





# Participant Profile

for the  
**Turkish-German Strategy Workshop 2006**  
**TÜBITAK Marmara Research Center,**  
**Istanbul- Gebze Turkey**  
**13 – 15 December 2006**



International Bureau (IB)  
of the Federal Ministry of  
Education and Research  
(BMBF)

**Expertise,  
technologies and  
infrastructures  
available in your  
institution:**

**Research activities / expertise:** Information systems, Sensor fusion, Geographic Information services, location based mobile services, eLearning and training

**Methods:** Project management

**Key technologies:** Information technology, Satellite-based mobile technology, spatial information systems

**Infrastructures:** Networks and others

**Key publications:**

MÄS, ST.; WANG, F.; REINHARDT, W.:

"Using Ontologies for Integrity Constraint Definition". In: 4th International Symposium On Spatial Data Quality, Peking, China - Proceedings. 2005

MÄS, ST.; REINHARDT, W.:

„Standardisierte Internetdienste bei der mobilen GIS-Datenerfassung“ In: Geomatik Schweiz, Geoinformation und Landmanagement; Heft 12/2005

KANDAWASVIKA, A.; REINHARDT, W.:

Concept for interoperable usage of multi-sensors within a landslide monitoring application scenario. In: 8th AGILE Conference on Geographic Information Science - Proceedings. 2005

KANDAWASVIKA, A.; REINHARDT, W.:

Investigation on multi-GeoSensors integration using OGC SensorWeb in a landslide monitoring system. Proceedings GI-Days 2005, Muenster, Germany

WANG, F.; MÄS, ST.; REINHARDT, W.; KANDAWASVIKA, A.:

"Ontology based quality assurance for mobile data acquisition". In: 19th international conference on Informatics for Environmental Protection: Networking Environmental Information - Proceedings. EnviroInfo 2005

BREUNIG, M.; BÄR, W.; HÄUSSLER, J.; REINHARDT, W.; STAUB, G.; WIESEL, J. (2005):

„Advancement of Mobile Spatial Services for the Geosciences“. In: Data Science Journal, <http://www.datasciencejournal.org/>. International Council for Science (ICSU)

REINHARDT, W., SAYDA, F., KANDAWASVIKA, A., WANG F., WITTMANN, E.:

GI and location based services – Principles and some experiences with applications for Mountaineers, GIS – Geoinformationssysteme 6/2003

HELMICH, R.; JOOS, G.; REINHARDT, W.:

Lernmodul Normung und Standardisierung - Konzept, Inhalte und Erfahrungen. In: Plümer, L.; Asche, H. (Hrsg.): Geoinformation - Neue Medien für eine neue Disziplin. 2004

REINHARDT, W.:

Raumbezogene Informationssysteme, Handbuch Ingenieurgeodäsie, Band 2, 228 Seiten, Wichmann, 2003, ISBN 3-87907-294-9



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## 2. Past and present research collaborations

Are you familiar  
with the European  
Framework  
Programme?

- Yes  
 No  
 with Framework Programme 5  
 with Framework Programme 6  
 with Framework Programme 7

EU-projects you are  
involved in:  
Past projects

Programme title / contract number / title / acronym / your function (coordinator / partner / contractor)  
AIDA: Multi Media Internet Alpine Guide EU contract no. (IST): INFMM3009-IMP AIDA 22739/0

Present projects

PARAMOUNT (= Public Safety & Commerical Info-Mobility Applications & Services in the Mountains), 5<sup>th</sup> framework, IST-2000-30158  
eduGI: Re-use and Sharing of e-Learning Courses in GI Science Education, EC Contract 2005-3866/001-001

Other international  
collaborations:

AGILE network ([www.AGILE-online.org](http://www.AGILE-online.org)) collaboration with several other universities and companies (<http://www.unibw.de/bauv11/geoinformatik/>)

Name(s) and  
contact details of  
potential partners:

If you would like to suggest the participation of particular partners from the partner country based on existing contacts or collaboration experience, you are welcome to indicate their names and contact details below:

Dr. H Sebnem Duzgun  
Associate Professor  
Geodetic and Geographic Information Technologies  
Middle East Technical University  
ODTU Insaat Muh. Su Kaynaklari Lab.  
K4-123 06531 Ankara

Some other contacts also available

## 3. Presentation at the Workshop

I will give a presentation at the workshop (approx. 10 min.) to present my institution, my expertise, and my collaboration interests. The contents of my presentations is summarised below (max. 1 page).



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## Presentation at the Workshop

AGIS (<http://www.unibw.de/bauv11/geoinformatik/>) is a research group at the University of the Bundeswehr Munich / Department of Civil Engineering working in the field of Geoinformatics. At the moment, AGIS consists of 12 permanent scientific staff members - mainly with an engineering or computer science background - as well as a number of student assistants. Most of the scientists are funded by third-party projects.

Our main research topics are:

- Efficient acquisition and management of spatial data
- Data quality and concepts for quality management
- Services for mobile users, examples in that field:
  - Combination of sensors, telematics and GIS
  - Applications for logistic support of traffic systems
  - Analyses for developments of GI services and service structures
  - See also projects below
- Standardization in the field of spatial information management

### Examples of projects:

**PARAMOUNT** - funded within the IST program of the EU (Contract N° IST-2000-30158)

Objective of the PARAMOUNT project has been the development of a prototype of a location based service (LBS) for mountain climbers and hikers, but could be transferred to other safety relevant areas. Three different categories of services had been implemented and successfully tested in conjunction with the German Alpine Club and the Search and Rescue (S&R) teams of Austria and Bavaria. The three categories were:

- Information (maps, position of the user, routes, weather, touristic infos etc.)
- Safety (Position of persons with accidents, support of S&R teams, etc.)
- Update of databases by involving users with GPS

**“Advancement of GeoServices”** – as part of the geoscientific research and development program GEOTECHNOLOGIEN with focus on “Information Systems for Earth Management” funded by the Federal Ministry for Education and Research (BMBF) and the German Research Council (DFG). The aim of the project was to enhance the information functionality of Location Based Services by providing sophisticated services based on open standards. These services assist the acquisition of data in the field and support the online updating of data bases as well as users during their decision processes. The services have been successfully tested within an early warning system in an Landslide scenario of a German state geological service.

**INDOOR**, funded by BMBF: For the most applications satellite-based positioning with Galileo or GPS is still depending on a direct “visibility” of the satellites. Thus these techniques are, until now, hardly used for the positioning and navigation within buildings (Indoor) or areas with comparable signal shadowing effects (border areas between Indoor and Outdoor). For security-sensitive BOS applications (public responsibilities of security politics, administration and services) and traffic-logistics applications, these are areas of particular interest. For example the exact localisation of an emergency call within a building and later on the reliable localisation and navigation of the SAR teams can be deciding factors for the rescue. The tasks of the AGIS are:

- 3D volume modelling of the buildings
- Requirements analysis and thereupon the overall conception of a standardised 3D-geodata web-service
- Concept development for the 3D navigation
- Implementation of the concepts via web services

### Interests in cooperation in the following fields:

- Enhancing safety of traffic systems by using Sensors data and Geodata (e.g. for driver assistance)
- Improving early warning systems within landslide monitoring application scenarios
- Applications of location based services for touristy purposes
- eLearning and training in fields where mobile services are relevant

**I agree with the publication of my data on the Workshop website!**



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PLEASE FILL IN THIS FORM **UNTIL 22 SEPT. 2006** AND RETURN IT TO:

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