TaxiMedia: An Interactive Context-Aware Entertainment and Advertising System

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The use of public transport vehicles, such as trams, buses, and taxis as an advertising space is increasing since several years. However mainly the outside of the vehicles is used to show advertisements using paintings, foil or roof-mounted displays. Nowadays, with advances in display technologies, small high-resolution displays can be easily embedded in the vehicles used for entertainment or advertising purposes. To explore the potential of in-car displays we implemented the TaxiMedia system, an interactive context-aware system for taxis. Our system is able to show different types of information based on the context of the taxi and can be used to entertain the passengers during the trip. We mainly use our system to visualize location-based advertisements, which can be selected based on the location a passenger is picked up at as well as the current location. Further context such as time, weather, or interest of the passenger may be considered.

The TaxiMedia system is based on a client-server infrastructure. The server system is responsible to mange the advertisements and provides a web-based application which lets advertisers upload their advertisements and define regions where thy want their advertisements to be shown. The client system is running on an *Eee PC* computer that is connected to a touch display embedded into the headrest.

Figure 1: TaxiMedia Prototype

We show how context information can be used, to more precisely target advertisements to the interests of the user. For example, if a passenger takes a cab from the airport on a week day morning, we may assume that the passenger is currently on a business trip. Hence, advertising hotels in the business district, as well as restaurants or special events in the evening may be interesting for the passenger. Additional information such as the weather can be taken into account. For example, on a rainy day, a small Italian restaurant may be a better option than suggesting to go to a nearby beer garden where one can only sit outside.