

Location Based Services

Concepts and Models

(Abstract)

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Location Based Services (LBS) - Introduction

According to the internet Wikipedia, a location-based service (LBS) is an example of a telecommunication convergence. It is an information and entertainment service, accessible via mobile devices in the mobile network. An LBS service uses the location of the mobile device to provide a useful service eg location of nearby pizza shop, locate a friend, get local weather and play location-based games.

LBS is a breakthrough mobile concept and technology which promises to offer innovative applications based on location of the user. LBS incorporates context to provide a useful service to the user, this service being related to physical co-location of the user near places or objects of interest.

LBS requires compatible handsets which support location-awareness using one of the positioning techniques like GPS, A-GPS, cell site triangulation etc. LBS also requires integration of location server with application servers which render useful services taking the mobile device's location into consideration. These services can be vast and broad and might include buddy finder, social networking, direction finder, asset tracking, location-based mobile media, mobile coupons, E-911 and a host of other useful services.

LBS Solution

Location-Based Services sit at the intersection of several technologies as depicted below.

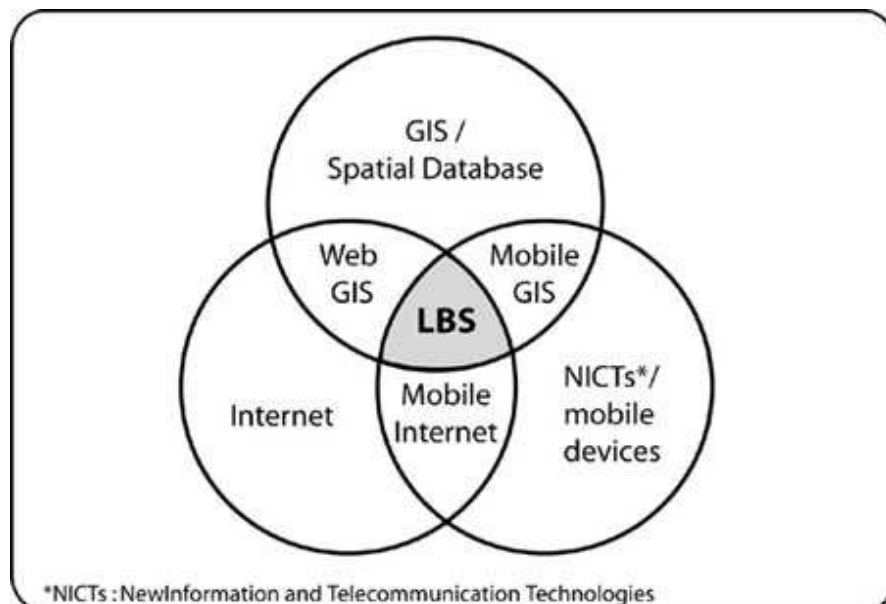


Fig 1 : LBS as an intersection of technologies (Brimi-combe 2002)

The basic components of an LBS solution include :

- a) Mobile Handset or Mobile device (Eg laptop)
- b) Positioning (using one of the techniques outlined later in this document)
- c) Communication Network as in a wireless carrier network
- d) Service and Content Provider – Service and Content provider might be different entities eg service provider is the mobile operator or hosted application service provider (ASP) whereas content may be pulled from a cataloging service, yellowpages, gaming, social network, friends' database, retail location database etc.

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