eLearning Department

Contact

Head of department:
Zsolt László Márkus

Phone:
+36 1 279 6191

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

Address:
1111 Budapest
Lágymányosi utca 11.

Web:
www.sztaki.mta.hu/elearning

Presenting mobile development with SSS technology

Multiplatform (web and mobile) eLearning training material

Development of Middleware for Free Horizontal Video Display

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 expert areas. The versatile application of the experiences in the areas of education, mobile applications, multimedia and R&D made it possible to reach our results.

Main R&D topics

- deploying eLearning systems and electronic courseware development,
- innovative application development for web and mobile platforms and for video display glasses,
- location dependent services, mobile application development for touristic reasons,
- optimising multimedia delivery

The Department develops new prototype systems, applications and integrated solution in the above topics based on the results of basic research. The research and the development is partially performed within the framework of EU projects, occasionally under the coordination of the Department.

eLearning

Besides deploying eLearning systems, we can create specific and generic training materials very efficiently based on the experience obtained in the course of our development projects. Our colleagues were involved in the development of several thousands of multimedia elements serving the 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, both the licensed and open source standard Learning Management Systems (LMSs) available on the market such as SAP, Oracle, ILIAS, IBM, Moodle can load and display them.

Based on our content development experience, we teach as well the methodology of the creation of training materials. Our satisfied clients include ministries, state institutions, banks, insurance companies, academic institutions and educational centres.

Main domestic references

- National University of Public Service
- National Institute of Public Adminstration
- National Development Agency
- Directorate General for Education, Training and Science Organising of the Ministry of Interior
- LEIER Hungária Kft.
- WSH Kft.
- Petőfi Museum of Literature
- Moholy-Nagy University of Arts
- Tokaj Hegyalja, Taktaköz, Hernád-völgye Tourism and Cultural Association
- Vodafone Hungary
- Generali Providencia Zrt.
- Szerencsejáték Zrt.

Main international references

- GUIDE@HAND Košice
- GUIDE@HAND Turia
- Alpen-Adria Univeristät, Klagenfurt
- Bulgarian Iconographical Digital Library

Application development for tourists

We worked in application development for tourist first in CityGuide project started in 2005 in cooperation with local governments. Based on the experience gained in this project, we developed the GUIDE@HAND service. The operation of this service requires continuous customer and development support maintained by our staff. GUIDE@HAND is a multilingual audio tourist guide application available on smart phones (iOS és Andoriod). The most important service of the application is that it guides the tourists in a city with the help of one- or two-hour-long enjoyable walks. While the user is approaching a famous sight, the GUIDE@HAND automatically reads the appropriate information, and the pictures and videos of the sight appear on the display, which facilitates the identification of the particular details as well. The traveller is guided from attractions to attractions with the help of voice instructions and stories can be listened to during the discovery.

The visitor can meet the service in several Hungarian locations and in some neighbouring countries. See the webpage http://www.guideathand.com for more details.

Market-oriented innovative developments

Our market-oriented innovative developments are based on our research activities. Several valuable domestic and international publications were issued in the area of adaptive distributed servers, host recommendation, content adaptation, peer-to-peer streaming and applying self-organising methods for multimedia delivery.

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 while playing in an eLearning framework.

The colleagues of our department work in several national and international committees, examining different aspects of eLearning and providing professional consultancy in the elaboration of various eLearning solutions. We initiated the eLearning Forum conference series in 2002, and still take part as co-organisers of the forum.

Most important projects

- Integrating Armenia into ERA: Information And Communication Technologies (INARMERA), FP7-INCO-2011-6, 2012-2014
- 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, 2010-2013
- Innovative eLearning Tool for Quality Training Material in VET (IQTool), 2007-1967/001-001 LE3 MULPRO, 2007-2009, http://www.iqtool.eu/
- Enhanced Learning Unlimited (ELU) FP6-IST-4-028025, 2006-2008,
- Networking Centres of High Quality Research on Knowledge Technologies and Applications (HUBUSKA), FP6-INCO-CT-2003-003401, 2004-2007

Staff

Márkus Zsolt László, head of department; the department has a total of 6 colleagues.