Title: METHODS, APPARATUS, AND SYSTEMS FOR ACCESSING MOBILE AND VOICE OVER IP TELEPHONE NETWORKS WITH A MOBILE HANDSET

Abstract: Methods, systems, and apparatus are provided to enable access to mobile and voice over IP (VoIP) telephone networks with a mobile handset. A VoIP gateway for the VoIP telephone network is provided. A cable modem allows communication between the handset and the VoIP telephone network via the VoIP gateway. A local network connects the handset to the VoIP gateway. The mobile handset determines whether it is within range of the local network. If the handset is within the range of the local network, data traffic may be routed to and from the handset via the VoIP telephone network. If the handset is outside of the range of the local network, data traffic may be routed to and from the handset via the mobile telephone network. The data traffic may comprise telephony data traffic and/or Internet protocol (IP) data traffic.

Published: with international search report

Continued on next page
Date of publication of the international search report: 22 May 2003

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04L12/28 H04Q7/38

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED
Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H04L H04Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic database consulted during the international search (name of database and, where practical, search terms used)
EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
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<th>Relevant to claim No.</th>
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</table>
| X        | EP 1 011 278 A (SYMBOL TECH.)  
21 June 2000 (2000-06-21)  
page 5, column 8, line 11 –page 11, column 19, line 30; figures | 1-3,10, 15, 20-22, 29,34, 39-41,53 |
| A        | ALCHEM T M ET AL: "IP SERVICES OVER BLUETOOTH: LEADING THE WAY TO A NEW MOBILITY"  
PROCEEDINGS ANNUAL CONFERENCE ON LOCAL COMPUTER NETWORKS. LCN, XX, XX, 1999, pages 2-11, XP001001314 | 1-57 |

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Date of the actual completion of the international search: 10 January 2003
Date of mailing of the international search report: 16/01/2003

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### INTERNATIONAL SEARCH REPORT

#### DOCUMENTS CONSIDERED TO BE RELEVANT

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<td>CN 1272739 A</td>
<td>08-11-2000</td>
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<td>EP 1011278 A2</td>
<td>21-06-2000</td>
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<td></td>
<td>JP 2000183977 A</td>
<td>30-06-2000</td>
</tr>
<tr>
<td>WO 0167684 A</td>
<td>13-09-2001</td>
<td>AU 4006001 A</td>
<td>17-09-2001</td>
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<tr>
<td></td>
<td></td>
<td>EP 1228604 A2</td>
<td>07-08-2002</td>
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<tr>
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<td>WO 0167684 A2</td>
<td>13-09-2001</td>
</tr>
<tr>
<td></td>
<td></td>
<td>WO 02091768 A1</td>
<td>14-11-2002</td>
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