

Sparkling Science >
Science linking with School
School linking with Science

Interim Report, 31st December 2009

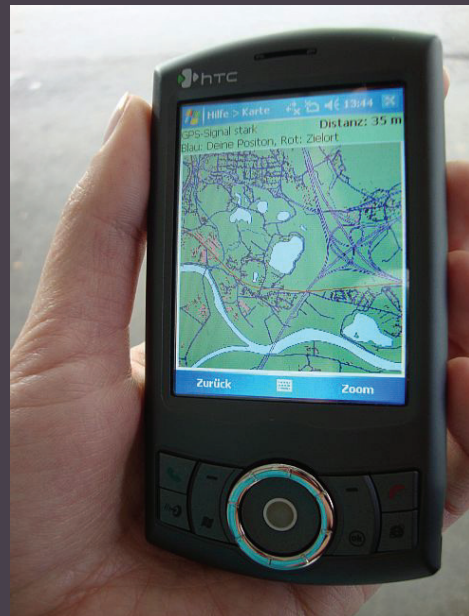
**Applications on the Move
Development of a mobile Gaming
Application for Young People**

LEADING INSTITUTION

Carinthia University of Applied Sciences,
Department of Geoinformation
Coordinator: Dr.-Ing. Karl-Heinrich Anders
Contact: k.anders@fh-kaernten.at

SCHOOL INVOLVED

HTL Villach, Carinthia



BM.W.F^a

www.bmwf.gv.at

Austrian Federal Ministry of
Science and Research

Applications on the Move – How far did we get?

The main idea behind the project “Applications on the Move” is to introduce young people “game-based” (i.e. in a playful manner) to the topic of Geoinformation. For this purpose, it is relevant to develop interesting game ideas in order to motivate young people. Thus, within the project Applications on the Move, the game ideas have been designed by the scholars of HTL Villach themselves, because we are of the opinion that precisely the young people know best about the needs of young people. However, more noteworthy at this point is the fact that the scholars of HTL Villach have not only provided the game ideas, they have further developed six prototype software implementations of games during the last project year. Dr. Karl-Heinz Eder, project leader on the side of HTL Villach, remarked in this context, “I am delighted by the way in which the scholars have overcome the complexity of developing mobile software!” The following game prototypes have been developed by the scholars of HTL Villach:

- CAPTURE THE FLAG – Popular game for children that requires the cooperation of the four members of each of two teams. The two teams play against each other, whereby on the one side distinct virtual objects can be employed, and on the other side, the game field can be adjusted dynamically.
- CATCH ME IF YOU CAN – A multi-player game of two teams that combines the rules of “paper chase” (or “treasure hunt”) with “cops and robbers”.
- FINAL COUNTDOWN – A multi-player game in which the participants must explore a previously unknown map. During the exploration, they have to capture as many opponents as possible within a predefined period of time. Here, to avoid getting captured, virtual objects might be used as hiding places.
- VIRTUAL LABYRINTH – The players of this game have to find the right way (in the real world) through a virtual labyrinth as shown on the displays of their mobile devices. Diversity during the game is given by the use of distinct game modi and playing objects.
- ZONE COMMANDER – A spatial and multi-player-based version of the popular strategic board game „Risiko“.
- BONJOUR – Spatial, multi-player-based, role-based game in which points must be collected in order to perform the special tasks of distinct playing levels.

With the support of students and trainees at the Carinthia University of Applied Sciences the following three applications have been developed:



- VESTIGO! – A virtual paper chase game in which the players should find virtual Geocaches as fast as possible. The hints for the next cache can be found in form of correct answers to location-based questions. An own web-based editor is the basis for the construction of new VESTIGO! games.
- RC CAR TROPHY – In accordance to RFID-related instructions, the player must drive a remotely controlled car as fast as possible to the location given within the instruction.
- MOBILE MOUNTAIN VIEW – Augmented reality application for displaying location-based information about mountains on android smartphones.

On the 20th of November 2009, the developed game prototypes have been presented and evaluated at Carinthia University of Applied Sciences in Villach within the scope of a workshop for 16- and 18-year-old scholars of the Gymnasium St. Martin. Further, on the 30th of November 2009, the fundamentals of GPS technology as well as the ideas for our location-based games have been presented and explained within the scope of the Future Kids Workshops at Carinthia University of Applied Sciences, in Villach. The topic of GPS and Gaming has been well appreciated by young scholars, as can be derived (e.g.) from the following statements of the scholars themselves:

- “This project was cool. What we have learned here is definitely unique.”
- “A great experience and very interesting. On the face of this, Mathematics is not just another school lecture, it is a thing for the whole life.”
- “I liked the course very much. I want to come again.”
- “We have learned a lot about GPS and – actually! – I had a lot of fun as well.”

<http://www.begabungsfoerderung.ksn.at/medien/pdfs/futurekids/geoinformation.pdf>

„During the last year, the project ‘Applications on the Move’ has shown that, with the aid of exciting topics, scholars can be motivated to develop own initiative and dedication to learning subjects. In the case of the HTL scholars, this was required in order to reach the specified goals, because of their challenging client-server applications. In particular, I have been surprised very positively by the engagement of the scholars.” (Dr.-Ing. Karl-Heinrich Anders)


More details about the project can be found under the URL

<http://www.fh-kaernten.at/geoinformation/bachelor/geoinformation/forschung.html>

and on the Wiki page of the project

<http://geoweb05.cti.ac.at/mediawiki/>





Sparkling Science >
Science linking with School
School linking with Science

oeAD'
OeAD-GmbH

www.bmwf.gv.at

BM.W.F^a

Austrian Federal Ministry of
Science and Research