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## (12) United States Patent

#### King et al.

#### (54) CENTRALIZED LOCATION BROKER

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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 809 days.
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- (52) **U.S. Cl.** ...... **455/456.1**; 455/404.2; 455/414.2; 455/456.2; 455/456.5

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#### (45) **Date of Patent:** Oct. 25, 2011

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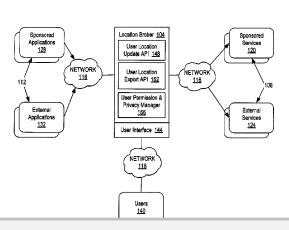
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#### (57) ABSTRACT

A centralized location system includes a location update application programming interface (API) to receive varying types of location inputs for a user from at least one locationproviding application. A memory stores a location of the user and the location inputs, wherein the location update API periodically updates in the memory the location inputs when location updates are received from the at least one locationproviding application. A location export API, upon request from a location-based service application, processes the location inputs to estimate a location of the user, which location estimate replaces the stored location in memory and is sent to the location-based service application. A user interface enables the user to specify a location granularity for at least one of the at least one location-providing application and the location-based service application.

#### 23 Claims, 6 Drawing Sheets



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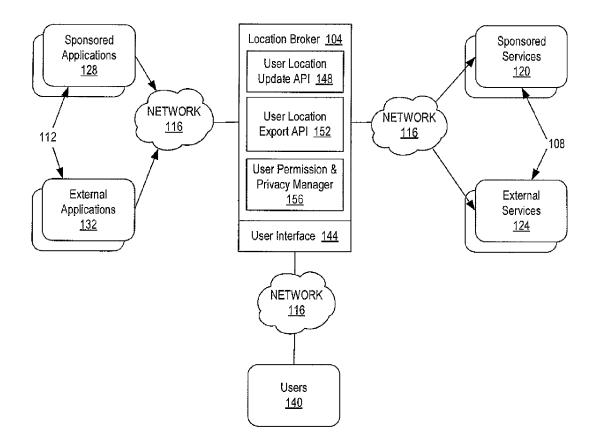
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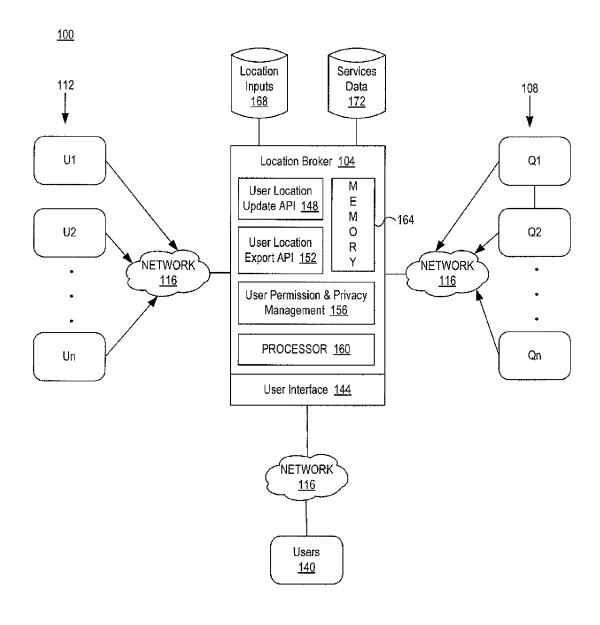
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# FIG. 1

Α



## FIG. 2

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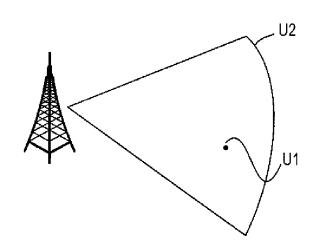
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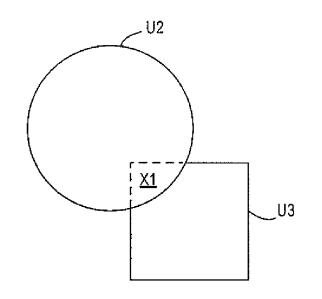


FIG. 3B

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