

Title (en)  
LOCATION SYSTEM FOR DIGITAL MOBILE TELEPHONY

Title (de)  
LOKALISIERUNGSSYSTEM FÜR DIGITALES MOBILES TELEFONGERÄT

Title (fr)  
SYSTEME DE LOCALISATION EN TELEPHONIE MOBILE NUMERIQUE

Publication  
**EP 1005773 A1 20000607 (EN)**

Application  
**EP 98940367 A 19980824**

Priority

- GB 9802538 W 19980824
- GB 9717844 A 19970823

Abstract (en)  
[origin: WO9911086A1] A digital cellular radio communication network, for example, a GSM or CDMA network, including a plurality of mobile stations; a number of base stations (BSs), each one of which is adapted to communicate with a number of mobile stations and has a known fixed geographic location in the network; and location means for determining the geographic location of a mobile station in the network. The location means includes at least one reference mobile station having a known geographic location in the network and which is adapted to receive signals broadcast by said base stations, and the received signals are used to determine the geographic location of a subscriber mobile station in the network. A mobile station includes means adapted to (a) identify, and measure the time of arrival of, the earliest arriving copy of a signal broadcast by a base station and received as a composite of plural copies, the time of arrival being measured relative to an internal time base of said mobile station, and (b) determine the relative timings of signals broadcast by a number of base stations. The relative timings of the signals are used to determine the geographic location of the mobile station in the network. The signals may be broadcast on a BCCH of each of the base stations, a BCCH signal conveying to a mobile station information concerning the broadcasting base station and the digital cellular radio communication network.

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**H04Q 7/38**

IPC 8 full level  
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Citation (search report)  
See references of WO 9911086A1

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