

VideoLectures, transLectures and Openingup*Slovenia* as a testing ground



Opening up Slovenia

Paris, 23 July 2014

Davor Orlič

davor.orlic@ijs.si

Knowledge 4All Foundation Ltd

t r a n s Lectures



**Making Media more valuable
for its owner and more
useful for its consumer**



videolectures●net

exchange ideas & share knowledge



Opening up Slovenia

What is happening?

Big promises of open and massively online education



- What can we do with it?
 - we can record everything from students' habits in reading and viewing lectures, to
 - their participation in discussion groups
 - their timing and performance on exercises
 - predict future student performance
 - select and sequence learning activities
 - help grade some types of assignments.
- Additionally we can:
 - understand educational content
 - how students learn it
 - and on communicate this understanding to human educators.

Open education and computation

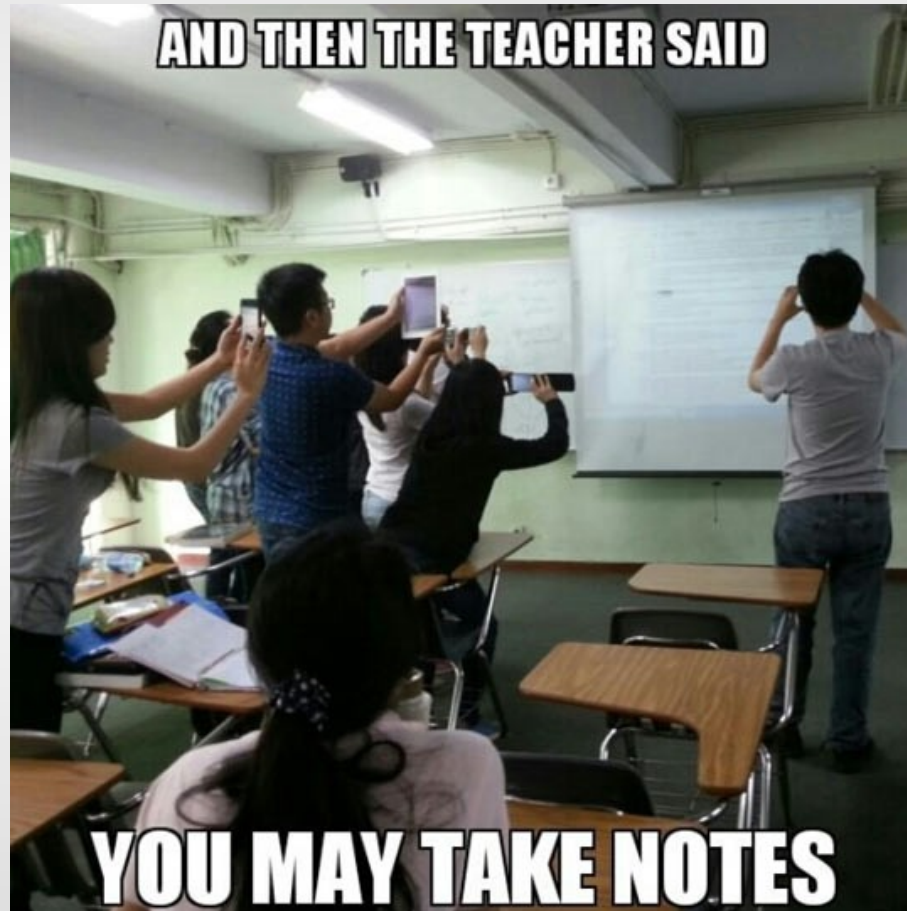


Open Universities
Large scale reasoning
Open licenses
Machine learning
Open source
Information retrieval
Knowledge discovery
Open Educational Resources
Data collection and storage

Interoperability models and solutions
Open accreditation
Language technologies
Open content
Open textbook
Multimodal interfaces
Cognitive systems
Open software
Open curriculum

Self-awareness
Open badges
Semantic and Context technologies
MOOCs
Ubiquitous sensing
Open Context Aware Environments
Open access
Internet of things (everything)
OCW

How the classroom is...



How the classroom should be?...





Opening up Slovenia

What is happening on our side?



VideoLectures.Net IN A NUTSHELL

- WHAT IS IT?
 - VideoLectures.NET is the largest **OER, free and open access digital library of academic talks.**
 - The lectures are given by distinguished scholars and scientists at conferences, summer schools, workshops
 - Case study for [transLectures](#) project
 - Was awarded by United Nations as one of the most outstanding examples of creative and innovative e-Content in the world in the last decade.
- WHAT IS THE CONTENT?
 - Content built up via FP6, FP7 research projects in fields of Computer Science
 - The users are PhD, MSc, MA, researchers, academics, industry, undergraduates and the general public.
- WHERE IS IT BASED?
 - Administratively: [Knowledge 4 All Foundation Ltd.](#), UK
 - Operationally: [Artificial Intelligence Lab, Institute Jožef Stefan](#), Slo

videolectures.net
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World Summit WSEA

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Exciting events just published Nov. 5, 2013

New video player and slides interface Oct. 28, 2013

New events for ML digestion Oct. 11, 2013

Machine learning eadresearch @ Internet of Education, Aug. 26, 2013 conference

The Slovenian Research Agency project results videos Aug. 18, 2013

COLT 2013 is here! Aug. 16, 2013

1st Winter School on Multimedia Processing and Applications Jan. 11, 2013

TOP AUTHORS

UPCOMING EVENTS

Living Bits And Things: Discover the potential of Internet of Things (IoT) and Machine-to-Machine (M2M) technologies and Smart Living in Central and South East Europe, Blvd 2013 Nov. 15, 2013 @ Blvd 13

1st Internet of Education Conference - The role of Computer Science in the Internet of Education, Ljubljana 2013 Nov. 11, 2013 @ Ljubljana 13

Third EUCOIII Members Conference in collaboration with Padova Network of Excellence, Padova de Millenium 2013 April 10, 2013 @ Padova de Millenium, IT 13

GG 140: The Atmosphere, the Ocean, and Environmental Change Oct. 1, 2013 @ New Haven, CT 13

AMST 144: Hemingway, Fitzgerald, Faulkner Sept. 1, 2013 @ New Haven, CT 13

CHES 143: Frontiers in Organic Chemistry II Feb. 1, 2013 @ New Haven, CT 13

PHIL 13c: Philosophy and the Science of Human Nature Jan. 1, 2013 @ New Haven, CT 13

MIT 6.036 Machine Programming Primer Jan. 11, 2013 @ Cambridge, MA

Content Structure



videolectures.net exchange ideas & share knowledge

Welcome Davor [Edit] [Manage] [Admin] [Track] [Help] [Logout]

HOME • BROWSE LECTURES • PEOPLE • CONFERENCES • ACADEMIC ORGANISATIONS • EU SUPPORTED • BLOG • ABOUT US

Event: EU Supported • PASCAL - Pattern Analysis, Statistical Modelling and Computational Learning • 26th Annual Conference on Neural Information Processing Systems (NIPS), Lake Tahoe 2012

View order: Overview, List, Popular, Just published, Recent, Top Voted

PASCAL 2

26th Annual Conference on Neural Information Processing Systems (NIPS), Lake Tahoe 2012

You are invited to participate in the Twenty-Sixth Annual Conference on Neural Information Processing Systems, which is the premier scientific meeting on Neural Computation.

Detailed information can be found at NIPS 2012 Conference homepage.

NIPS Spotlight Sessions videos are available at Video Journal of Machine Learning Abstracts - Volume 3

NIPS Workshops videos are available at NIPS Workshops, Lake Tahoe 2012

Categories: Top • Computer Science • Machine Learning

Posner Lectures

Invited Talks

Oral Sessions

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DOMOV • PREGLED PREDAVANJ • LUDIJE • KONFERENCJE • AKADEMSKE ORGANIZACIJE • PODPRTO OD EUJ • BLOG • O NAS

Lokacija: EU Supported • PASCAL - Pattern Analysis, Statistical Modelling and Computational Learning • 26th Annual Conference on Neural Information Processing Systems (NIPS), Lake Tahoe 2012

Quantum information and the Brain

avtor: Scott Aaronson, Department of Electrical Engineering and Computer Science, Massachusetts Institute of Technology, objavljeno: Jan 16, 2013, posneto: december 2012, ogledov: 2339

Kategorije: Top • Computer Science • Information Theory, Top • Physics • Quantum Mechanics, Top • Computer Science • Machine Learning

Turn off the lights

Quantum Information and the Brain

Scott Aaronson (MIT)
NIPS 2012, Lake Tahoe

Lecture popularity: ★★★★★ You need to login to cast your vote.

Tweet 23 Like 67 +1 26 Share 1 Delicious

Opis: Ever since quantum mechanics was discovered nearly a century ago, famous scientists from Eddington to Wigner to Compton to Eccles to Penrose have speculated about possible connections to the brain – a quest often parodied as “quantum mechanics is mysterious, the brain is mysterious, ergo they must be related somehow.” In this talk, I’ll offer a critical survey of these ideas from the modern standpoint of quantum information theory, pointing out the huge conceptual and experimental problems that have plagued most concrete proposals. However, I’ll also explain why I think some role for quantum mechanics in cognition is not yet excluded, and discuss what sorts of advances in neuroscience and physics might help settle the question.

Prejeto: Prikazite v bojem Windows Media predvajalniku, Prekopri na Windows Media Player, Prenešite prosiljico: nips2012_aaronson_quantum_information_01.pdf (1.5 MB)

Streaming Video Help: Windows Media Player Firefox Plugin - Download

Povezava na to stran: Si želite postavitvi povezavo na to predavanje na vašo domačo stran? Kar pogumno! Skopirajte HTML kodoček!

Mnenja in komentarji: Davor (Publication manager), januar 24, 2013 at 11:53 p.m. This talk comes with an extra interview http://blog.videolectures.net/scott-a...

Napišite svoje mnenje:

Prejeto: 09:00 Quantum information and the Brain, 0:33 My challenge, 2:25 On the other hand, there's an obvious Problem of Scale, 5:04 My view, 6:22 Quantum Mechanics in 1 Slide, 8:22 Interference, 11:07 Measurement (1), 14:02 Measurement (2), 17:02 Measurement (3), 17:54 David Deutsch (circa 1970s), 19:46 Quantum Computing (1), 22:09 Quantum Computing (2), 23:32 The Limits of Quantum Computers (1), 26:44 The Limits of Quantum Computers (2)

What Others Watch Right Now: Lecture 5: Linear-Time Sorting: Lower Bounds, Counting Sort, Radix Sort - videolectures.net, Lecture 4 - Best responses in soccer and business partnerships - videolectures.net, MIT 6.046J / 18.410J Introduction to Algorithms - Fall 2005 - VideoLectures - videolectures.net, Model-based Bayesian RL - videolectures.net, Category: Computers - videolectures.net

SHOW CHAT

Povezane vsebine: Videna predavanja, 100 od 1000

What are the stats?



Content

Events: 900
Authors: 12, 000
Lectures: 16, 000
Videos: 18, 000
Organisations: 7000
Categories: 600
Comments: 8500

Website

Video views: 6 million
Page views: 27 million
Signed in users: 25,000
Average time: 36 min
Attachments: 620,000
Files: 1,3 million
8 servers
New Visitor: 60.83%
Licenses: Creative Commons

Users

Top countries:
United States, India,
Slovenia, UK,
Germany, China,
Canada

Tutorials: 350
Keynote: 800
Interviews: 250



Knowledge 4 All Found. (K4A)



- WHAT IS IT?

- K4A is a Foundation based in London
- The goal of providing the legacy of the PASCAL2 Network of Excellence (machine learning)
- Part of this legacy is VideoLectures.NET website
- Has 60 members sites (CS departments and AI Labs)
- Strong connections with Open Courseware Consortium
- Strong connections with Matterhorn Opencast

- WHAT IS THE AIM?

- Use VideoLectures.Net as a free platform for global Education
- Introduce intelligent tools into VideoLectures.Net
- Use the expertise in Artificial Intelligence for Online Education
- Provide a stable global infrastructure for these processes
- Collect datasets to improve these processes
- Facilitate research in the field of Artificial Intelligence

- SPECS?

- Cost: 4,5 mio EUR
- Project ref no. ICT-287755
- Project acronym: transLectures
- Project full title: Transcription and Translation of Video Lectures
- Instrument: ICT-2011.4.2 Language Technologies
- Thematic Priority: STREP
- Start date / duration: 01 November 2011 / 36 Months

- WHO?

- Universidad Politecnica De Valencia, Xerox, Knowledge 4 All Foundation Ltd., RWTH, European Media Laboratory GmbH, Deluxe Digital Studios
- OpenCast Matterhorn, VideoLectures.Net, Polmedia

- WHAT IS THE AIM?
 - To develop innovative, cost-effective solutions to produce accurate transcriptions and translations in VideoLectures,
 - To deploy those tools across other Matterhorn-related repositories.
 - For translation, we consider the language pairs: $en \leftrightarrow es$, $en \leftrightarrow sl$, $en \rightarrow fr$ and $en \rightarrow de$.

- WHAT IS THE IMPACT?
 - A big step in making educational repositories truly accessible both to speakers of different languages and to people with disabilities.

- ADDITIONAL VALUE?
 - Imagine having 16000 lectures in most of the world`s languages.

- KEYWORDS?
 - language technologies, machine translation, automatic speech recognition, massive adaptation, intelligent interaction, education, video lectures, multilingualism, accessibility
- WHY TRANSCRIPTION & TRANSLATION?
 - There are accessibility issues that can be solved by transcription
 - Non-native speakers understand better by reading than by hearing
 - At least 1,300 different languages with more than 100,000 native speakers
 - No language with more than 20% of the world population

- **List of all VideoLectures.NET videos with transcriptions:**
 - http://helium.ijs.si/lectures_with_trans.html
- **Example: English video**
 - http://translectures.videlectures.net/mitworld_chomsky_spelke_iul/
- **transLectures player editing demo:**
 - http://translectures.videlectures.net/bootcamp07_keller_bss/
 - <http://polimedia.upv.es/visor/?id=601f4e14-1db8-6143-9754-1af15c11ee3c>
- **Mediamixer**
 - <http://mediamixer.videlectures.net>



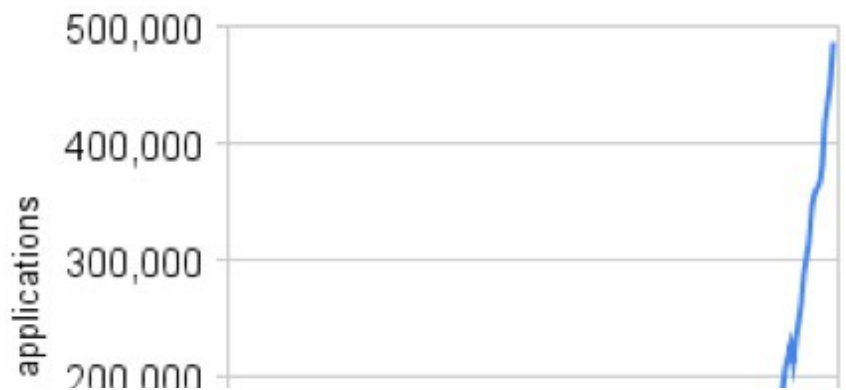
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Research



2007

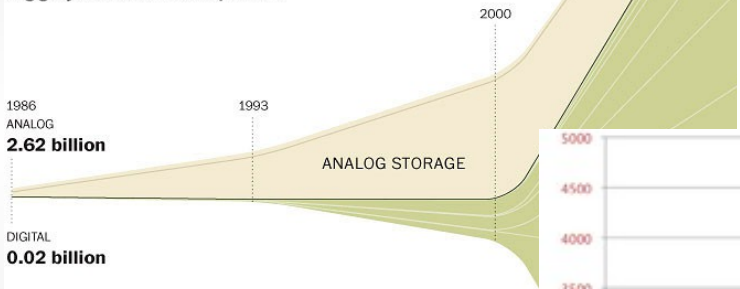
Total Patent Applications



THE WORLD'S CAPACITY TO STORE INFORMATION

This chart shows the world's growth in storage capacity for both analog data (books, newspapers, videotapes, etc.) and digital (CDs, DVDs, computer hard drives, smartphone drives, etc.)

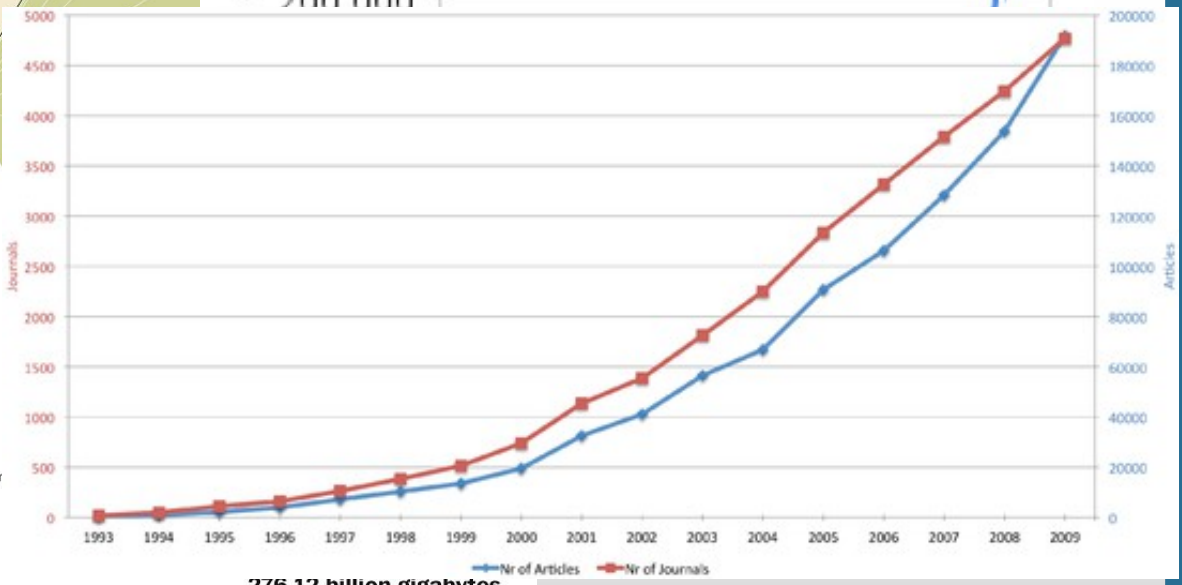
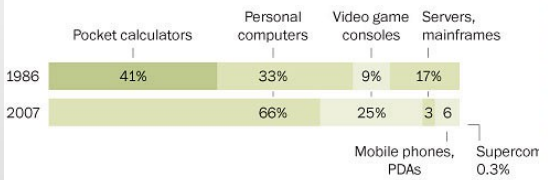
In gigabytes or estimated equivalent



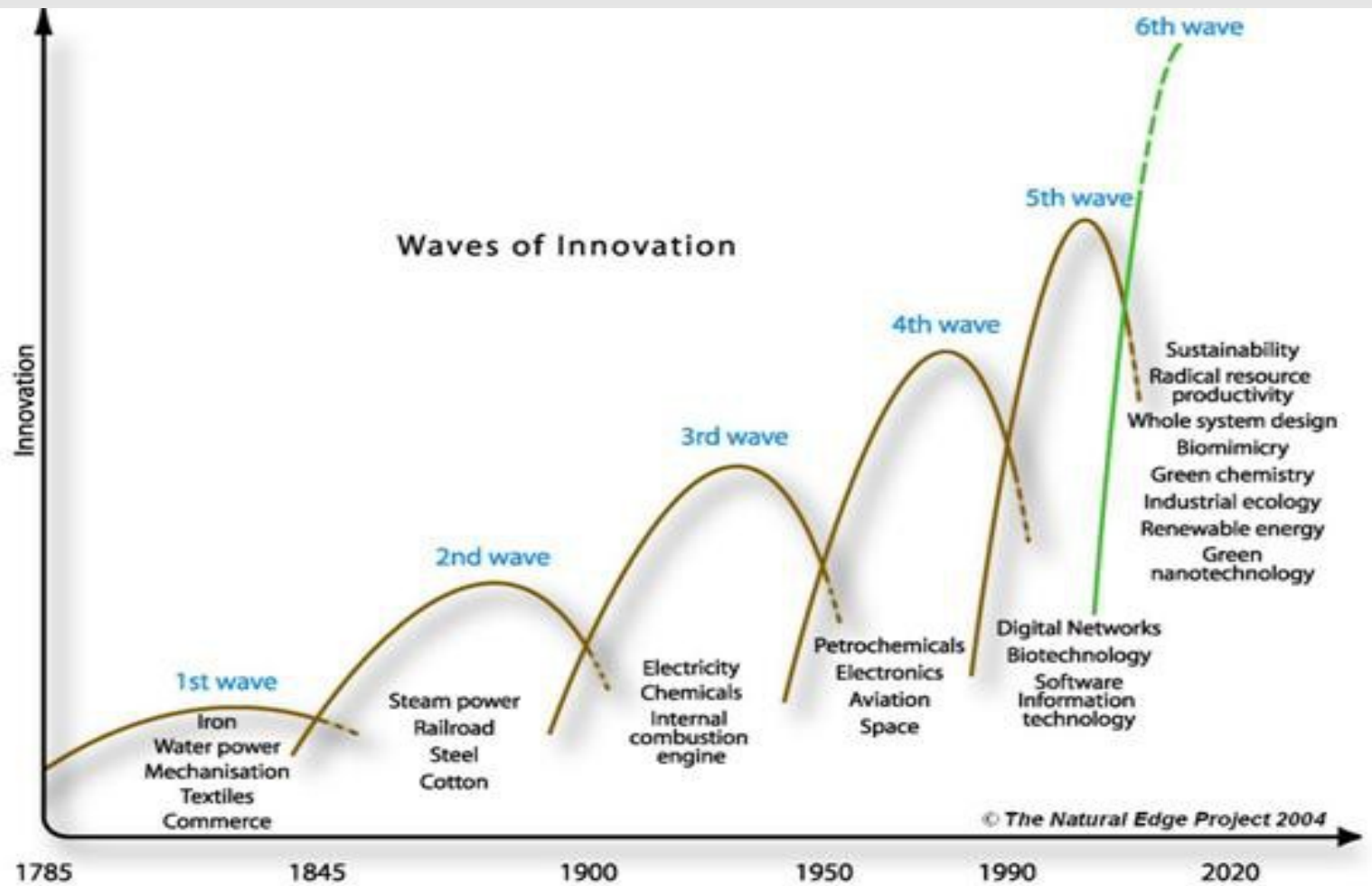
COMPUTING POWER

In 1986, pocket calculators accounted for much of the world's data-processing power.

Percentage of available processing power by device:



276.12 billion gigabytes



PALETTE LIP MAESTRO
SME-Net SCAPE READAL LEARN EDUCUBE OSCAR
KP-LAB TERENCE LOGOS PAPPYPLUS OR-WORLD
ARISTOCIN TRAIN.ME TRIAL-SOLUTIONS WEBLABS Plan4all ASPECT
INNOVANT TELplus CONNECT TEL-Map
L2C IntelLeo LiWA MILK TWT-U Organic.Edunet MIRROR
MINERVAplus VIDL TEL-ME-MOR DFKNOW TEL-MAPARISE
BRICKS UNITE VARIAZIONI PICK LeActiveMa
SCOP SinPers MultiMATCH MAGELAN PrestoPRIM Treble-CLEF
APOSDLE xDELIA ENUS T-LEARNING V-MusT.n
WORKSAFE MULTITR Opencourtrolia logForever NELEO
UNFOL YOUNGNET PROTAGE mEducator
NATURE-SDI SCALE SHAMAN SIREN SLIM-VR STELLAR FORBCI
RENCO DIALOGUE METACAMPUS EMUCAST

<http://www.glasba.videofon.si/>

DISNET

Študentski projekti iz in za industrije

Teachers in the Digital Age

<http://svarog.org/>

IMAGINE

VideoLectures.Net

Mediamixer

Edoo

Xlike

SustEner

E-gradiva

DEAFVOC 2

Tandem

Translecture

IJEPEG-UMKI / ePlatform

iEARN

Safe.si

ADRIART

METOD

FICL

DL@WEB

MARE

<http://astra.si/>

CMEPIUS

Spletno oko

SIO

eTwinning

Blend.FL

EQUAL Study

Online Presence for Learning

Unisvet

CALIBRATE

Comenius-EduMedia-Awards

Open scientific evenings at University of Nova Gorica

Impletum

School-wide vimeo channel

ISME

Munus 2

Razvoj naravoslovnih kompetenc

ITC Euromast

E-PRAGMATIC

Enhancing the capacity of e-learning for educational

Innovative 1:1

Pedagogy

e-Šolska torba

E-Šolstvo

Mesto znanja

<http://www.egradiva.si/>

EAPPS

Obstacles...

Fragmentary results - fragmentary research and development

Disintegration:

- Cross-domain and cross-level divide
- Bottom up (needs) detached from the top down (legislation)

Implementation barriers (from social to value added)

Missing critical mass: the absence of large and systemic testbeds

Limited vision of Openness

Quality of content/services

Challenges...

Personalised (learner centric) vs. Mass

Multilingual and multicultural vs. Global

Dynamic vs. Rigid

Quality vs. Quantity

Open vs. Proprietary

Sharing (social) vs. Transferring (mechanistic)

Participative vs. Directed



Opening up Slovenia

What is missing?

- **Based on:**

- EC communication titled 'Opening up Education' (DG EAC, Connect), Sept 2013
- VideoLectures.Net success (UNESCO award winner)
- Open education projects at Universities
- E-education program supported at the Ministry of Edu
- Successful e-learning technology developers and providers
- Industry lead initiative for Smart Specialization

- **Slovenia is proposing to take a lead in EU „Opening Up Education“ initiative by:**

- Providing EU state level commitment for the programme by all stakeholders
- Offering Slovenia as a test-bed to develop, test and deploy best practices

History and Timeline



- **26 February 2013** VideoLectures.Net recognized by UNESCO as best “e-Science & Technology” in the world in the last decade.
- **19 March 2013** JSI and K4A won the bid for OCWC 2014" to be held in Ljubljana
- **2 April 2013** on an official visit to Slovenia Director-General of UNESCO Irina Bokova, was impressed with VideoLectures.Net, and transLectures
- **25 September 2013** the EC presented ‘Opening up Education’ joint DGs EAC and Connect.
- **25 November 2013** the Ministry of Education, Science and Sport announces OpeningupSlovenia
- **23 April** OpeningupSlovenia officially launched at OCWC Global Conference in Ljubljana, Slovenia
- **Mid June** first call for proposals for 1.4 mio EUR

Bottom up initiative



- Knowledge 4 All Foundation Ltd.
- Jožef Stefan Institute
- University of Maribor
- University of Primorska
- University of Ljubljana
- University of Nova Gorica
- Ministry of Education, Science and Sport of Slovenia
- OS Savsko Naselje primary school, representative of the national primary schools cluster
- Vrtec Trnovo kindergarten, representative of the national kindergarten cluster
- Chamber of Commerce and Industry of Slovenia
- Slovenian National Post – system integrator

Associated institutions



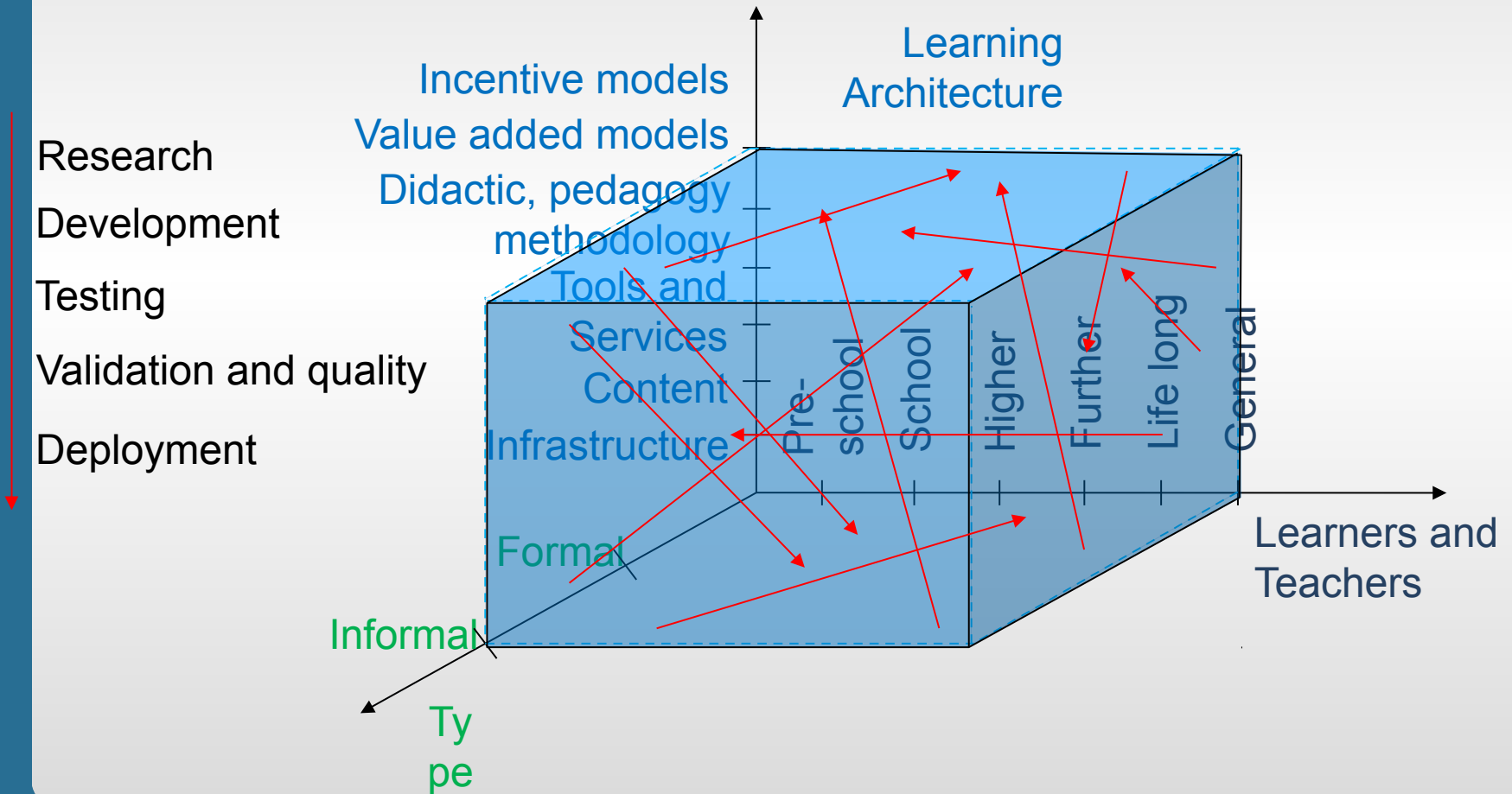
- **Austria:** Faculty of Computer Science, Graz University of Technology
- **Belgium:** Department of Educational Sciences, Vrije Universiteit Brussel
- **Croatia:** Univeristy of Zadar, Josip Juraj Strossmayer University of Osijek
- **Estonia:** Institute of Informatics, Tallinn University
- **France:** University of Nantes, INRIA - the French Institute for Research in Computer Science and Control
- **Greece:** SingularLogic SA
- **Italy:** International Centre for Genetic Engineering and Biotechnology (ICGEB), Trieste, Interdipartimental Center of Research in Urban Planning "Alberto Calza Bini" , Università degli Studi di Napoli Federico II, IAES International Academy of Environmental Sciences, Venice, Department of Mathmatics and Computer Science, University Udine, University of Trieste
- **Germany:** Karlsruhe Institute of Technology
- **Lithuania:** Vilnius Business College
- **Netherlands:** UNESCO OER Chair, Open University Netherlands, EADTU, European Association of Distance Teaching Universities
- **Poland:** Lublin University of Technology, University of Natural Sciences and Humanities in Siedlce
- **Portugal:** Faculty of Science and Technology of Universidade Nova de Lisboa, UNINOVA (Institute for the Development of New Tecnologies)
- **Slovenia:** Karst Research Institute, Postojna, Slovenia, British Council Slovenia, IAM - Institute and Academy of Multimedia, School centre Kranj, Slovenian institute for Adult Education
- **Spain:** Madrid Open University, Universidad Complutense de Madrid, Universitat Politècnica de València
- **Turkey:** Department of Computer Education & Instructional Technology Middle East Technical University
- **United Kingdom:** The Open University UK, University College London
- **United States:** OpenCourseWare Consortium, Opencast Matterhorn

Why Slovenia?



- Small enough to make policies work
- Large enough to have quantitative data and partners
- Personalisation – gaining from cultural richness
- Excellent background and raised awareness
- Critical mass of advanced technology, content, projects, networks
- Needs and interests from major stakeholders
- Strategically committed

Open education matrix



- **OuS Kick-off - OCWC Global 2014, 23-25 April 2014, Ljubljana**
 - President of republic of Slovenia Borut Pahor and UNESCO as Patrons
 - Slovenian Minister for Education Jernej Pikalo as promotor of the OuS
 - EC commissioner Androulla Vassiliou (Education, Culture, Multilingualism and Youth) as supporter of OuS
- **UNESCO Chair on Open Software for OER**

Running projects



- Shared Open University (U, PS, IJS)
- National videolectures.net and scienceatlas.si
- RTD center for primary schools (OS, IJS, PS)
- RTD center for kindergardens (VT, IJS, OS)
- Mymachine (OS, IJS, U, VT)
- Slovenian Educational Network: e-textbook library (50+), teachers training (40.000)
- “OpenYota” – holistic OS solution for Open Education
- Contextual Microlearning with AI
- high-tech RTD projects
- On-the-job competencies adaptation



Opening up Slovenia

MyMachine Slovenia





Roža se sama zalije.
 Nič več težav z polivanjem,
 vstajanjem iz
 ležišča...





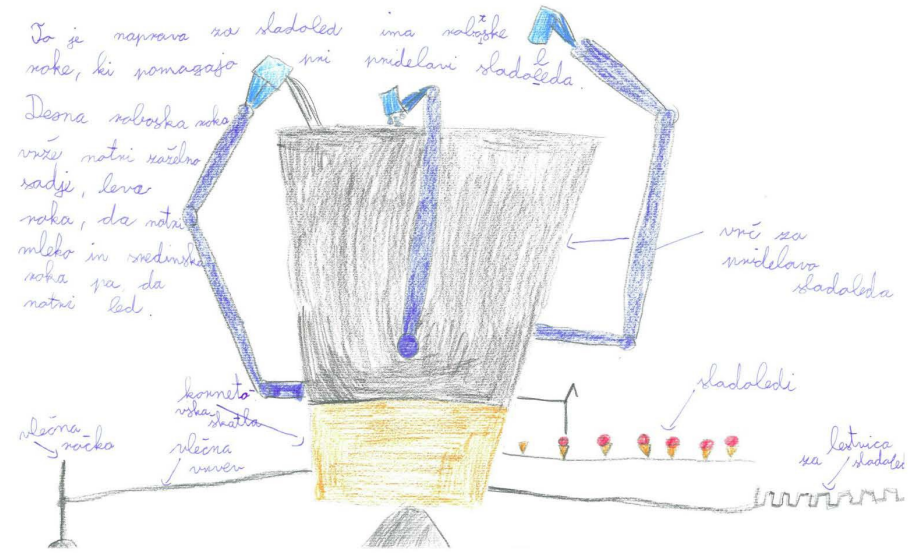
Āoga, ki me
maha ākaki
(māori āe āe āe)

Meta



To je sladokredak.

Petra Lutman 4.A.



Thank you and **Openingup*France!***

WEBSITES:

<http://www.k4all.org/>

<http://videolectures.net/>

<http://www.translectures.eu/>

<http://www.k4all.org/openingupslovenia/>

<http://conference.ocwconsortium.org/2014/>

Paris, 23 July 2014

Davor Orlič

davor.orlic@ijs.si

Knowledge 4All Foundation Ltd