### PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
Timo Koskela	05/16/2011
Sami-Jukka Hakola	05/12/2011
Samuli Turtinen	05/12/2011
Chunyan Gao	05/13/2011

#### **RECEIVING PARTY DATA**

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State/Country:	JAPAN
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#### PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	13963399

## **CORRESPONDENCE DATA**

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NAME OF SUBMITTER:	Jerry Stanton
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Signature:	/Jerry Stanton/
Date:	08/09/2013
Total Attachments: 5 source=RM105005_Assignment#page1.tif source=RM105005_Assignment#page2.tif source=RM105005_Assignment#page3.tif source=RM105005_Assignment#page4.tif source=RM105005_Assignment#page5.tif	

PATENT REEL: 030979 FRAME: 0465

### ASSIGNMENT

Title of Invention	SIGNALING METHOD TO ENA LICENSED AND UNLICENSED LTE-A NETWORKS			
Filing Details	This assignment is directed to (che US Provisional Application No. US Application No.	******	Filed On	August 9, 2013
	a 371 national stage of United Kingdom Patent Appl		Filed On Filed On Filed On	
	PCT Application No.	PCT/CN2011/070929	Filed On	February 11, 2011

As the below named inventor(s), I/we,

- (1) Time Koskela, a citizen of Finland and residing at Rantatienkatu 50 as 5, FI-90120 Oulu, Finland;
- (2) Sami Hakola, a citizen of Finland and residing at Peikontie 7, FI-90450 Kempele, Finland;
- (3) Samuli Turtinen, a citizen of Finland and residing at Poolatie 3a, FI-91100 li, Finland;
- (4) Chunyan Gao, a citizen of the People's Republic of China and residing at Room 271, Building 6, Ru Yi Li, Bei Cao Chang Hu Tong, Xi Zhi Men Nei Da Jie, Xicheng District, Beijing 100035, China;

have invented certain improvements in the patent application for which I/we have filed an application for Letters Patent as identified above:

WHEREAS, I/we authorize the attorney of record to update this document to include Filing Details as listed above (i/e., filing date, serial number, etc.) to correspond to the Title of the Invention and Docket Number if such Filing Details are not available at the time I/we signed this document;

WHEREAS, RENESAS MOBILE CORPORATION, a corporation organized under the laws of Japan, having its principal office in 6-2, Otemachi 2-chome, Chiyoda-ku, Tokyo, Japan (hereinafter referred to as "ASSIGNEE"), is desirous of acquiring the entire right, title and interest in and under the said invention and the said application, and in and to any and all Letters Patent which shall be granted therefore in any and all countries where it has been filed, including all rights to claim priority, and to any and all improvements which are disclosed in the invention entitled.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and other good and valuable consideration, we have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto said Assignee, its successors, legal representatives, and assigns, the entire right, title, and interest in, to and under said invention, and said application, and all divisional, renewal, substitutional, non-provisional, and continuing applications thereof, and all Letters Patent of any and all countries which may be granted thereon and all reissues, reexaminations.

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and extensions thereof, and all applications for Letters Patent which may be filed for said invention in any country or countries, and all extensions, renewals, reexaminations, and reissues thereof, and all prior patents and patent applications from which a filing priority of the above-described patent application may be obtained, including the right to collect past damages; and we hereby authorize and request the official of any country or countries, whose duty it is to issue patents on applications as aforesaid, to issue all Letters Patent for said invention to said Assignee, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND WE HEREBY covenant that we have full right to convey the entire interest herein assigned, and that we have not executed, and will not execute, any agreement in conflict herewith.

AND WE HEREBY further covenant and agree that we will communicate to said Assignee, its successors, legal representatives and assigns, any facts known to me respecting said invention, and testify in any legal proceedings, sign all lawful papers, execute all divisional, renewal, substitutional, continuing, reexamination, and reissue applications, make all rightful declarations and/or oaths and generally do everything possible to aid said Assignee, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for said invention in all countries.

This Assignment is deemed to be effective at least as early as February 11, 2011 (the first filing priority date).

inventor Name:	Timo Koskela	Ti Kokela	
		Inventor Signature	
		Dated: 16.3.2011	
		Jun Kan	
		Witness Signature	
		Witness Name JUHA KALAL MINE	

Assignee docket RM105005.

Inventor Name:	Sami Hakola		
		Inventor Signature	~ ^ !:
N		Dated: May 12	2011
2/13		9 -	
10%		Jon Jordan	
1000		Witness Signature	•
30			KARALATINE"

Assignee docket RM105005.

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Inventor Name:	Samuli Turtinen	Inventor Signature
		II IN TO THE TENTE OF THE TENTE
		Dated: Nay 12, 2011
		John Jens
	•	Witness Signature
		Witness Name: Juna KARALINEN

Assignee docket RM105005.

Inventor Name:	Chunyan Gao	Inventor Signature	
		Dated: <u>2011-05-13</u>	
		Jag Ham	
		Witness Signature	
		Witness Name: JING HAN	