

## PATENT ASSIGNMENT COVER SHEET

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
SERGEY BOLDYREV	09/06/2012
DEBMALYA BISWAS	09/10/2012
LAURI AARNO OLAVI TARKKALA	10/02/2012
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	NOKIA CORPORATION
<b>Street Address:</b>	KEILALAHDENTIE 4
<b>City:</b>	ESPOO
<b>State/Country:</b>	FINLAND
<b>Postal Code:</b>	FIN-02150
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	13572020
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(704)444-1111
<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>	
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<b>Email:</b>	kim.shaul@alston.com
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<b>ATTORNEY DOCKET NUMBER:</b>	042933/454442
<b>NAME OF SUBMITTER:</b>	GUY R. GOSNELL
<b>SIGNATURE:</b>	/Guy R. Gosnell/
<b>DATE SIGNED:</b>	11/24/2014
<b>Total Attachments: 4</b>	
source=454442Assign#page1.tif	
source=454442Assign#page2.tif	
source=454442Assign#page3.tif	
source=454442Assign#page4.tif	
<b>PATENT</b>	

**ASSIGNMENT**

In consideration of good and valuable consideration, the receipt of which is hereby acknowledged, I (we) the undersigned, Sergey BOLDYREV, Debmalya BISWAS, Lauri Aarno Olavi TARKKALA, hereby sell, assign, and transfer to Nokia Corporation, a corporation of Finland, having a principal place of business at Keilalahdentie 4, Espoo, FIN-02150, Finland ("Assignee"), and its successors, assigns, and legal representatives, the entire right, title, and interest for the United States and all foreign countries, in and to any and all improvements that are disclosed in the application for the United States patent, entitled:

**METHOD AND APPARATUS FOR  
PROVIDING GROUP ROUTE RECOMMENDATIONS**

- which has been executed by the undersigned concurrently herewith,  
 which was filed on August 10, 2012 and assigned Serial No. 13/572,020

and in and to said application and all divisional, continuing, substitute, renewal, reissue, and all other patent applications that have been or shall be filed in the United States and all foreign countries on any of said improvements; and in and to all original and reissued patents that have been or shall be issued in the United States and all foreign countries on said improvements; and in and to all rights of priority resulting from the filing of said United States application;

agree that said Assignee may apply for and receive a patent or patents for said improvements in its own name; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns, and legal representatives, to carry out in good faith the intent and purpose of this Assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all said improvements; execute all assignments and powers of attorney; communicate to said Assignee, its successors, assigns, and representatives all facts known to the undersigned relating to said improvements and the history thereof; and generally assist said Assignee, its successors, assigns, or representatives in securing and maintaining proper patent protection for said improvements and for vesting title to said improvements, and all applications for patents and all patents on said improvements, in said Assignee, its successors, assigns, and legal representatives; and

covenant with said Assignee, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

The undersigned hereby grant(s) registered practitioners of the firm of Dithavong Mori & Steiner, P.C. of 918 Prince Street, Alexandria, Virginia, 22314, the power to insert on this assignment any further identification, including the application number and filing date, which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

Each Inventor: Please Sign and Date Below:

Sep-6<sup>th</sup>, 2012  
Date

  
Name: Sergey BOEDYREV

\_\_\_\_\_, 20\_\_\_\_  
Date

\_\_\_\_\_  
Name: Debmalya BISWAS

\_\_\_\_\_, 20\_\_\_\_  
Date

\_\_\_\_\_  
Name: Lauri Aarno Olavi TARKKALA

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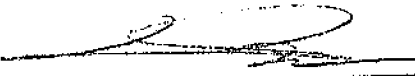
\_\_\_\_\_, 20\_\_\_\_  
Date

\_\_\_\_\_  
Name: Sergey BOLDYREV

10 Sep, 2012  
Date

Debmalya Biswas  
Name: Debmalya BISWAS

2 Oct, 2011  
Date

  
Name: Lauri Aarno Olavi TARKKALA