



## eLearning Department

Head of department:  
**Zsolt László Márkus**

Phone:  
**+36 1 279 6191**

E-mail:  
**zsolt.markus@sztaki.mta.hu**

Address:  
**H-1111 Budapest, Lágymányosi u. 11.**

Web:  
**elearning.sztaki.mta.hu/en**

### INTRODUCTION



The eLearning Department of MTA SZTAKI has become a key player of the domestic eLearning market in the last decade profiting, especially in innovative web and mobile development and different other expert areas. The versatile application of the experiences in the areas of education, mobile applications, multimedia and R&D made it possible to attain our results.

#### Major activities and areas covered

- deploying eLearning systems and multiplatform electronic courseware development,
- innovative application and content development for web and mobile platforms, for virtual reality headsets and video display glasses,
- location dependent services, mobile application development for touristic reasons, providing information on municipalities and recommending events,
- optimising multimedia delivery

We can create specific and generic training materials, interactive adventure games for web, mobile and digital TV platforms very efficiently, based on the experience gained in the course of our development projects. Our colleagues were involved in the development of several thousands of multimedia elements performing to the full satisfaction of our clients. Our products are developed in harmonised teamwork; with the goal to create standardised training material packages, their local installations and configurations. The eLearning department is committed to the application of international standards in courseware development and played a significant role in promoting their widespread use in Hungary. All of our training materials comply with international standard SCORM and consequently, the Learning Management Systems (LMSs) available on the market such as ILIAS and Moodle can load and display them.

#### International scientific partnerships

Our department established close cooperation with the University Paul Sabatier in Toulouse and the Institute for Informatics and Automation Problems (IIAP) of the National Academy of Sciences of the Republic of Armenia. MTA SZTAKI and the above mentioned institutes signed a Memorandum of Understanding in order to explore future cooperation opportunities. We have been conducting joint research and development together with the Institute of Mathematics and Informatics of the Bulgarian Academy of Sciences (IMI BAS) within the framework of a bilateral academic cooperation project for years.

### MAIN R&D TOPICS

The GUIDE@HAND mobile application family consists of multilingual offline applications running on smart phones and tablets for providing thematic services. The applications are available on platforms iOS and Android. The application family serves users on a variety of domains. The thematic groups created so far are the following: GUIDE, EVENT, CITY, MUSIC, UNI, INFO, SPORT, BOOK.

With the help of SZTAKI SSS® Technology (Synchron Slide and Stream) 2.0, presentations and conference materials can be archived and displayed together with illustrations (e.g. slides, animations and videos). The SSS Player can communicate with open-source eLearning frameworks (e.g. ILIAS and Moodle) by applying the SCORM standard which enables an extended functionality.

- EXOS. S.R.O. Kosice
- Technical University of Crete
- IRIT, Toulouse
- Institute for Informatics and Automation Problems of NAS RA
- Institute of Mathematics and Informatics, BAS, Sofia
- Consorzio ForCopim, Italy
- Klagenfurt University, Austria
- Virtual encyclopaedia of the Bulgarian iconography
- Széchenyi István University
- Eötvös József Highschool
- Számalk Zrt.
- Hungarian National Lottery PLC.
- Walker's Guide Ltd.
- Midmar Miskolc Tourism Marketing Nonprofit Ltd.
- Budapest 9<sup>th</sup> District Local Government
- Törökbálint Local Government
- Hungarian National Academy of Sciences

- Creating eLearning training materials within the framework of the project "Academic cooperation for the water sector", TÁMOP-4.1.1C-12/1Konv-2012-0015
- eLearning training material development from the scenario scripts prepared by teachers in the topic of patriotic education and national defense, TÁMOP-3.1.2-12/1-2012-0001
- Development of Public Association for Tourism in Tata as a local-level TDM organization, KDOP-2.2.1/A-12-2012-0004
- Integrating Armenia into ERA: Information and Communication Technologies (INARMERA), FP7-INCO-2011-6
- Development of new, binocular, free-horizon video display (FHVD) with embedded microcomputer for educational and mobile Internet displaying purposes, GOP-2009-1.1.1-09/1-2010-0002
- Innovative eLearning Tool for Quality Training Material in VET (IQTool), 2007-1967/001-001 LE3 MULPRO
- Implementation and continuous improvement of IT solutions in rapid winner searching, prize calculation and draw services for the Hungarian National Lottery PLC

