

Martijn Kiers, Elmar Krajnc and Hans-Georg Frantz

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Speaker Qualifications



Martijn Kiers, born 1971 in The Netherlands, is the project manager of the project “Ways4all”. Since September 2006 Martijn Kiers is university teacher and senior researcher at the University of Applied Science FH-JOANNEUM, course “Energy-, Traffic- and Environmental Management” in Kapfenberg, Austria. During his work, he has given several speeches and presentations for universities and local governments in Austria (TU-GRAZ, KF-Uni Graz, Stadt Wien and Land Steiermark).

Before becoming a teacher Martijn Kiers was working for 10 years as project manager for the Dutch Ministry of Waterways and Public Works. Here he presented different projects on national and international conferences, like the European Union Project “Tabasco” (Telematics Applications in BAvaria, SCotland and Others) in Glasgow and in Amsterdam.



Elmar Krajnc, born 1976 in Austria, is part of the “Ways4all” project team and responsible for the software development. He is lecturer and research assistant at the University of Applied Science FH-JOANNEUM, course Internet technologies and Software design in Kapfenberg, Austria. His research interests include Mobile Computing, Human computer interaction and Accessibility. During his work he has given several speeches and presentations at conferences and symposia.

Elmar Krajnc reached his MSc of computer sciences at the Graz University of Technology. He has practical experience as software developer, project manager and researcher.



Hans-Georg Frantz, born 1962 in Graz (Austria), is Professor at the University of Applied Sciences FH JOANNEUM, course “Energy, Traffic and Environmental Management” in Kapfenberg, Austria. He is responsible for education and research and development in the area of transportation at the course. In the project “Ways4All” his responsibility covers the concept of data sources and integration from authorities, infrastructure and transport operators. He is also CEO of the consulting company B.I.M. Mobility Consulting & Engineering at Graz (Austria).

During his work he held several speeches at local and international conferences (UITP IT-Trans, Austrian Research Conferences). He is program director of the international conference RegioMove covering regional public transport.

RFID / Real Time Indoor Navigation System for Visually Impaired and Blind People

Imagine a world without barriers, where all people and particularly people with special needs can enjoy daily life without running into obstacles or problems which undermine their self-determination. This is a dream which could come true within the next years. The project “Ways4all” is using passive RFID tags to identify indoor routes, barriers and means of public transport.

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RFID / Real Time Indoor Navigation System for Visually Impaired and Blind People

The basis for this project is the tactile guidance system. At all strategic spots inside the building - entrance, platforms, intersections - a RFID-tag will be placed into the tactile guidance system. Those RFID-tags send their unique code through an RFID-Reader to the user's smartphone. The phone reads the code and sends it on to an RFID-database server where all the tags together with some additional information are saved as location points.

One of the challenges of the Ways4All concept is to study the possible integration of independent data sources on the fly when they are needed. There are already several concepts and realisations of integrated data platforms available, but those have the disadvantages that the integrated platforms are, for the most part, not maintained by the source-owners themselves. Therefore in actuality, they are not as good as needed for the navigation of visually handicapped people. Examples are changed floor plans at stations due to maintenance or closed elevators, especially in multi-operator transfer stations. The challenge is to find the real origins of the needed data, the available structures and possible interfaces to integrate the needed information.

The project covers not only principal conceptions like mentioned above; it also covers the proof of concept - based on actual available data - for guiding visually impaired and blind people with the smartphone application. The smartphone can receive real-time routing information and relay the indoor route instructions acoustically. Getting to the target destination at the station, the user can make contact with the different means of public transport with the program "Quo Vadis" – developed by the Wiener Linien and Transelektronik.