

12-28-2006

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To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies):

Michael K. Bugenhagen

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance/Execution Date(s):

Execution Date(s): December 18, 2006

- ☒ Assignment ☐ Merger ☐ Change of Name  
☐ Security Agreement ☐ Joint Research Agreement  
☐ Government Interest Assignment  
☐ Executive Order 9424, Confirmatory License  
☐ Other

2. Name and address of receiving party(ies)

Name: EMBARQ HOLDINGS COMPANY, LLC

Internal Address:

Street Address:

5454 W. 110th Street  
KSOPKJ0701

City: Overland Park

State: Kansas

Country: United States of America Zip: 66211

Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application or patent number(s):

☒ This document is being filed together with a new application.

A. Patent Application No.(s)

This application

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

5. Name and address to whom correspondence concerning document should be mailed:

Name: Gerald T. Welch  
PATTON BOGGS LLP

Internal Address: Atty. Dkt.: 024777.0180PTUS  
Street Address: 2001 Ross Avenue, Suite 3000

City: Dallas

State: TX Zip: 75201

Phone Number: (214) 758-6610

Fax Number: (214) 758-1550

Email Address: gwelch@pattonboggs.com

6. Total number of applications and patents involved:

1

7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00

- ☒ Authorized to be charged by credit card  
☐ Authorized to be charged to deposit account  
☐ Enclosed  
☐ None required (government interest not affecting title)

8. Payment Information

a. Credit Card Last 4 Numbers 1004  
Expiration Date 09/09

b. Deposit Account Number  
Authorized User Name

9. Signature:

Signature

December 19, 2006

Date

Gary B. Solomon - 44,347  
Name of Person Signing

Total number of pages including cover sheet, attachments, and documents:

4

112966 U.S. PTO  
11/642428



121906

**ASSIGNMENT BY INVENTOR**

**THIS ASSIGNMENT**, made this 18<sup>th</sup> day of December, 2006, by Michael K. Bugenhagen (hereinafter referred to as Assignor), residing at 12186 S. Sagebrush Drive, Olathe, Kansas 66061;

**WHEREAS**, Assignor has invented certain new and useful improvements in **SYSTEM AND METHOD FOR DIAGNOSING RF ATTRIBUTES OVER AN RF FOOTPRINT OF A WIRELESS NETWORK**, set forth in a Patent application for Letters Patent of the United States, filed herewith; and

**WHEREAS**, Embarrq Holdings Company, LLC, organized under and pursuant to the laws of Delaware having its principal place of business at 5454 W. 110th Street, KSOPKJ0701, Overland Park, Kansas 66211 (hereinafter referred to as Assignee), is desirous of acquiring the entire right, title and interest in and to said inventions and said Application for Letters Patent of the United States, and in and to any Letters Patent of the United States to be obtained therefore and thereon.

**NOW, THEREFORE**, in consideration of One Dollar (\$1.00) and other good and sufficient consideration, the receipt of which is hereby acknowledged, Assignor has sold, assigned, transferred and set over, and by these presents does sell, assign, transfer and set over, unto Assignee, its successors, legal representatives and assigns, the entire right, title and interest in and to the above-mentioned inventions and application for Letters Patent, and in and to any and all direct and indirect divisions, continuations and continuations-in-part of said application, and any and all Letters Patent in the United States and all foreign countries which may be granted therefore and thereon, and reissues, reexaminations and extensions of said Letters Patent, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by Assignee, for its own use and benefit and the use and benefit of its successors, legal representatives and assigns, to the full end of the term or terms for which Letters Patent may be granted and/or extended, as fully and entirely as the same would have been held and enjoyed by Assignor, had this sale and assignment not been made.

**AND** for the same consideration, Assignor hereby represents and warrants to Assignee, its successors, legal representatives and assigns, that, at the time of execution and delivery of these presents, except for any rights, titles and/or interests that have arisen to Assignee under law or that have already been transferred to Assignee, Assignor is the sole and lawful owner of the entire right, title and interest in and to the said inventions and application for Letters Patent above-mentioned, and that the same are unencumbered and that Assignor has good and full right and lawful authority to sell and convey the same in the manner herein set forth.

**AND** for the same consideration, Assignor hereby covenants and agrees to and with Assignee, its successors, legal representatives and assigns, that Assignor will 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 any Letters Patent and applications for Letters Patent for said inventions, without charge to Assignee, its successors, legal representatives and assigns, whenever counsel of Assignee, or counsel of its successors, legal representatives and assigns, shall advise: that any proceeding in connection with said inventions, or said Patent application for Letters Patent, or any proceeding in connection with any Letters Patent or applications for Letters Patent for said inventions in any country, including but not limited to interference proceedings, is lawful and desirable; or, that any division, continuation or continuation-in-part of any application for Letters Patent, or any reissue, reexamination or extension of any Letters Patent, to be obtained thereon, is lawful and desirable.

**AND** Assignor hereby requests the Commissioner of Patent and Trademarks to issue said Letters Patent of the United States to Assignee, as Assignee of said inventions and the Letters Patent to be issued thereon, for the sole use and benefit of Assignee, its successors, legal representatives and assigns.

**AND** Assignor hereby grants the following individuals the power to insert on this Assignment any further identification 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:

PATTON BOGGS LLP

All practitioners at Customer Number 44124

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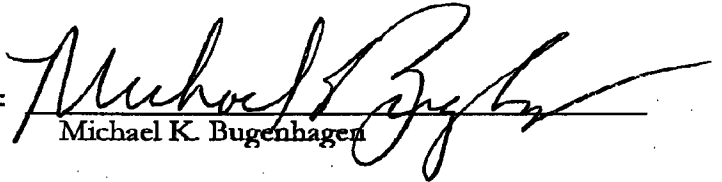
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AND Assignor acknowledges an obligation of assignment of this invention to Assignee  
at the time the invention was made.

Date: 12/18/2006

Signature: \_\_\_\_\_

  
Michael K. Bugenhagen

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