

## PATENT ASSIGNMENT

Electronic Version v1.1

Stylesheet Version v1.1

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>Tomas Hedberg</td> <td>09/15/2009</td> </tr> <tr> <td>Jacob Osterling</td> <td>09/22/2009</td> </tr> <tr> <td>Oscar Zee</td> <td>09/15/2009</td> </tr> </tbody> </table>	Name	Execution Date	Tomas Hedberg	09/15/2009	Jacob Osterling	09/22/2009	Oscar Zee	09/15/2009	
Name	Execution Date								
Tomas Hedberg	09/15/2009								
Jacob Osterling	09/22/2009								
Oscar Zee	09/15/2009								
RECEIVING PARTY DATA									
Name:	Telefonaktiebolaget LM Ericsson (publ)								
Street Address:	S-164 83								
City:	Stockholm								
State/Country:	SWEDEN								
PROPERTY NUMBERS Total: 1									
Property Type	Number								
Application Number:	13394674								
CORRESPONDENCE DATA									
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Phone:	9199483390								
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<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i>									
Correspondent Name:	Murphy, Bilak & Homiller/Ericsson								
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Address Line 4:	Cary, NORTH CAROLINA 27518								
ATTORNEY DOCKET NUMBER:	1009-0095								
NAME OF SUBMITTER:	Michael D. Murphy								
Total Attachments: 6 source=Assignment#page1.tif source=Assignment#page2.tif source=Assignment#page3.tif source=Assignment#page4.tif source=Assignment#page5.tif source=Assignment#page6.tif									

CH \$40.00 13394674

## ASSIGNMENT

This Assignment is made by:

**HEDBERG, Tomas**

**Grubbensringen 31  
SE-112 69 STOCKHOLM  
Sweden**

**ÖSTERLING, Jacob**

**Meteorvägen 25 B  
SE-175 60 JÄRFÄLLA  
Sweden**

**ZEE, Oscar**

**Marmorgatan 13A, 4tr  
SE-118 67 Stockholm  
Sweden**

(hereinafter referred to as "Assignor(s)") in favor, and for the benefit and behoof of, Telefonaktiebolaget L M Ericsson (publ), a corporation duly organized under and pursuant to the laws of Sweden and having its principal place of business at S-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 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, and continuations-in-part 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 and Patents may be granted as fully and entirely as the same would have been held and enjoyed by the Assignor(s) had this sale and assignment not been made:

**LTE Cell Specific Reference Signal Bandwidth Reduction**

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

Country Code	Priority Application(s)	Filing Date(s)
WO	PCT/EP2009/061703	2009-09-09

Assignor(s) hereby authorize and request Assignee's Attorneys to insert the serial number and filing date of said application(s) for Letter Patent, when known. The assignment of the above mentioned rights includes a transfer of the right to use a convention priority of the above mentioned application(s) for Letter Patent in all countries and multilateral treaty organizations. Assignor(s) hereby request that said Letters Patent or Patent be issued to Assignee as the Assignee of said inventions, the Letters Patent or Patent to be issued for the

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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 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 or Patent.

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 execution and delivery these presents, 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 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 any proceeding in connection with Letters Patent 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 of any application(s) for Letters Patent, or any reissue or extension of any Letters 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 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.

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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.

## ASSIGNMENT

Date 090915 Signature of Assignor Tomas Hedberg  
HEDBERG, Tomas

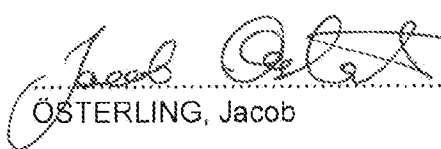
Date 2002-09-15 Witnessed by Paul Sjoberg  
Name: PAUL SJÖBERG  
Address: CENSRALV. 10  
181 60 LIDKÖ  
SWEDEN

Date 090915 Witnessed by Tomas Nylander  
Name: TOMAS NYLANDER  
Address: HÖGTORP 28  
139 34 VÄRMDÖ  
SWEDEN

## ASSIGNMENT

Date SEPT 22, 2009

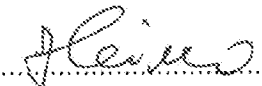
Signature of Assignor

  
ÖSTERLING, JacobDate Sep 22, 2009

Witnessed by

Name:

Address:

  
Franz Heiser

Astronomir. 17

SE-17566 Järfälla

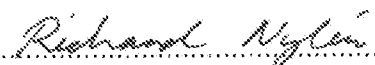
Sweden

Date Sep 22, 2009

Witnessed by

Name:

Address:

  
RICHARD NYLEN

Rågängen 186

SE-17546 Järfälla

SWEDEN

## ASSIGNMENT

Date 2009-09-15

Signature of Assignor

In the name of  
ZEE, OscarDate 2009-09-15

Witnessed by

Paul Stjernholm  
PAUL STJERNHOLM

Name:

Address:

CENTRALV. 10181 60 LIDANKÖSWEDENDate 09 09 15

Witnessed by

Tommy Nylander

Name:

Address:

TOMMY NYLANDERHÖGTORPSV. 28139 34 VÄRMDÖSWEDEN