

United States Patent [19]
Alperovich et al.

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[54] **PROVIDING LOCATION-BASED CALL FORWARDING WITHIN A MOBILE TELECOMMUNICATIONS NETWORK**

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[21] Appl. No.: **08/766,296**

[22] Filed: **Dec. 13, 1996**

[51] Int. Cl.⁶ **H04Q 7/22**

[52] U.S. Cl. **455/417; 455/414**

[58] Field of Search 455/417, 456, 455/445, 432, 414

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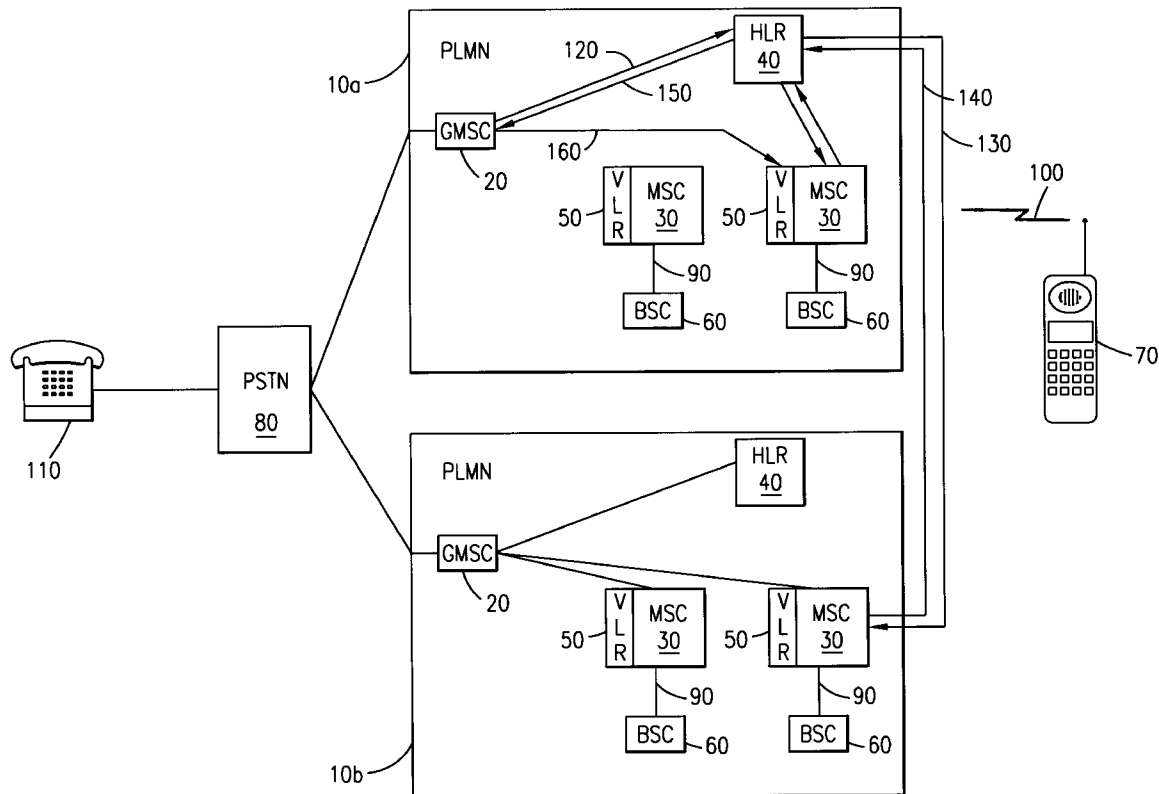
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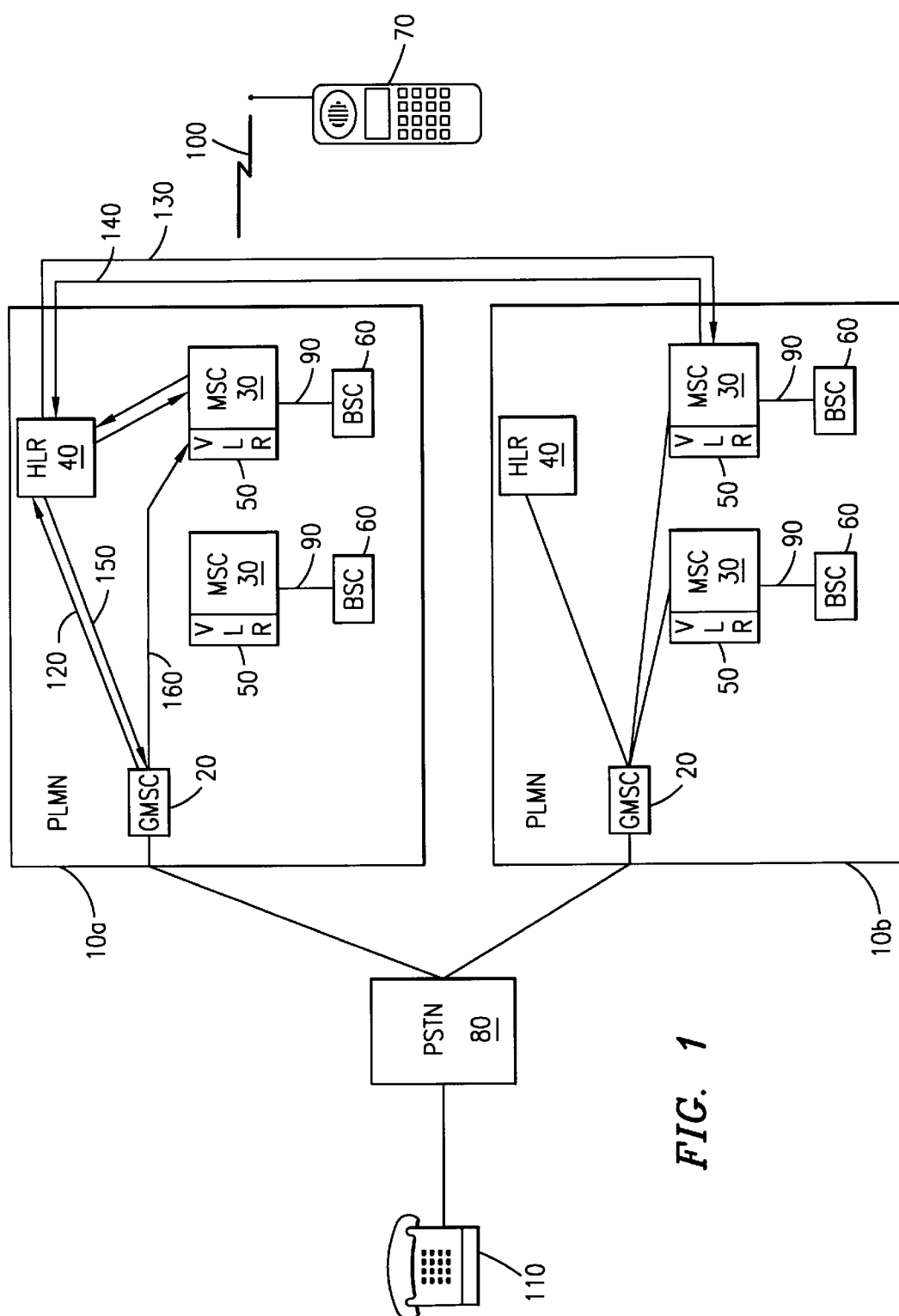
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[57] **ABSTRACT**

Call forwarding data, including forward to numbers for a particular mobile station are correlated with a particular service area and stored at a home location register (HLR) associated with that particular mobile station. Whenever the mobile station travels into a mobile switching center (MSC) serving that particular service area, the MSC performs a location update with the HLR. A location update signal further includes data representing the identity of the service area currently serving the mobile station. Upon receiving the location update signal from the serving MSC, the HLR analyzes the received data to determine the identity of the service area currently serving the mobile station and retrieves the call forwarding data associated with that particular service area. The retrieved call forwarding data are then analyzed to determine whether the forward to numbers are located in the current service area for the mobile station and, if so, transmitted back to the serving MSC in order to provide location-based call forwarding to the roaming mobile station.

34 Claims, 6 Drawing Sheets





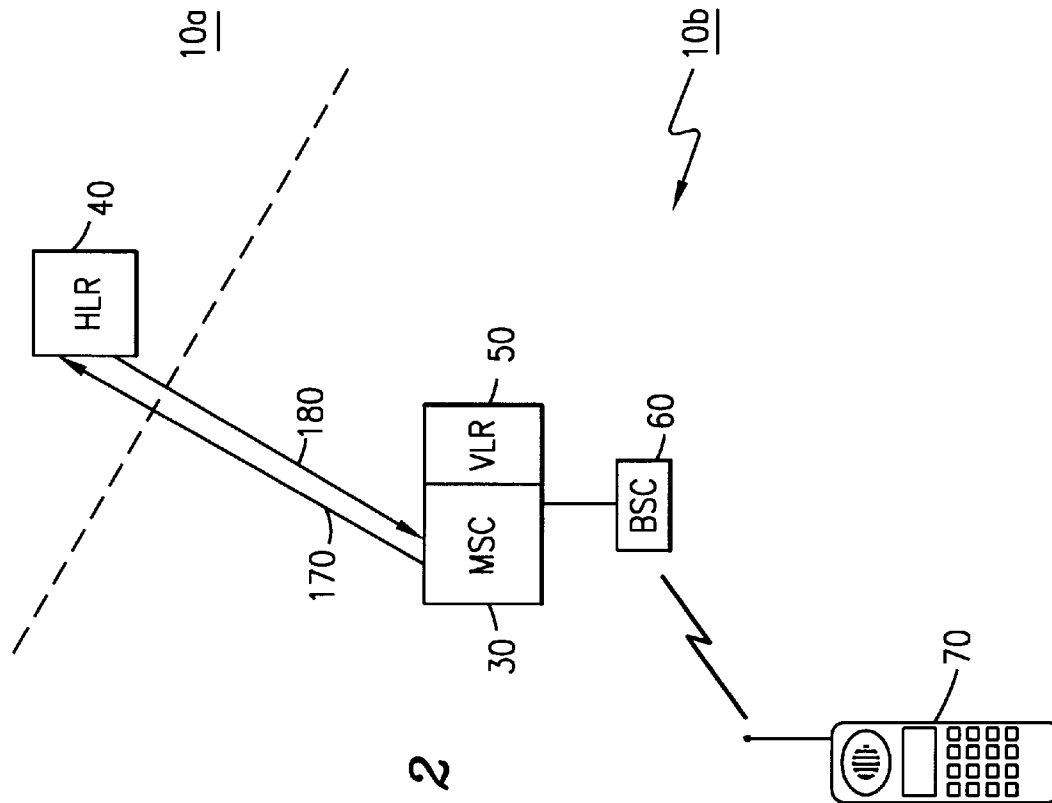
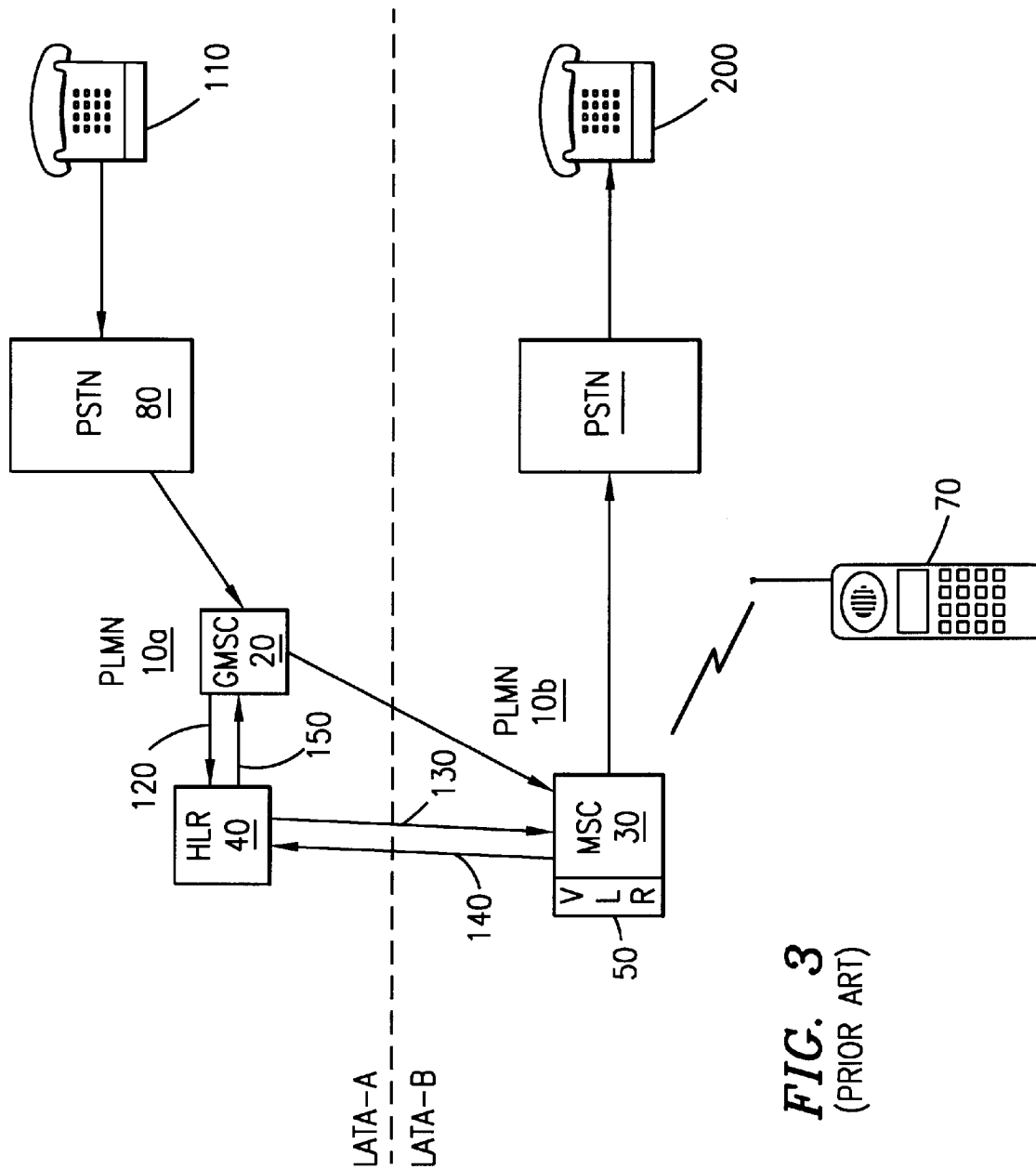
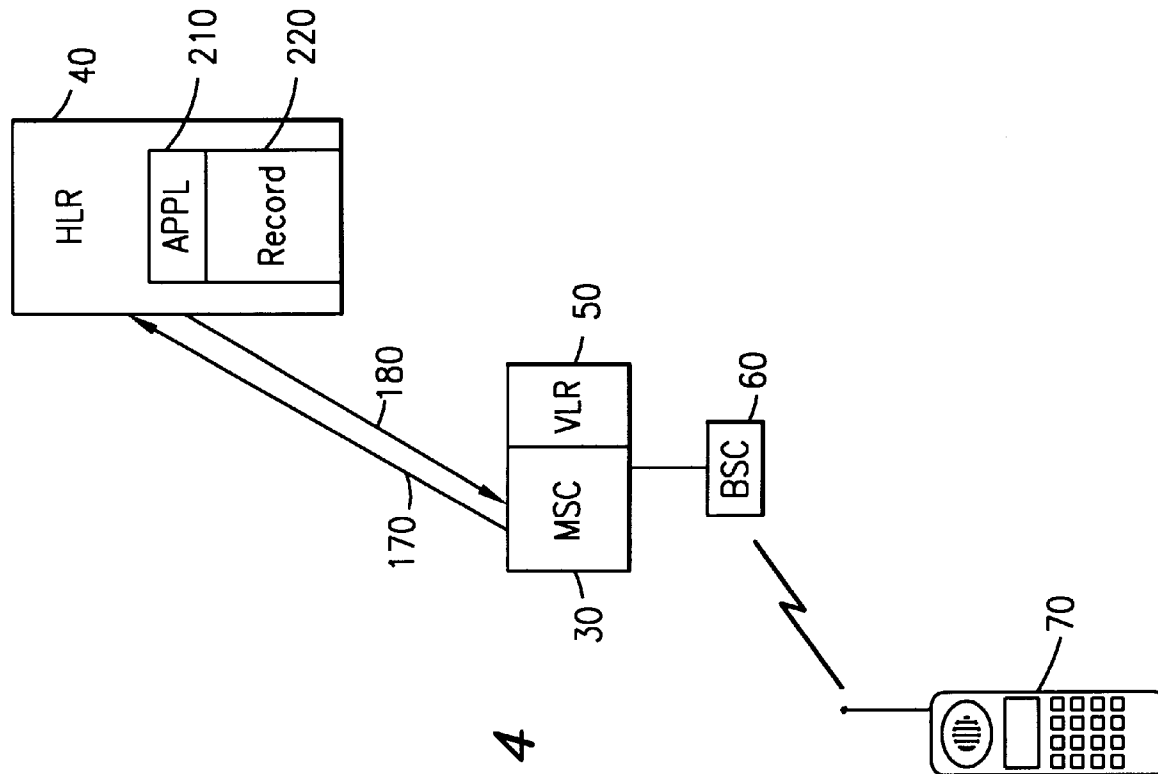


FIG. 2



**FIG. 4**

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