

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT6961418

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
ICARO L. J. DA SILVA	10/11/2019
GUNNAR MILDH	06/28/2019
KARL NORRMAN	06/13/2019
OSCAR OHLSSON	06/13/2019
DUNG PHAM VAN	09/24/2018
PAUL SCHLIWA-BERTLING	10/11/2019
MAGNUS STATTIN	06/13/2019
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	TELEFONAKTIEBOLAGET LM ERICSSON (PUBL)
<b>Street Address:</b>	SE-164 83
<b>City:</b>	STOCKHOLM
<b>State/Country:</b>	SWEDEN
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	16764516
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(984)538-0416
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
<b>Phone:</b>	9842193375
<b>Email:</b>	zaccoinstructions@sagepat.com
<b>Correspondent Name:</b>	SAGE PATENT GROUP/ZACCO
<b>Address Line 1:</b>	P.O. BOX 30789
<b>Address Line 4:</b>	RALEIGH, NORTH CAROLINA 27622-0789
<b>ATTORNEY DOCKET NUMBER:</b>	P073593US02
<b>NAME OF SUBMITTER:</b>	DAVID C. HALL
<b>SIGNATURE:</b>	/David C. Hall/
<b>DATE SIGNED:</b>	10/11/2021
<b>Total Attachments: 10</b>	

source=P073593US02\_WO Signed Assignment#page1.tif  
source=P073593US02\_WO Signed Assignment#page2.tif  
source=P073593US02\_WO Signed Assignment#page3.tif  
source=P073593US02\_WO Signed Assignment#page4.tif  
source=P073593US02\_WO Signed Assignment#page5.tif  
source=P073593US02\_WO Signed Assignment#page6.tif  
source=P073593US02\_WO Signed Assignment#page7.tif  
source=P073593US02\_WO Signed Assignment#page8.tif  
source=P073593US02\_WO Signed Assignment#page9.tif  
source=P073593US02\_WO Signed Assignment#page10.tif

## ASSIGNMENT

This Assignment is made by:

<b>DA SILVA, Icaro L. J.</b>	<b>Bergshamra Allé 175 SE-170 77 SOLNA Sweden</b>
<b>MILDH, Gunnar</b>	<b>Koltrastvägen 28 SE-192 55 SOLLENTUNA Sweden</b>
<b>NORRMAN, Karl</b>	<b>Stigbergsgatan 32 A SE-116 28 STOCKHOLM Sweden</b>
<b>OHLSSON, Oscar</b>	<b>Malmgårdsvägen 30L SE-116 38 STOCKHOLM Sweden</b>
<b>PHAM VAN, Dung</b>	<b>Grindtorps skolgränd 44 SE-183 47 Täby Sweden</b>
<b>SCHLIWA-BERTLING, Paul</b>	<b>Hjalmar Svenfelts väg 29 B SE-590 71 LJUNGSBRO Sweden</b>
<b>STATIN, Magnus</b>	<b>Wäckareslingan 17 SE-194 44 UPPLANDS VÄSBY Sweden</b>

(hereinafter referred to as "Assignor(s)") in favor, and for the benefit and behoof of, Telefonaktiebolaget LM Ericsson (publ), a corporation duly organized under and pursuant to the laws of Sweden and having its principal place of business at SE-164 83 Stockholm, Sweden (hereinafter referred to as "Assignee").

For good, sufficient and adequate consideration, the receipt of which is hereby acknowledged, the Assignor(s) have, as of the Effective Date, sold, assigned, transferred, and set over, and by these presents, and to the extent any transferable or assignable rights still remain with the inventor, do hereby sell, assign, transfer, and set over, unto the Assignee, its successors, legal representatives, and assigns the entire right, title, and interest in and to the following inventions, application(s) for Letters Patent, and any and all Letters Patent or Patents in all countries and pursuant to all multilateral treaty organizations, including Sweden, the United States of America, the Patent Cooperation Treaty and European Patent Convention, that may be granted therefor and thereon, and in and to any and all divisions, continuations, continuations-in-part, conversions and utility models of said application(s), and reissues and extensions of said Letters Patent or Patents, the same to be held and enjoyed by the Assignee, for its use and behoof and the use and the behoof of its successors, legal representatives, and assigns, to the full end of the term or terms for which Letters Patent, Patents and Utility Models may be granted as fully and entirely as the

## ASSIGNMENT

same would have been held and enjoyed by the Assignor(s) had this sale and assignment not been made:

### REPLAY PROTECTION FOR RESUME PROCEDURE

including, but not limited to, the application(s) for Letters Patent and Utility Model filed in:

Country Code	Priority Application(s)	Filing Date(s)
WO	PCT/IB2018/059022	2018-11-16
US	16/764,516	2020-05-15

The Effective date is the earliest date of the above listed Filing Date(s).

Assignor(s) hereby authorize and request Assignee's Attorneys to insert the serial number and filing date of said application(s) for Letter Patent or Utility Model, when known. The assignment of the above mentioned rights includes a transfer of the whole right to use a priority (including priority according to any convention, multilateral agreement, bilateral agreement and national law) of the above mentioned application(s) for Letter Patent and Utility Model in all countries and multilateral treaty organizations wherein no residual rights shall remain with the Assignor(s). Assignor(s) hereby request that said Letters Patent, Patent or Utility Model be issued to Assignee as the Assignee of said inventions, the Letters Patent, Patent or Utility Model to be issued for the sole use and behoof of the Assignee, its successors, legal representatives, and assigns. Assignee alone hereinafter has the entire disposal of the invention and possesses entire ownership to any domestic and foreign patents or utility models granted thereafter. The rights granted hereunder shall include all rights to institute legal actions, obtain remedies and recover and retain damages in respect to said Letters Patent, Patent or Utility Model.

The Assignor(s) and Assignee hereby understand and agree that with the execution of this Assignment, to the extent necessary or appropriate, national and/or regional applications may be filed by the Assignee as the applicant and on behalf of the assignor.

To the extent Assignee is entitled to receive the rights hereunder pursuant to this Assignment, each of the Assignor(s) hereby covenants and agrees to and with the Assignee, its successors, legal representatives, and assigns, that, at the time of the Effective Date, the Assignor(s) were the sole and lawful owners of the entire right, title, and interest in and to the inventions and application(s) for Letters Patent or Utility Models above-mentioned, and that the same are unencumbered, and that the Assignor(s) have good and full right and lawful authority to sell and convey the same in the manner herein set forth.

Further, and for the same consideration, the Assignor(s) hereby covenant(s) and agree(s) to and with the Assignee, its successors, legal representatives, and assigns that the Assignor(s) will, whenever counsel of the Assignee, or the counsel of its successors, legal representatives, and assigns, shall advise that any proceeding in connection with said inventions or said application(s) for Letters Patent or Utility Model, or any proceeding in connection with Letters Patent or Utility Model for said inventions, in any country and any multilateral treaty organization, including interference proceedings, is lawful and desirable, or that any division, continuation, continuation-in-part, conversion or Utility Model of any application(s) for Letters Patent or Utility Model, or any reissue or extension of any Letters

## ASSIGNMENT

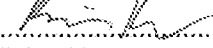
Patent to be obtained thereon, is lawful and desirable, sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done for the procurement, maintenance, enforcement, and defense of Letters Patent or Utility Model for said inventions, without charge to Assignee, its successors, legal representatives, and assigns, but at the cost and expense of the Assignee, its successors, legal representatives, and assigns. If any of the Assignor(s) is prevented by any obstacles from signing said documents in person, this Assignment shall be valid as a Power of Attorney for the Assignee to sign these documents on behalf of any such Assignor(s) or, in the event of the death of the latter, the estate thereof.

This Assignment shall be governed by and construed under, and any dispute, controversy or claim related hereto shall be decided in accordance with, the laws of:  
**Sweden**

without regard to the conflicts of laws provisions thereof. Any dispute, controversy or claim arising under, out of or relating to this Assignment and any subsequent amendments of this Assignment, including, without limitation, its formation, validity, binding effect, interpretation, performance, breach or termination, as well as non-contractual claims, shall be referred to and finally determined by arbitration in accordance with the WIPO Arbitration Rules. The arbitral tribunal shall consist of a sole arbitrator. The place of arbitration shall be in the country of the inventor's residence. The language to be used in the arbitral proceedings shall be English.

No modifications shall be made to this Assignment unless in writing and signed by each of the Assignor(s) and Assignee. If any of the provisions of this Assignment shall be deemed invalid or unenforceable, then the entire Assignment shall be construed as if not containing the particular invalid or unenforceable provision or provisions, and the rights and obligations of Assignee and Assignor(s) shall be construed and enforced accordingly. Assignee's failure to exercise any option made available as a result hereof, shall not be construed as a waiver of such provisions, rights, or options, or affect the validity of this Assignment. Assignor covenants and agrees that it will not take any actions in violation of this Assignment.

Subsequent assignment from any of the assignors to the assignee purporting to convey the subject matter specified herein for a particular country, patent office, or jurisdiction shall not invalidate any provision of this assignment and any such subsequent assignment shall act as a further confirmation of the assignment herein.

Date November 8, 2019 Signature on behalf of   
Assignee Brian Kearns

Patent Unit Director

## ASSIGNMENT

Title: REPLAY PROTECTION FOR RESUME PROCEDURE

Date: 2019-10-11 Signature of Assignor

DA SILVA, Icaro L. J.

Date: 2019-10-11 Witnessed by

Name:

Address:

JOSE LUIS PRADAS

Sjogatan 9

118 27 Stockholm

Sweden

Date: 2019-10-11 Witnessed by

Name:

Address:

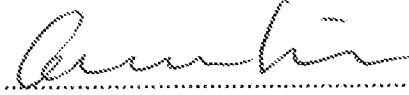
Asma MUHAMMAD

Parkvägen 12, SE-19141

Solbultna, Stockholm

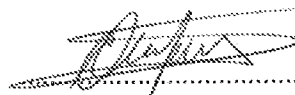
## ASSIGNMENT

Title: REPLAY PROTECTION FOR RESUME PROCEDURE

Date 28 june 2019 Signature of Assignor  
MILDH, GunnarDate 28 june 2019 Witnessed by

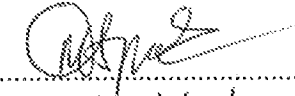
Name:

Address:

  
Oumier Teyeb  
Huvudstagan 3D  
17144 Solna  
SWEDENDate 28 june 2019 Witnessed by

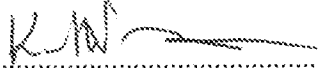
Name:

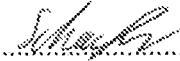
Address:

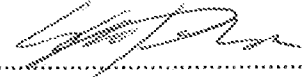
  
Ajmal Muhammad  
Parkvägen 12  
19141 Sollentuna  
SWEDEN

## ASSIGNMENT

Title: REPLAY PROTECTION FOR RESUME PROCEDURE

Date: 13 June 2019 Signature of Assignor:   
NORRMAN, Karl

Date: 13 June 2019 Witnessed by:   
Name: Christian Schaefer  
Address: Rindövägen 72  
16957 Solna  
Sweden

Date: 13 June 2019 Witnessed by:   
Name: KIM SEONGHYUN  
Address: Mälgårsvägen 17  
Årsta  
Sweden



## ASSIGNMENT

Title: REPLAY PROTECTION FOR RESUME PROCEDURE

Date <u>13/6-2019</u>	Signature of Assignor	<u>[Signature]</u> OHLSSON, Oscar
Date <u>13/6-2019</u>	Witnessed by	<u>Ioanna Pappa</u>
	Name:	<u>IOANNA PAPPAS</u>
	Address:	<u>FATOURIS BRUNNEGATA 11</u>
		<u>11828 STO LKHOLM</u>
		<u>SWEDEN</u>
Date <u>13/6-2019</u>	Witnessed by	<u>[Signature]</u>
	Name:	<u>Oumer Teyeb</u>
	Address:	<u>Huvudstorgatan 3D</u>
		<u>17144 Solna</u>
		<u>SWEDEN</u>

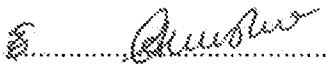
## ASSIGNMENT

Title: REPLAY PROTECTION FOR RESUME PROCEDURE

Date 2018-09-24..... Signature of Assignor
  
 PHAM VAN, Dung
Date 2018-09-24..... Witnessed by

Name:

Address:

  
 Sandeep Narayanan Kadan Veedu

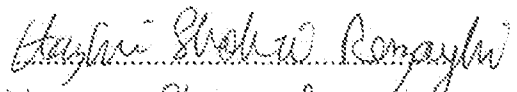
 Gustaf Berg Väg 17,  
 LUN 2502

Täby 18370

Date 2018-09-24..... Witnessed by

Name:

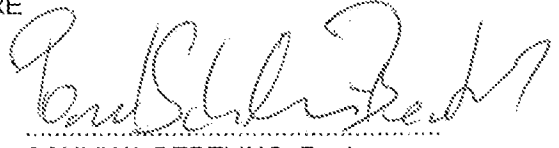
Address:

  
 Hazhri Shokri Razayhi

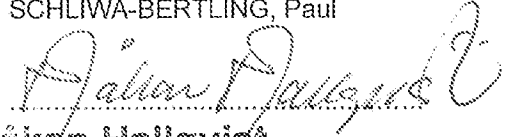
 Evanderangs gatan 18  
 16956 Solna

## ASSIGNMENT

Title: REPLAY PROTECTION FOR RESUME PROCEDURE

Date 2013-10-11 Signature of Assignor
  
 SCHLIWA-BERTLING, Paul
Date 2013-10-11 Witnessed by

Name:

  
**Håkan Hallqvist**

Nordänvindsvägen 7

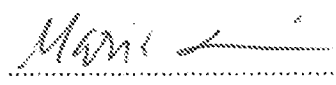
Address:

SE-58272 Linköping, SWEDEN

Ph +46 10 711 4401

Date 2013-10-11 Witnessed by

Name:

  
**Maria Strängberg**

Address:

Uttergatan 21

SE-587 23 Linköping, Sweden

Ph +46 10 714 86 23

## ASSIGNMENT

Title: REPLAY PROTECTION FOR RESUME PROCEDURE

Date: 13 June 2019 Signature of Assignor  
 STATIN Magnus

Date: 13 June 2019 Witnessed by  
 Name: ZHENHUA ZOU  
 Address: Nybodagatan 16  
 17142 SOLNA  
 Sweden

Date: 13 June 2019 Witnessed by  
 Name: Per-Erik Eriksson  
 Address: Skinegatan 67  
 116 37 STOCKHOLM  
 Sweden