Abstract

This paper presents a component of the ongoing research project Integrated Real-time Mobility Assistant (IRMA). The component’s name is Compensation Engine. IRMA is a software system that targets the personal mobility in a near future scenario, based on green, shared and public transports. IRMA handles end-to-end itineraries that may involve multiple transport systems, and supports the users in schedule and re-schedule their itineraries. This paper focuses on the description of the Compensation Engine component, which monitors the progress of the journey and spots possible transportation issues. The component alerts the user when the journey can not be completed and allows the rescheduling of the route. The Compensation Engine has been implemented and proved on test cases.

References

- Barroero T., Telesse F., Motta G., "Design of performance aware service systems," in The International Joint Conference on Service Sciences (IJCSS), Taiwan,


S. Barbeau, P. Winters, N. Georggi, "Travel assistant device (TAD) to aid transit riders with special needs," National Center for Transit Research at the Center for Urban Transportation Research, University of South Florida, 2008.


S. Qi, W. Hai-yang, "Meta service in intelligent platform of virtual travel agency," School of Computer Science and Technology, Shandong University, China.


K. Dziekan, K. Kottenhoff, "Dynamic at-stop real-time information displays for public transport: effects on customers," Transportation & Logistics, Royal Institute of Technology (KTH), Svezia, 2006.


M. D. Hickman, N. H. M. Wilson, "Passenger travel time and path choice," University of California-Berkeley, Massachusetts Institute of Technology, USA,
- S. J. Barbeau, N. L. Georggi, P. Winters, "Dynamic travel information personalized and delivered to your cell phone," National Center for Transit Research, Center for Urban Transportation Research, University of South Florida, USA, 2011.
- S. Barbeau, N. L. Georggi, P. Winters, "Travel assistance device (tad) – deployment to transit agencies," National Center for Transit Research, Center for Urban Transportation Research, University of South Florida, USA, 2010.

**Index Terms**

Computer Science

Software Engineering

**Keywords**

Transport systems; software engineering; applications of computer science in modeling data and information systems; smart cities; urban mobility; human mobility; mobility integrator; service oriented architecture.