New Paradigm Related to Innovative Technologies at Czech Secondary Schools

Ivo Martiník
VŠB-Technical University of Ostrava
Faculty of Economics
Czech Republic
ivo.martinik@vsb.cz
Motivation, Problem Area

Problem of the most universities and secondary schools in the Czech Republic:

How to keep and increase the learning process quality, when the number of students and the popularity of the part-time and distance form of learning continually increases?
Motivation, Problem Area

Problem of the most universities and secondary schools in the Czech Republic:

It is clear that classic textual study texts (eventually with added multimedia components) cannot fully compensate straight forward or intermediary interaction of the teacher with the student.
Motivation, Problem Area

Full complex multimedia visualization of the educational process accessible on-line or on-demand is such the absolute necessity in the present time.
Motivation, Problem Area

Problem of the most universities and secondary schools in the Czech Republic:

Although the information technologies penetration reaches the world standard within the Czech population, the exploitation of the new technologies including the rich-media technologies in everyday teaching and learning is far behind expectations.
Rich-Media Technology

Rich-media is synonymous for broad range of interactive multimedia being used for the support of synchronous and asynchronous communication

Animations (Flash Player)
Stream video
Rich Internet Applications
Online games

...
Rich-Media Recorder
Rich-media Recording
MEdia-rich Repository of LearnING Objects

www.merlingo.cz
Main Goals of MERLINGO Project

Setting up and manage the central repository of learning objects based on the rich-media technologies accessible online and on-demand within the national computer network CESNET2,
CESNET2 Topology
Main Goals of MERLINGO Project

Minimize the financial, personal and time costs joined with the creation and management of the rich-media learning objects (especially the costs of direction, cutting, organizing, archiving, computational and personal capacities, etc.),
Main Goals of MERLINGO Project

Support for the eLearning and rich-media technologies in the area of complex multimedia visualization of the educational process and fundamentally enrich the learning process especially in its part-time and distance form,
Main Goals of MERLINGO Project

Radically improve the quality of students with special needs learning, establishment of “barrier-free” information access to records of presentations.
Support for the Students with Special Needs
Main Problem Areas of MERLINGO Project

Relatively **high purchase price** of individual recording systems and the necessity of annual payment for programming support to supplier,
Main Problem Areas of MERLINGO Project

Technical difficulties in realization of recording in locations which are not equipped with a necessary infrastructure (camera and microphone systems, sound, mixing device, etc.),
Main Problem Areas of MERLINGO Project

Impossibility to outfit each teaching staff with their own mobile recording that could be used for preparation and publishing of a lecture,
Main Problem Areas of MERLINGO Project

Limited possibility of editing and modifications (e.g. edition, post-production) of records of lectures which could be done by teaching staff without technical assistance and on a mobile device,
Main Problem Areas of MERLINGO Project

Inaccessibility or difficult implementation of application programming interface providing interaction with learning management systems of virtual universities.
EduArt

A Top Place
to Study Economics

Technical University of Ostrava
Faculty of Economics
Sokolská 33, 701 21 Ostrava
Czech Republic
http://en.ekf.vsb.cz/

EduArt

Synchronised Recording

on line
on demand

Publishing
Archiving
A Top Place
to Study Economics

EduArt

Video recording

Audio recording

Electronic board

Data projector

CD/DVD/BD

Mobile phone

USB

Visualizer

Archiving

Internet
Currently, one of the key tasks for the MERLINGO project investigators is a pilot implementation of rich-media technologies in the educational process at six selected secondary schools within the project.

Clever helpers for teaching using ICT in a simple and creative way.
Rich-media Technologies at Secondary Schools

Clever helpers for teaching using ICT in a simple and creative way

- Slavonic Grammar School in Olomouc,
- Grammar School Hello in Ostrava-Poruba,
- Olga Havlová Grammar School in Ostrava-Poruba,
- Information Technology High School in Frýdek-Místek,
- Secondary Vocational School of Třinec Steelworks,
- Secondary Technical School in Šumperk.
Main Goals of the Project

• Increasing the teaching process level at the secondary schools,
Main Goals of the Project

• Increasing the teaching process level at the secondary schools,

• Support of asynchronous communication realization between teachers and students,
Main Goals of the Project

• Increasing the teaching process level at the secondary schools,
• Support of asynchronous communication realization between teachers and students,
• Mobilization of students in the teaching process,
Main Goals of the Project

• Increasing the teaching process level at the secondary schools,
• Support of asynchronous communication realization between teachers and students,
• Mobilization of students in the teaching process,
• Support of students with special needs.
Rich-media Technologies at Secondary Schools
Rich-media Technologies at Secondary Schools
Rich-media Technologies at Secondary Schools
EduArt Technology US Patent

(12) United States Patent
Martinik

(10) Patent No.: US 9,007,383 B2
(45) Date of Patent: Apr. 14, 2015

(54) CREATING PRESENTATIONS BY CAPTURING CONTENT OF A SIMULATED SECOND MONITOR

(71) Applicant: Ivo Martinik, Ostrava-Poruba (CZ)
(72) Inventor: Ivo Martinik, Ostrava-Poruba (CZ)
(73) Assignee: Vysokáškola báňská—Technická Univerzita Ostrava

(56) References Cited

U.S. PATENT DOCUMENTS

4,555,775 A 11/1985 Pike
6,337,717 B1 1/2002 Nason et al.
7,158,140 B1 1/2007 Kolebanov
7,650,603 B2 1/2010 Green
8,736,700 B2 5/2014 Cote et al. .......... 348/222.1
2006/006148 A1 2006/015115 A1

(21) Appl. No.: 13/705,985

eLearning Forum Asia 2015
Thank You for Your Attention

Ivo Martiník
VŠB-Technical University of Ostrava
Faculty of Economics
Czech Republic
ivo.martinik@vsb.cz