Location Based Services (LBS)

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2. Definition & Examples

Location based services are those that utilize users' current locations:

- Asset Tracking
- Way-finding
- Traffic Management
- Emergency Response
- Mixed-reality Games
- Targeted Shopping
- Location-aware Billing

Question: are there examples that are of particular interest to WG members?

Question: do any particular examples or types of examples deserve more consideration and/or depth than others?

3. Motivation

Motivation for examining this area:

- An example of how regulation can influence edge-core dynamics.
- Functionally equivalent services can be implemented in a variety of ways with respect to edge-core principles.
- LBS is an area of high interest by mobile operators.

Question: what motivations (if any) do particular WG members have in relation to LBS?

4. Core-Edge Dimensions

Core

Edge

Collection

Heavily dependent on core network resources such as mobile phone antennas and other operator equipment.

Heavily dependent on user (knowing location a priori) or user's handheld (edge) device, e.g. a GPS receiver or RFID scanner.

What core and edge components are used to collect location information?

Operation

Heavily dependent on core network resources for things like routing, centralized information, integration with other databases, and aggregation of location information.

Once location is determined, application runs locally with the user, independent of core network resources, e.g. placing user on a map using maps in stored memory.

What core and edge components are needed to operate the application?

Question: how do these dimensions work with the edge-core taxonomy?

5. Core-Edge Dimensions Cont.

	Collection Core	Collection Edge
Operation Core	Tracking employees through their mobile phones.	Asset tracking in a national retail chain using RFID scanning and centralized inventory databases.
Operation Edge	Getting listings of nearby shops on your mobile phone from pre-stored lists.	Having a GPS handheld track a path traveled.

Question: how does the edge-core taxonomy enrich a table like this?

6. Core-Edge Properties

General properties of LBS that contribute to whether a given service will be primarily delivered in a core or edge-based fashion:

- Precision
- Processing Power
- Energy Consumption
- Cost
- Speed
- Regulation

Question: is this a general concept that can be applied to the other case studies?

7. Core-Edge Properties Cont.

Specific properties of LBS applications that can be used in an attempt to sway the Core-Edge dynamics for a particular market:

- Centralized Information (Core)
- Aggregation of Information (Core)
- Distributed Networking (Edge)

Question: are these general concepts that can be applied to the other case studies or eventual modelling?