

# Abstract

## Location-Based Mobile Advertising Architecture: A System Dynamics Approach

The high penetration and growth rates of mobile devices along with the recent technological development of the third-generation devices in the Egyptian market have created a new direct communication channel with customers known as mobile advertising. Mobile marketing offers great opportunities for businesses. Marketing activities supported by mobile devices allow companies to directly communicate with their consumers without time location barriers. The underlying study presents initial Egyptian consumer evaluation and investigation on their perceived perception towards location-based mobile advertising (LBA), which allows marketers to reach their target consumers based on their location. LBA allows service providers to offer timely personalized services and products based on their target customers' specific location and preferences. However, it is unknown which is the best way to build these advertisements in order to positively affect Egyptian consumers' needs and expectations. Accordingly, the research at hand, investigates the current situation of LBA and how to be improved in order to suit the Egyptian context. LBA enhanced model will be conducted using an Analytic Hierarchy Process (AHP) questionnaire and interviewing decision makers in mobile network providers. Modeling an enhanced LBA mechanism to meet the Egyptian customers' needs is a difficult task due to the complex and dynamic nature of its operating environment. Therefore, a System Dynamics approach is more appropriate to model such a complex system and to be simulated under different what-if conditions. When results were brought together, some points were brought to light. It was clear that mobile subscribers are willing to receive messages based on their location and in a suitable time. They regard it as very important to receive messages from trusted source and increase the credibility rate. On the other side, decision makers are restricted by rules and regulations. Advertising messages could only be sent in an informative way, MMS are not supported, and they only consider incentives and compensations. Finally, based on the proposed model simulation results show that LBA effectiveness curve is increasing while m-advertising is decreasing in the following two years.