یک رویکرد نوین برای حفظ حریم شخصی در شبکه‌های اجتماعی مکان مبنا

(A New Method for Privacy Protection In Location based Social networks)

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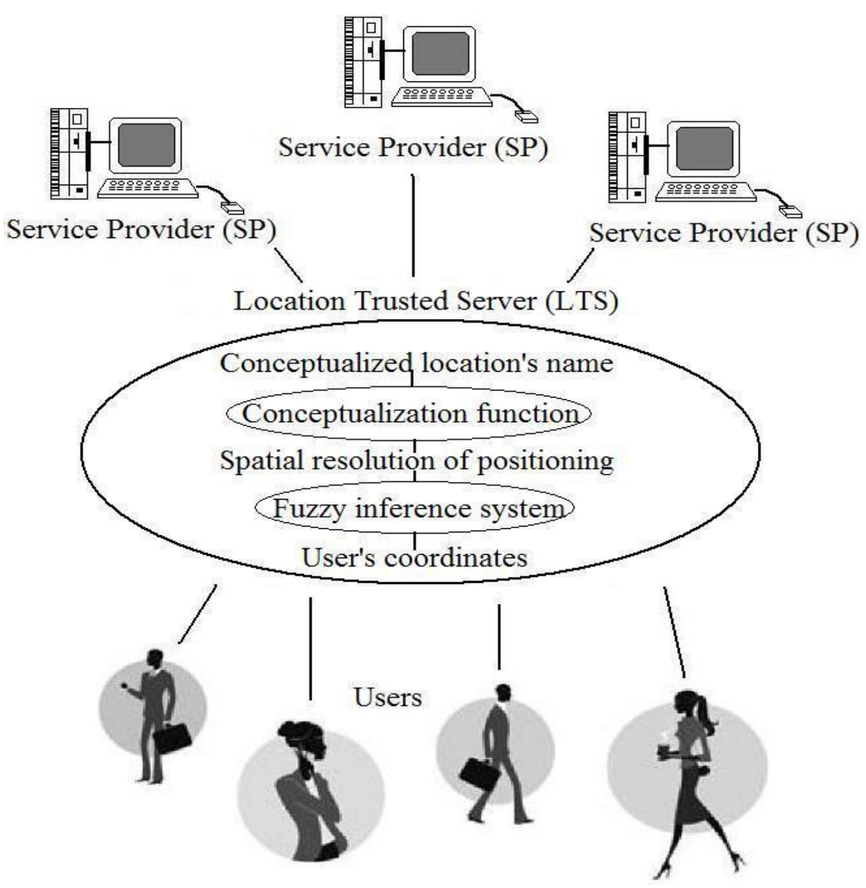
Introduction

✓ Location-Based Social Networks (LBSN): The growing penetration of GPS equipped smart phones allowing users to constantly share geographic information on their current whereabouts has led the way to an augmentation of existing *Social Network Sites* with location-based features or the creation of new ones exclusively around geographic information. A LBSN does not only mean adding a location to an existing social network so that people in the social structure can share location-embedded information, but also consists of the new social structure made up of individuals connected by the interdependency derived from their locations in the physical world as well as their location-tagged media content, such as photos, video, and texts.

✓ One of the very important issues in such services is the informational privacy; means restricting persons that are unknown or unknowable to others. It is obvious that the core of such problem is using user's position unlike his/her opinion. The motivation behind this misuse is often to observe and analyze the user's behavior, attitudes, and social situation in order to tailor special offers or advertisements for him, but sometimes it may also be with criminal intentions.

Methods

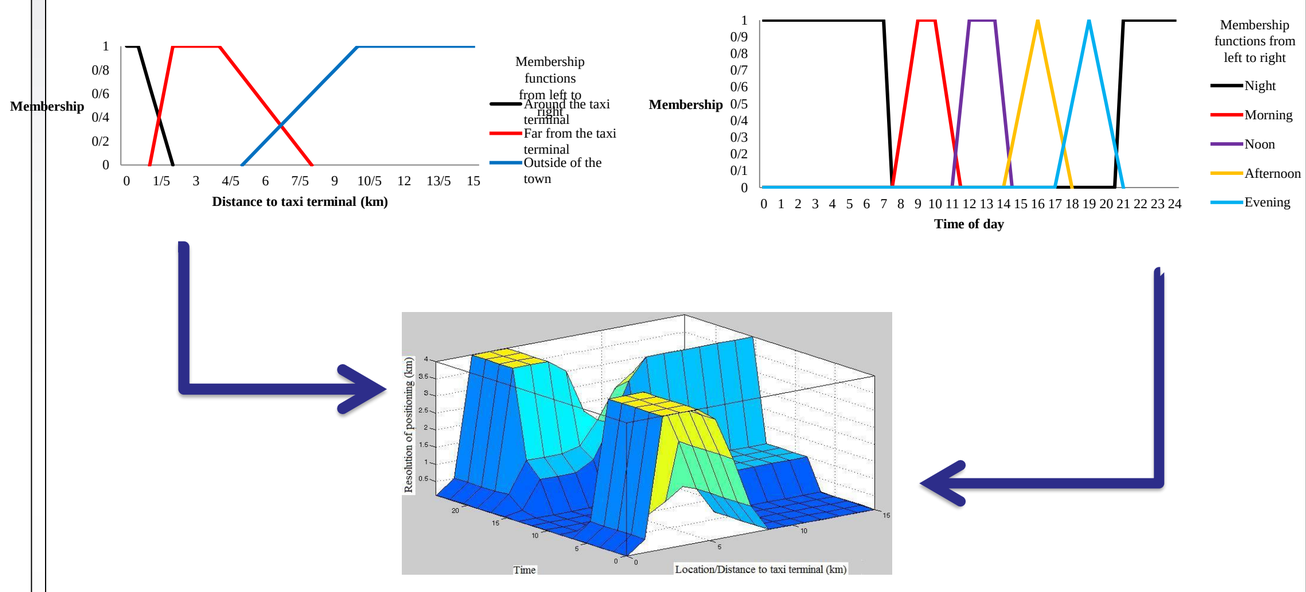


The main components of the proposed architecture for protecting privacy in a LBSN

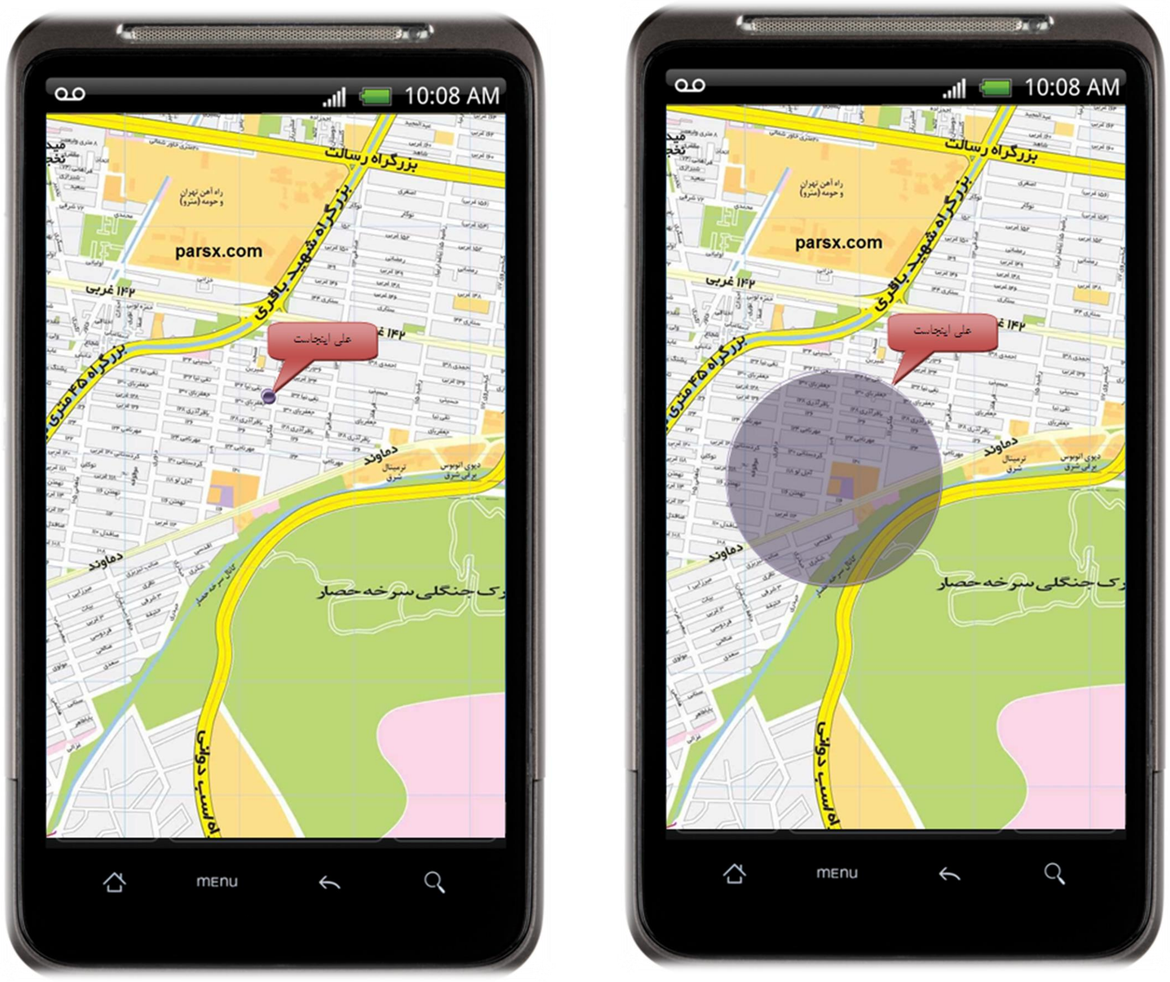
Results

✓ The proposed method was tested with an implementation for a taxi driver group. This group was chosen for two reasons. The first reason is that privacy is a concern of taxi drivers. As the drivers declared, in addition to strangers, many familiar people such as their boss and family can access their location; additionally, the driver may be a member of a location-based social network.

✓ To implement this fuzzy system, two inputs named the user's location and the time of request in addition to an output that named the user's positioning resolution.



The resolution of positioning at different times and locations.



Determining compatible areas based on the resolution obtained.