

GLOBAL GEODETIC REFERENCE SYSTEM IN SUPPORT OF LOCATION BASED SERVICES

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The last decade has witnessed significant growth in Location Based Services (LBS), leading analysts to predict LBS as the next big thing in the mobile services market. The drivers of this phenomenon include the exponential growth in the use of smartphones, the deployment of high speed mobile broadband network across the globe, the shift in consumer preferences, and the sudden surge in social networking tools.

Network infrastructure vendors made significant investments on increasing the accuracy of a user's location using various technologies like GPS, AGPS and cell IDs. Location Based Services have subsequently increased and precise applications of LBS are in the forefront of this development.

Precise LBS will require a well defined global reference frame for any meaningful and exploitable point positions. The International Terrestrial Reference Frame (ITRF) provides such global reference that anchors nearly all ground based applications such as LBS.

This paper will therefore, among other things, situate Global Navigation Satellite Services and ITRF within the context of LBS, highlight the issues and challenges concomitant with location-based applications, and make some recommendations.