefor, and all patents that have granted or may be granted hereafter thereon, including but not limited to those identified below.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, WE do hereby acknowledge that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto ASSIGNEE, its successors, its legal representatives, and its assigns, the entire right, title, and interest throughout the world in and to said INVENTIONS, including all patent applications therefor that may have been filed or may be filed hereafter for said INVENTIONS in the United States, including but not limited to U.S. Application No(s). 13/691,056, filed November 30, 2012, Qualcomm Reference No. 120819, and all provisional applications relating thereto, together with U.S. Provisional Application No(s). 61/581,254, filed December 29, 2011, Qualcomm Reference No. 120819P1, U.S. Provisional Application No(s). 61/591,530, filed January 27,

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WHEREAS, QUALCOMM Incorporated (hereinafter "ASSIGNEE"), a Delaware corporation, having a place of business at 5775 Morehouse Drive, San Diego, California 92121-1714, U.S.A., desires to acquire or otherwise obtain the entire right, title, and interest in and to said INVENTIONS, including all inventions related thereto or thereof, all patent applications therefor, and all patents that have granted or may be granted hereafter thereon, including but not limited to those identified below.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, WE do hereby acknowledge that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto ASSIGNEE, its successors, its legal representatives, and its assigns, the entire right, title, and interest throughout the world in and to said INVENTIONS, including all patent applications therefor that may have been filed or may be filed hereafter for said INVENTIONS in the United States, including but not limited to U.S. Application No(s). 13/691,056, filed November 30, 2012, Qualcomm Reference No. 120819, and all provisional applications relating thereto, together with U.S. Provisional Application No(s). 61/581,254, filed December 29, 2011, Qualcomm Reference No. 120819P1, U.S. Provisional Application No(s). 61/591,530, filed January 27,

2012, Qualcomm Reference No. 120819P2, U.S. Provisional Application No(s). 61/605,900, filed March 2, 2012, Qualcomm Reference No. 120819P3, U.S. Provisional Application No(s). 61/648,510, filed May 17, 2012, Qualcomm Reference No. 120819P4, U.S. Provisional Application No(s). 61/691,066, filed August 20, 2012, Qualcomm Reference No. 120819P5, U.S. Provisional Application No(s). 61/731,425, filed November 29, 2012, Qualcomm Reference No. 120819P6, (and do hereby authorize ASSIGNEE and its representative to hereafter add herein such application number(s) and/or filing date(s) when known), and all divisional applications, renewal applications, continuation applications, continuation-in-part applications, and design applications thereof, and all issued patents of the United States which may have granted or may be granted hereafter thereon and all reissues, renewals, reexaminations, and extensions to any of the foregoing and all patents issuing thereon in the United States;

AND WE further do acknowledge and agree that WE have sold, assigned, conveyed, and transferred, and by these presents do hereby sell, assign, convey, and transfer, unto ASSIGNEE, its successors, its legal representatives, and its assigns, all rights of priority under International Conventions, Treaties, or Agreements, and the entire right, title, and interest throughout the world in said INVENTIONS, including all inventions related thereto or thereof, and all patent applications therefor that may have been filed or may be filed hereafter for said INVENTIONS in any foreign country, countries, or treaty/union organizations, and all divisional applications, renewal applications, continuation applications, continuation-in-part applications, patent of addition applications, confirmation applications, validation applications, utility model applications, and design applications thereof, and all issued patents which may have granted or may be granted hereafter for said INVENTIONS in any country or countries foreign to the United States, and all reissues, renewals, reexaminations, and extensions thereof;

AND WE DO HEREBY authorize and request the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications or registrations, to issue all patents for said INVENTIONS to said ASSIGNEE, its successors, its legal representatives and its assigns, in accordance with the terms of this instrument;

AND WE DO HEREBY sell, assign, transfer, and convey to said ASSIGNEE, its successors, its legal representatives, and its assigns all claims for damages and all remedies arising out of or relating to any violation(s) of any of the rights assigned hereby that have or may have accrued prior to the date of assignment to said ASSIGNEE, or may accrue hereafter, including, but not limited to the right to sue for, seek, obtain, collect, recover, and retain damages and any ongoing or prospective royalties to which WE may be entitled, or that WE may collect for any infringement or from any settlement or agreement related to any of said patents before or after issuance;

AND WE HEREBY covenant and agree that WE will communicate promptly to said ASSIGNEE, its successors, its legal representatives, and its assigns, any facts known to us respecting said INVENTIONS, and will testify in any legal proceeding, sign all lawful papers, execute all applications and certificates, make all rightful declarations and/or oaths, and provide all lawful assistance to said ASSIGNEE, its successors, its legal representatives and its assigns, to obtain and enforce patent protection for said INVENTIONS in all countries;

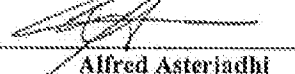
AND WE HEREBY represent that WE have full and exclusive, unencumbered right to sell, assign, convey and transfer all subject matter herein, and hereby covenant that WE have not and will not execute any writing or do any act whatsoever conflicting with these presents.

Done at _____, on _____
LOCATION DATE Simone Merlin

Done at _____, on _____
LOCATION DATE Santosh Paul Abraham

Done at _____, on _____
LOCATION DATE Maarten Menzo Wentink

Done at _____, on _____
LOCATION DATE Zhi Quan

Done at UTRECHT, NL, on 01/23/2013
LOCATION DATE 
Alfred Asterjadhi