

# A Smartphone Application for an Innovative User Supporting Location Based Shopping Experience

Martin Krammer, Thomas Bernoulli, Ulrich Walder  
Institute for Building Informatics  
Graz University of Technology  
Graz, Austria  
martin.krammer@tugraz.at

## ABSTRACT

*Online shopping* has become a very competitive way to buy goods. *Price* and *convenience* are two strong reasons to buy online. Customers like to choose and evaluate products without time and location constraints.

Conventional *local stores* can hardly keep up with online-prices and lack an objective comparison convenience, but provide another desirable shopping experience – personal communication and touching the products. But what if people visit local stores to choose and finally buy online because of better prices?

To prevent this behaviour local stores have to find ways to outweigh the advantages of online shopping. *Location based services* (LBS) are able to generate that beneficial experience for the store and the customer. With LBS utilizing a customer's smartphone the desirable online-shopping advantages can be brought into the hands of local customers.

This paper proposes a LBS smartphone application that customers want to use because they have significant shopping-advantages when doing so. Additionally the same measures help store-owners to learn about their customers and increase sales.

The proposal includes interesting ways of *customized advertising*, where a customer's past shopping data helps to generate *individual product sale offers* per application usage. Combined with *product location* information further exciting ways to create a satisfying customer - store relationship will be shown.

An obvious *product search* feature will be extended to *location aware routing*-applications. Different context adaptive *shopping list* features will be a key point why customers want to use the application. Actively used shopping lists build a base for a *self-checkout* functionality speeding up a customer's shopping and stores could reassign freed-up staff to improve the personal customer service even more. User controlled *data sharing* possibilities will help to manage collective (everyday) shopping demands of somehow connected customers.

**KEYWORDS:** LBS, Local Shopping Improvement, Smartphone