

# EXHIBIT A



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(12) **United States Patent**  
Camilleri et al.

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(54) **METHOD OF ENABLING A WIRELESS DEVICE TO MAKE A NETWORK CONNECTION WITHOUT USING A NETWORK OPERATOR'S HOME LOCATION REGISTER**

USPC ..... 370/356; 370/352; 370/401; 455/416; 455/433; 455/445

(58) **Field of Classification Search**  
USPC ..... 455/445, 453, 435.1, 417, 422.1, 428, 455/433, 416; 370/329, 352-356  
See application file for complete search history.

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(73) Assignee: Shoo 533 Limited, Berkshire (GB)

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(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 710 days.

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This patent is subject to a terminal disclaimer.

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§ 371 (c)(1),  
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(74) *Attorney, Agent, or Firm* Saul Ewing LLP

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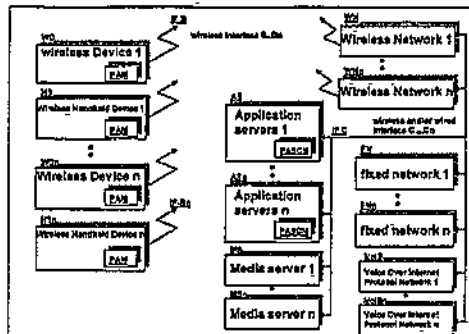
(57) **ABSTRACT**

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H04L 12/66 (2006.01)  
H04W 8/08 (2009.01)  
H04L 29/06 (2006.01)  
H04W 76/02 (2009.01)  
H04W 80/04 (2009.01)

A wireless device can initiate a network connection without using a network operator's home location register. The wireless device sends data to a server that defines a call request; and the server decides on the appropriate routing over all available networks for that call request. But, unlike a conventional HLR, the server can receive communications from the device using any one of several different protocols, and is not limited to the MAP (mobile application part) protocol. For example, the wireless device can use SMS or HTTP over the internet to communicate with the server. The server then determines the appropriate least cost routing.

(52) **U.S. Cl.**  
CPC ..... H04L 29/06027 (2013.01); H04W 8/082 (2013.01); H04W 76/02 (2013.01); H04L 65/1069 (2013.01); H04W 80/04 (2013.01)

24 Claims, 6 Drawing Sheets



## US 8,861,512 B2

Page 2

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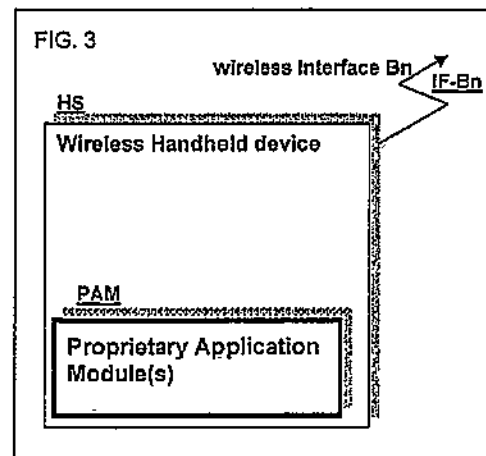
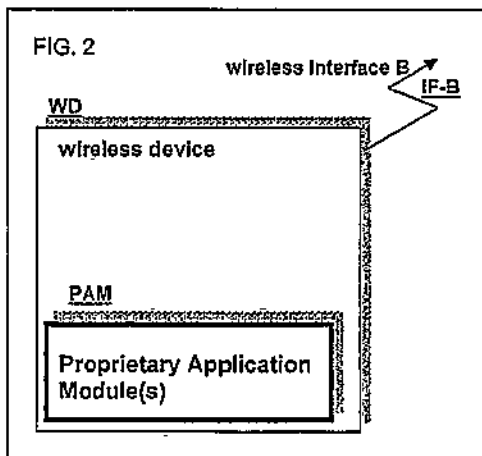
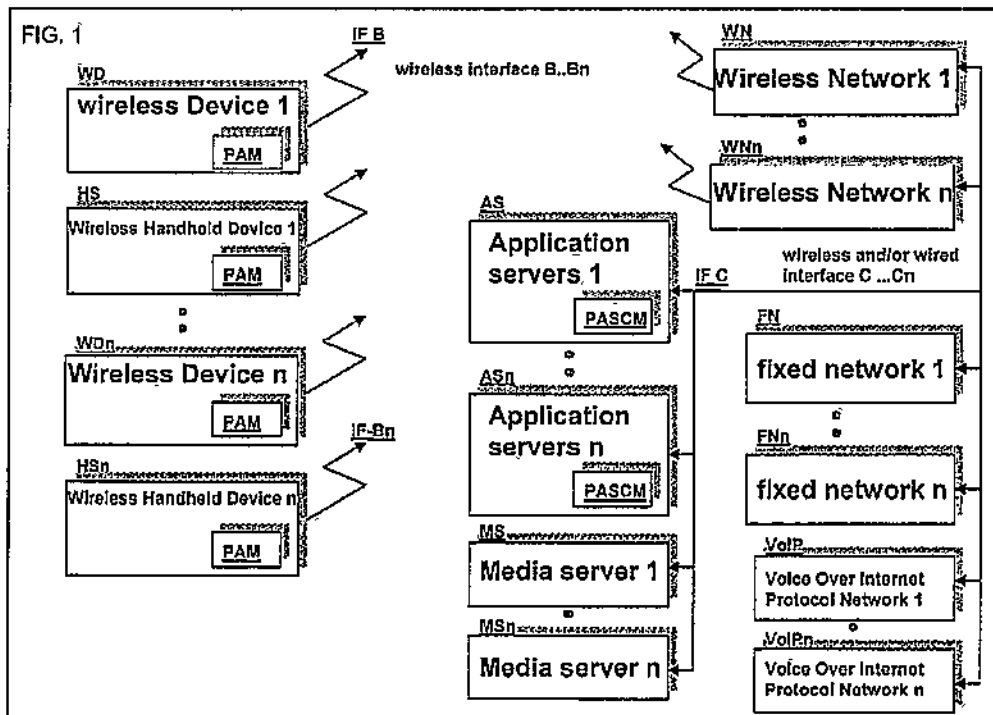
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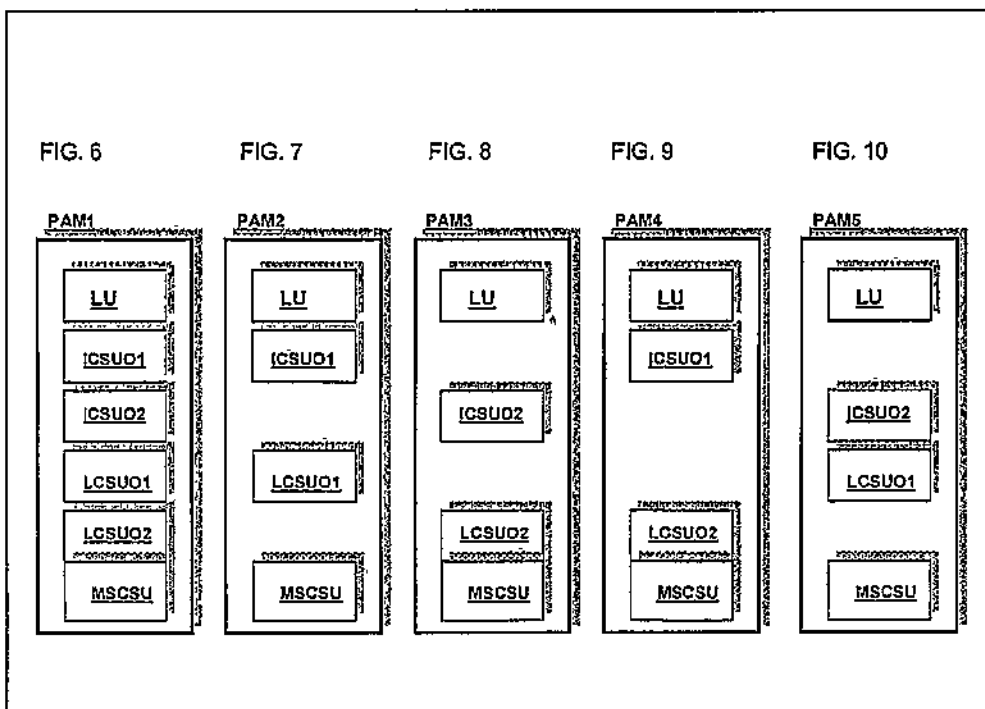
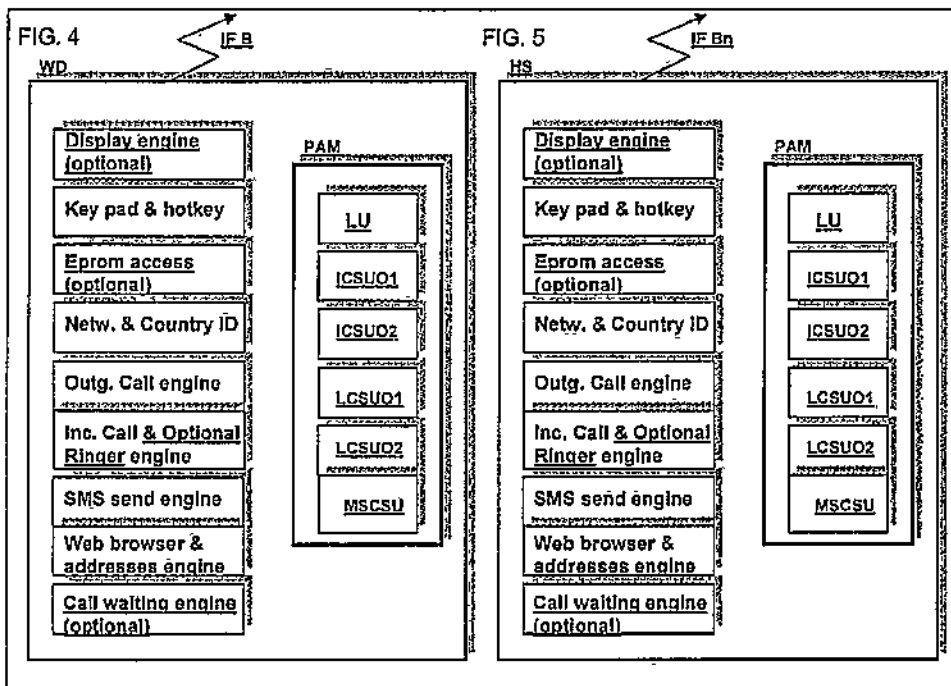
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