PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Tevfik Yucek	06/25/2013
Simone Merlin	07/12/2013
Hemanth Sampath	06/30/2013
Didier Johannes Richard Van Nee	08/19/2013

RECEIVING PARTY DATA

Name:	QUALCOMM Incorporated		
Street Address:	5775 Morehouse Drive		
City:	San Diego		
State/Country:	CALIFORNIA		
Postal Code:	92121		

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	13901193

CORRESPONDENCE DATA

Fax Number: 5123275575

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

512-327-5515 Phone: Email: lrusso@tlgiplaw.com Correspondent Name: Toler Law Group Address Line 1: 8500 Bluffstone Cove

Address Line 2: Suite A201

Address Line 4: Austin, TEXAS 78759

ATTORNEY DOCKET NUMBER:	123080	
NAME OF SUBMITTER:	Laura Russo	
Signature:	/Laura Russo/	PATENT

REEL: 031062 FRAME: 0224 502467847

Date:	08/22/2013
Total Attachments: 12	
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ASSIGNMENT

WHEREAS, WE,

- 1. Tevfik Yucek, a citizen of Turkey, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121 and a resident of Santa Clara, CA.
- 2. 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,
- 3. Hemanth Sampath, 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,
- 4. Didier Johannes Richard Van Nee, a citizen of The Netherlands, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121 and a resident of De Meern, 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 INTER-FRAME SPACING DURATION FOR SUB-1 GIGAHERTZ WIRELESS NETWORKS (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). 13/901,193 filed May 23, 2013, Qualcomm Reference No. 123080, and all provisional applications relating thereto, together with U.S. Provisional Application No. 61/658,341, filed June 11, 2012, Qualcomm Reference No. 123080P1, U.S. Provisional Application No. 61/669,489 filed July 09, 2012, Qualcomm Reference No. 123080P2 and U.S. Provisional Application No. 61/677,336, filed on July 30, 2012, Qualcomm Reference No. 123080P3 (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;

PATENT QUALCOMM Ref. No. 123080 Page 3 of 3

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 Jose	on (,/25/2013	A
	LOCATION		DATE	Tevfik Yucek
Done at		, on		
	LOCATION		DATE	Simone Merlin
Done at_		, on		
Dana at	LOCATION		DATE	Hemanth Sampath
Done at_	LOCATION	, on	ÝNA TO	Didie Labour District N. N.
	LOCATION		DATE	Didier Johannes Richard Van Nee

Page 1 of 3

ASSIGNMENT

WHEREAS, WE,

- 1. Tevfik Yucek, a citizen of Turkey, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121 and a resident of Santa Clara, CA,
- 2. 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.
- 3. Hemanth Sampath, 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,
- 4. Didier Johannes Richard Van Nee, a citizen of The Netherlands, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121 and a resident of De Meern, 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 INTER-FRAME SPACING DURATION FOR SUB-1 GIGAHERTZ WIRELESS NETWORKS (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). 13/901,193 filed May 23, 2013, Qualcomm Reference No. 123080, and all provisional applications relating thereto, together with U.S. Provisional Application No. 61/658,341, filed June 11, 2012, Qualcomm Reference No. 123080P1, U.S. Provisional Application No. 61/669,489 filed July 09, 2012, Qualcomm Reference No. 123080P2 and U.S. Provisional Application No. 61/677,336, filed on July 30, 2012, Qualcomm Reference No. 123080P3 (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	Tevfik Yucek
Done at	San Diego	, on _	7/12/13	Semone Kerlin
	LOCATION		DATE	Simone Merlin
Done at		_, on _		
	LOCATION		DATE	Hemanth Sampath
Done at		, on		
	LOCATION		DATE	Didier Johannes Richard Van Nee

ASSIGNMENT

WHEREAS, WE,

- 1. Tevfik Yucek, a citizen of Turkey, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121 and a resident of Santa Clara, CA,
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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 INTER-FRAME SPACING DURATION FOR SUB-1 GIGAHERTZ WIRELESS NETWORKS (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). 13/901,193 filed May 23, 2013, Qualcomm Reference No. 123080, and all provisional applications relating thereto, together with U.S. Provisional Application No. 61/658,341, filed June 11, 2012, Qualcomm Reference No. 123080P1, U.S. Provisional Application No. 61/669,489 filed July 09, 2012, Qualcomm Reference No. 123080P2 and U.S. Provisional Application No. 61/677,336, filed on July 30, 2012, Qualcomm Reference No. 123080P3 (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;

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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	Tevfik Yucek
Done at		_, on _	DATE	Simone Merlin
	LOCATION		DATE	Simone Merlin
Done at	San Digo	្ឋា	06/30/13	Hamanth Samnath
Done at	LOCATION		DATE	Hemanth Sampath
Done at	LOCATION	_, on _	DATE	Didier Johannes Richard Van Nee

ASSIGNMENT

WHEREAS, WE.

- 1. Tevfik Yucek, a citizen of Turkey, having a mailing address located at 5775 Morehouse Drive, San Diego, CA 92121 and a resident of Santa Clara, CA,
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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;

PATENT

QUALCOMM Ref. No. 123080 Page 3 of 3

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	Tevfik Yucek
Done at		, on		
	LOCATION		DATE	Simone Merlin
Done at		, on		
	LOCATION		DATE	Hemanth Sampath
Dona at	Breukelen	on	August 19, 2013	
Done at	LOCATION	OII .	DATE	Didier Johannes Richard Van Nee

PATENT REEL: 031062 FRAME: 0237

RECORDED: 08/22/2013