

Cloud based e-learning solution E-CHO

Marko Papić, Faculty of Electrical engineering, University of Ljubljana



KC Class
Cloud Assisted Services

Laboratory for Telecommunications - profile

- Established in 1946, remains the most innovative R&D laboratory in the field of telecommunications in Slovenia
 - International scientific, R&D and interdisciplinary projects cooperation
 - Young and motivated team
 - 50+ scientists, researchers, students, technicians ...

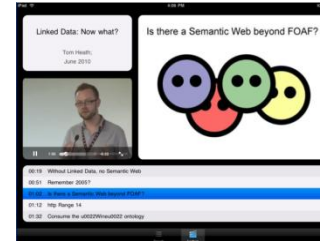


R&D COMPETENCES

- Scientific and industry oriented R&D
 - Future Internet, **Internet of Things**
 - **Quality of Service/Experience** (QoS/QoE) tools and modeling
 - Communications systems & services – SSW, NGN/IMS, MultiPlay, IPTV
 - Communications **protocol development** (SS7, SIGTRAN, SIP, Diameter)
 - Self-Organized Networks – **SON algorithms**, emulation
 - **SmartGrid** and energetics communication technologies and solutions
 - Assistive technologies and **eHealth**
 - Multimedia-based **eLearning** technologies, solutions and content
 - GNSS applications – tracking, **eToll collection system**
 - Mobile application development (iOS, Android)
 - Converged multimedia applications (IPTV, Web 2.0)

SELECTED RESEARCH AREA: MULTIMEDIA

- ICT supported learning
 - LCMS platform, cloud based
 - Social learning
 - M-learning
 - Game based mobile learning



e-cho

- Design and development of multimedia applications on convergent terminals
 - iPhone, iPad, Android
 - Interactive / smartTV, Set-top-boxes
- Design and evaluation of intuitive user interfaces
 - Heterogeneous interaction modalities
 - touch, gestures, voice



WHAT IS E-CHO CLOUD PLATFORM

- E-CHO Cloud eLearning Platform supports:
 - all technical, didactical and organizational aspects of e-learning,
 - large scale implementations,
 - multimedia and interactive content,
 - various didactical approaches,
 - virtual laboratories



CONTENT

- “LO” – Learning Objects are elementary “Content” entity in E-CHO
 - Anything: text, picture, video, html, URL, File, question
 - Joining LOs into groups – Courses; (linear/nonlinear)
 - Transcoding and streaming
 - LO parameters: Arbitrary Meta Tagging
- “Activity” is an entity belonging to “LO”
 - discussing, file exchange, commenting, rating
 - social. collaborative learning enabler
- Simplicity of content development
 - concurrent work on different LOs
 - import/export SCORM, ZIP
 - Collaborative authoring, versioning



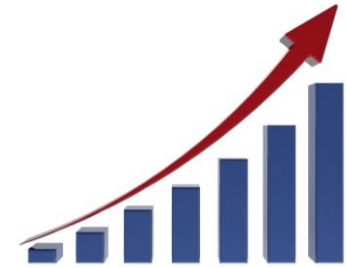
LEARNING DELIVERY

- Desktop, mobile, TV
 - Multimedia courses, activities, tests
- Corporate environments
 - Knowledge Management: E-CHO as the main environment encompassing all existing knowledge resources (management and processing of knowledge)
 - Training support (e-learning, blended learning)
- Schools and academia
 - E-schoolbooks
 - Teachers lessons (LOs+activities)
 - Learning games, virtual laboratories...



PROGRESS TRACKING AND MANAGEMENT

- Administrative progress tracking
 - Each LO: Access, Time
 - Each LO group: Time percentage
- Knowledge assessments
 - Questions and tests: detailed reports
 - Tutor subjective grading: any activity per user (numerical, percentage)
- Management of Learning Process, Learning Content, Users and Groups
- User accounts
 - regular, linked
- Access rights are defined on the E-CHO process level
 - Predefined roles are based on roles templates
 - Arbitrary access rights generation
- Grouping of users



TARGET ENVIRONMENTS

- E-CHO 3.0 is a cloud based system, ADAPTED to performance of :
 - centralized corporate e-learning (cloud based hosting)
 - ICT based education in schools (www.e-gradiva.si)
 - corporate e-learning and knowledge management (E-CHO 3.0 corporate)



CORPORATE USE OF E-CHO

- Case examples:
 - NLB d.d. – biggest national bank in Slovenia
 - Telekom d.d. – National Telco operator, Mobile operator
- Close integration with internal IT systems
 - AD/LDAP/User databases (mirroring corporate organization charts, Single sign on)
 - Corporate Intranet integration
 - Integration with HRM systems (way towards Knowledge Management)
 - Semantic tools
- Cloud based hosting
 - Quick and easy e-learning setup
 - Content sharing or distribution – one source delivery

E-CHO IN SCHOOLS



WORKBOOKS



TEXTBOOKS



ADMINISTRATION



KNOWLEDGE ASSESSMENT



LESSONS PREPARATION

TEACHER TODAY

LODVA LEVCEK

TEACHER TOMORROW

LOWOVBOM LEVCEK



Class Conference 2012

WWW.EGRADIVA.SI

- 18 multimedia, interactive e-textbooks
- Knowledge assessment, virtual projects activities
- 26000 users (teachers, pupils, students)
- Cloud based hosting, complete learning process support

Ime učbenika	Postopek	Poslednja posodobitev
Dokumentacija	100 %	08.11.14
Ekonomika	100 %	08.08.00
Glavni oblikovalski slogovi	0 %	08.08.00
Gradivo	0 %	08.08.00
Gradiva in obdelane: papir in tisk	100 %	08.08.00
Idole za izdelavo iz lesenih gradiv	0 %	08.08.00
Idole za izdelavo iz papirnih gradiv	100 %	08.08.01
Karikaturne	100 %	09.09.08
Lesna gradiva	0 %	08.08.00
Obnova lesnih/tražne stene	0 %	08.08.00
Papirna gradiva	100 %	08.08.01
Preizkusi znanja 129	0 %	08.08.00
Preizkusi znanja 134	37 %	100 %
Preizkusi znanja 135	0 %	08.14.14
Preizkusi znanja 136	0 %	08.08.00

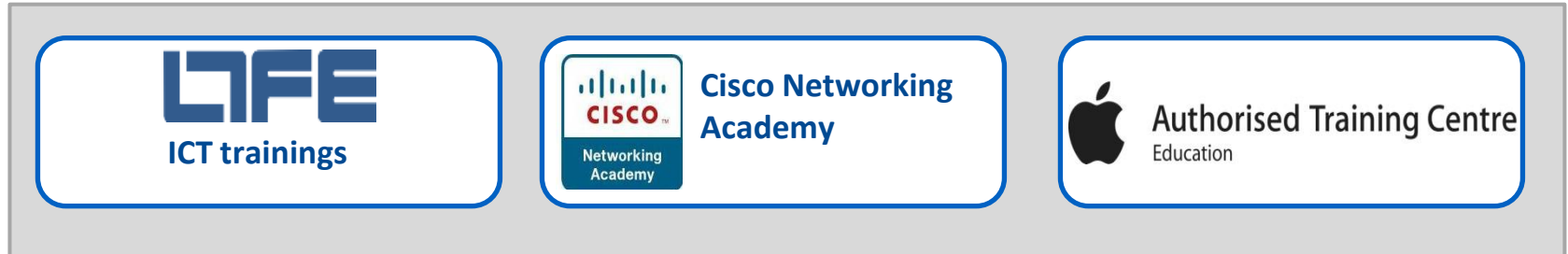
The interface includes a video player showing a person at a desk, a slide navigation pane with 'Slide056' and 'Slide057', and a mind map diagram with nodes like 'Ključne veščine', 'Pomembna vsebnosti', 'Odkrivanje skupaj', 'Sprememba ljudi', 'Ključni viri', 'Distribucija glavi', 'Vir prihodov', and 'Struktura stroškov'. The bottom right corner features the 'VIZUARNA' logo and contact information for Marko Šušteršič.

The page displays an interactive interface with a central image of a person and various clothing items (jacket, t-shirt, shorts, pants, shoes, hat, gloves). A text box says 'Človek ustvarja. Prava stvar, ki jo lahko naredi naša obnova'. The left sidebar shows a navigation menu with categories like 'Tehnika in tehnologija', 'Človek in ustvarjanje', 'Dokumentacija', 'Ekonomika', 'Tehnološki sredstva', 'Računalniki in krmiljenje', and 'Prometna vozila'.

The question asks: '01. Strukturni krog predstavlja sestavo preti. Reši legendo tako, da izbereš ustrezne pojme!'. Below the question is a 3D pie chart with four segments labeled A, B, C, and D. Segment C is 45%, B is 25%, A is 25%, and D is 5%. A legend box contains the following items: 'izberi', 'mimeralni delci', 'erak', 'mimo', 'organska snov'. The interface includes a 'Preostali čas: Neomejeno' timer and a progress indicator at the bottom.

ICT-ACADEMY

- Initiative & common brand for LTFE professional trainings activities



- Over 15 years of experiences in delivery of ICT trainings for
 - telco and service providers
 - ICT vendors
 - agencies, governmental institutions
 - educational institutions
 - enterprises
 - individuals



ICT-ACADEMY

- An ecosystem of
 - Experienced lecturers, assistants, support personnel
 - Training programmes
 - Professional equipment & laboratories
 - *Satisfied customers*



www.ict-academy.eu

Additional information

- Marko Papić
 - marko.papic@ltfe.org;
 - Skype: markopapic
- E-CHO cloud based platform
 - www.e-cho.org
- ICT academy
 - www.ict-academy.eu
 - rok.zurbi@ltfe.org
- University of Ljubljana, Faculty of Electrical Engineering, Laboratory for Telecommunications
 - www.ltfe.org

