

Improving Attractiveness of Public Transportation with Interactive Experiences

Kaisa Väänänen

Tampere University of
Technology
Korkeakoulunkatu 1
33720 Tampere Finland
kaisa.vaananen@tut.fi

Jarno Ojala

Tampere University of
Technology
Korkeakoulunkatu 1
33720 Tampere Finland
jarno.ojala@tut.fi

Elina Hilden

Tampere University of
Technology
Korkeakoulunkatu 1
33720 Tampere Finland
elina.hilden@tut.fi

MariAnne Karlsson

Design&Human Factors
Chalmers University of
Technology
41296 Göteborg Sweden
mak@chalmers.se

Pontus Wallgren

Design&Human Factors
Chalmers University of
Technology
41296 Göteborg Sweden
pontus.wallgren@chalmers.se

Markku Turunen

University of Tampere
Kanslerinrinne 1
33100 Tampere Finland
markku.turunen@sis.uta.fi

ABSTRACT

New interactive experiences can change the way people experience and perceive public transportation and hence improve its attractiveness. This workshop addresses such interactive experiences in public transportation. The main focus is on *new interactive experiences with travel services in public transportation*. We invite both practitioners and researchers to propose design concepts, design and evaluation methods, novel interactive technologies or future research issues for the HCI in public transportation. The topics address services for individual transportation vehicle types (buses, electric buses, trains, trams), or for the whole public transportation chain. The workshop will form a research agenda for interactive experiences in public transportation.

Author Keywords

Public transport; mobility as a service (MaaS); experience design; travel services; design approaches; participatory design; sustainable HCI; novel interfaces.

INTRODUCTION AND MOTIVATION

Public transportation is a unique representation of urban space where the individuals come together with diverse socio-economic backgrounds at regular frequencies for extended periods of time [3]. Thus the context of public transportation has broad potential for the application of

digital services such as location-based services through the use of, for example, travelers' mobile devices [3] and public displays. Today, public transport users as well as non-users have access to a number of ICT mediated information services including real-time information and information on how to travel from A to B. These travel services have been designed primarily to increase travelers' knowledge, reduce uncertainty, and increase the efficiency of the trip.

Studies have also shown that people spend their time at, for instance bus stops and onboard buses listening to music and using social media applications in addition to reading newspapers or books or simply relaxing [2], [4] The study conducted by Carreira, et al. revealed the potential of supplementary services when adding value to the passengers' travelling experience [1]. People's traveling behavior is changing simultaneously with the mix of transport modes and services offered to them [7].

Transportation is no longer only moving from an origin to a destination but it is a way for the users to encounter different service channels; such as off-board services (services that are used outside of the vehicle), on-board entertainment or information before, during or after the bus trip [1]. There is potential for improving the traveling experience by offering value through supplementary services. Enhancing the attractiveness of public transport can happen through experience-driven design [5]. In order to understand the demand in different travel settings, the service providers need to familiarize themselves with the travel experience and its forming factors [6].

In addition to the basic navigation and scheduling services, our aim is to charter a collection of potential travel services for the context of public transportation. By **travel services** we mean *digital services that can support or enrich public*

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transportation as well as associated activities before and after the trip. The perspective is on the traveler (passenger) experience and how the attractiveness of public transportation can be improved by novel interactive experiences.

The **practical goal** of the workshop is to provide a forum where researchers, designers, and practitioners can explore the design space of public transportation, create new ideas as well as establish contacts with others working in the field. The **research goal** is to gather understanding of experience-related issues and to form a research agenda for interactive experiences in public transportation.

THEMES

The workshop will build around and is expecting contributions from the attendees related to the following themes:

Enhancing the public transportation travel experiences.

In what way can new travel services enhance the overall experience of using public transportation, of using different public transportation modes? Utilizing hardware add-ons, extensions and customizations to create new experiences to public transport. Novel applications or interaction techniques for public transport.

New services for future public transportation. Future public transportation may be a matter of a widening the concept from public to collective transportation. What are the implications of such a development on the content and design of travel services?

Increasing public transportation use. In what way can new travel services motivate an increase in public transportation use? What are the challenges?

Co-design in the context of public transportation. How can travelers participate in the development of new travel services? How can the knowledge about traveler experience be integrated in the development and design of new travel services? What could be the role of e.g. crowdsourcing?

The topics can include or combine issues such as:

- Interactive service design principles, e.g. gamification, sustainable HCI and persuasion;
- New interaction styles, e.g. based on public displays;
- Context-awareness and location-based services;
- Supporting social interaction in public transportation;
- Services that support the whole transportation chain, e.g. by using open data;
- New approaches to payments;
- Mobility as a Service (MaaS);
- Participatory design and user involvement methods tailored for public transportation

WORKSHOP GOALS AND EXPECTED OUTCOMES

The workshop will gather researchers and designers in the public transportation domain and in HCI to create concepts and interaction ideas for the new interactive experiences in different forms of public transportation. The outcome will be a research agenda for interactive experiences in public transportation, as well as a set of concepts for the related interactive experiences.

Workshop Activities

We run a one-day workshop on Monday, 24th of October, 2016, with presentation and discussion including some brainstorm in the morning and bodystorming and hands-on session in the afternoon, followed by a summary of a research agenda for the theme of the workshop.

Target Audience

HCI scholars and practitioners from multidisciplinary areas including: interaction designers, service designers and developers, and researchers of transportation systems.

The Workshop Web Site

Information about the workshop can be found at: <https://publictransportationexperiences.wordpress.com/>

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