

Čas za ponoven premislek o
izobraževanju računalništva in
informatike

*It is time to rethink what is
Computer Science Education*

SIRikt 2012, Kranjska Gora, March 22nd, 2012

Topics

- Introduction
- Part 1: Curriculum
 - Status in Slovenia, Austria, and Lithuania
 - Brief survey of international Curricula for CS
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- Part 2: Teachers
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 - The future of CS teacher education
- Conclusions



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- *Vilniaus universitetas*, Vilnius, Lithuania; VU Institute of Mathematics and Informatics
- <http://www.mii.lt/index.php?siteaction=personnel.view&id=304&lang=en>
- IFIP Technical Committee 3 (TC3), *ICT in Education*, Vice Chair (<http://www.ifip-tc3.net/>)

Mag. Peter Micheuz



- ***Alpen-Adria-Universität Klagenfurt*** (Celovec), Austria; Department of Informatics Didactics
- [http://www.uni-klu.ac.at/tewi/inf/isys/kid/staff/index.html#Peter Micheuz](http://www.uni-klu.ac.at/tewi/inf/isys/kid/staff/index.html#Peter_Micheuz)



Prof.Dr. Andrej Brodnik

- ***University of Ljubljana***, Slovenia; Faculty of Computer and Information Science
- ***University of Primorska***, Slovenia; Department of Information Science and Technology

Introduction – *Nomen est omen*

- **Computing** The broad subject area; roughly equivalent to what is called ICT in schools and IT in industry, as the term is generally used.
- **ICT** The school subject defined in the current National Curriculum.
- **Computer Science** The rigorous academic discipline, encompassing programming languages, data structures,
- **Information Technology** The use of computers, in industry, commerce, the arts and elsewhere, including aspects of IT systems architecture, human factors, project management, etc. (Note that this is narrower than the use in industry, which generally encompasses Computer Science as well.)
- **Digital literacy** The general ability to use computers. This will be written in lower case to emphasize that it is a set of skills rather than a subject in its own right.

The Royal Society: *Shut down or restart?*

Part 1: Curriculum

- Status in Slovenia
 - Mag. Radoslav Wechtersbach, *The national education institute of the Republic of Slovenia*, Head of the Computer Science subject group
- Status in Austria
 - Mag. Peter Micheuz
- Status in Lithuania
 - Prof.Dr. Valentina Dagienė

Part 1: Curriculum

- Brief survey of international Curricula for CS
 - Mag. Peter Micheuz
- Policymakers
 - Mag. Radoslav Wechtersbach – Slovenia,
 - Prof.Dr. Valentina Dagienė – Lithuania,
 - Mag. Peter Micheuz – Austria

Part 1: Curriculum

- Future of curricula
 - The Royal Society: *Shut down or restart? The way forward for computing in UK schools*, January 2012 (Prof.Dr. Andrej Brodnik)
 - KOLI Group, *The Future of Teaching Computing at School - Computing Teacher Education*, November 2011 (Prof.Dr. Valentina Dagienė)
 - *The new IFIP Curriculum* (Mag. Peter Micheuz)

Part 1: Curriculum

- Foreseen changes in CS Curricula
 - Lithuania (Prof.Dr. Valentina Dagienė)
 - Austria (Mag. Peter Micheuz)
 - Slovenia

Part 2: Teachers

- Status in Slovenia
 - Prof.Dr. Jože Rugelj, *University of Ljubljana*, Slovenia, Faculty of Education
- Status in Austria
 - Mag. Peter Micheuz
- Status in Lithuania
 - Prof.Dr. Valentina Dagienė

Part 2: Teachers

- KOLI Group, *The Future of Teaching Computing at School - Computing Teacher Education*, November 2011 (Prof.Dr. Valentina Dagienė)
- Other ICT related professions in schools

Part 2: Teachers

- Future of CS teachers education
 - Austria (Mag. Peter Micheuz)
 - Lithuania (Prof.Dr. Valentina Dagienė)
 - Slovenia

Conclusions

- Suggestions ...