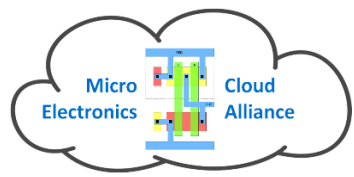


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Success story

THIS PRESENTATION REFLECTS THE VIEWS ONLY OF THE AUTHORS, AND THE COMMISSION CANNOT BE HELD RESPONSIBLE FOR ANY USE, WHICH MAY BE MADE OF THE INFORMATION CONTAINED THEREIN.



MicroElectronics Cloud Alliance

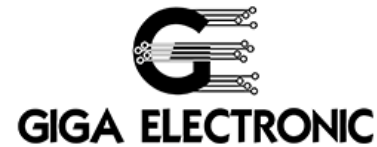


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<http://meca-project.eu/>



POLITECNICO DI TORINO



Objectives

- Shared IT infrastructure for teaching materials and learning resources
- Networking of project partners from HEIs and SMEs
- Shared server infrastructure, e-learning resources and remote access to the CAD tools
- Pilot test
- Implementation of jointly developed cloud-based open educational resources

Networking of project partners from HEIs and SMEs

Meetings business - academia



Training events



mClouds feasibility analysis, Toulouse Training of course developers, Torino



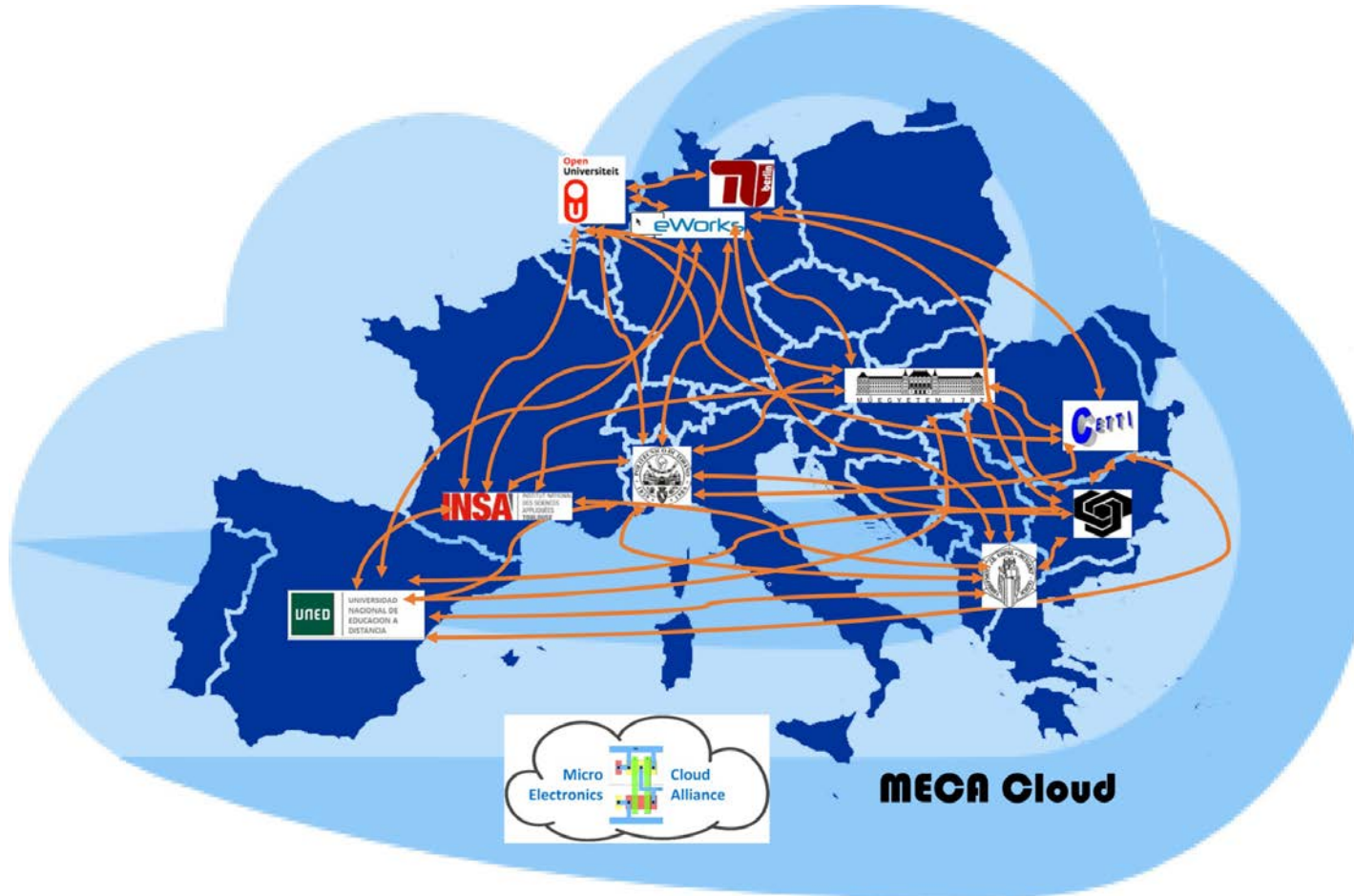
Teachers' training, Bucharest



Training of system officers, Berlin

Development of mClouds

Shared IT infrastructure, e-learning resources and remote access to the CAD tools

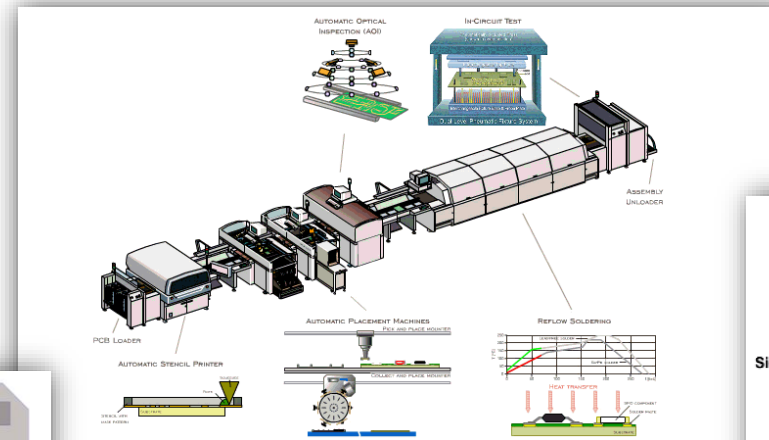


Development of Open Educational Resources (OERs)

4 OERs developed by business partners



18 OERs developed by academic partners



Operation of Micro Hot Plate devices

Main advantage: high temperatures, high ramp rates, with very low power consumption.

Optimization criteria:

- Minimal membrane bending at high temperatures
- Temperature uniformity over the membrane

Schematics Ferroelectric Spintronics

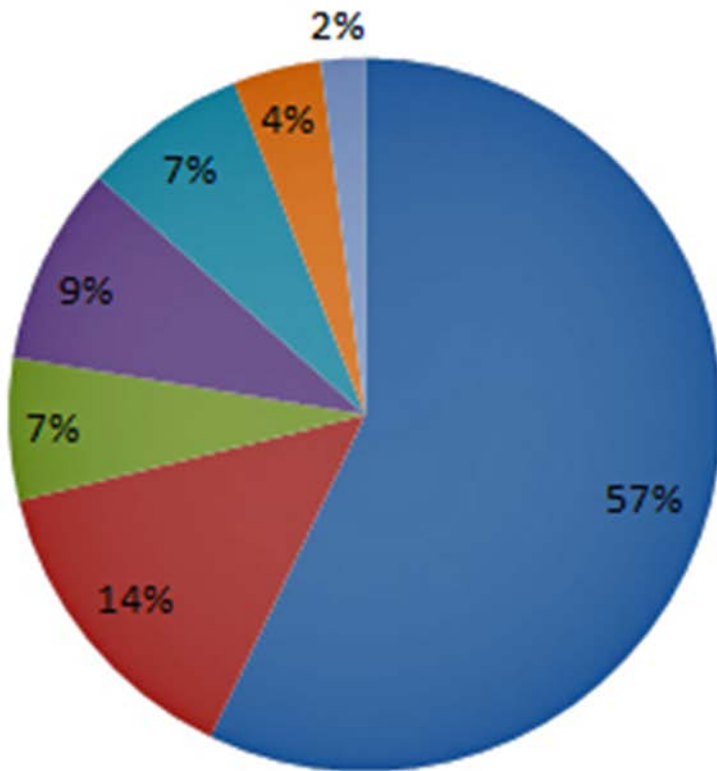
Side 0 ← flying read/write head

- central atom
- Floating Gate Mosfet Transistor
- electrostatic fields
- electromagnetic field
- rotating disk with glass, plastic or metal substrate
- electric field
- electron space charge fields
- fluorescence

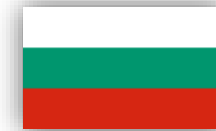
Side 1 ← flying read/write head

Copyright 1998 - 2006 by Colossal Storage Corp. design by sonja thomas

mClouds Users During the Pilot Test - 828 users from 9 EU Countries



- HEIs
- Auto-motive
- ICT
- Medical electronics
- Microsystems
- Renewable energies
- Others

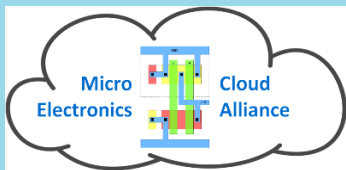


Summary of Results from Industrial Experts

- All developed courses are considered to fulfil a more than average need in short term
- In long term the industry will need even more skills and competences in the proposed topics
- We can conclude that **the university world is close to the industry needs in the sector of microelectronics.**
- **1128 participants in the pilot test and field trial!**

Conclusions: Long Term Benefits

- **All EU HEIs** delivering education in micro-/nanoelectronics could be **involved in European educational cloud.**
- The cloud-based content in OER has three main **advantages for the sustainability of the results:**
 - resources for initial e-learning development and systems/ networks creation are the only high investments unlike the face-to-face delivery of education
 - the students could access the courses from their countries, i.e. it insures virtual mobility without additional financing
 - the content is easily changeable and upgradeable what is mandatory for the fast developing sector of microelectronics

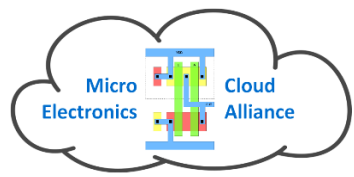


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Micro Electronics Cloud Alliance MECA

Sustainability

- New National and Regional Knowledge Alliances created – memoranda of understanding for future collaboration within mClouds and knowledge sharing Business-Academia;
- More than 50 European enterprises involved and another 15 universities
- New countries joined the Microelectronics Knowledge Alliance: **Portugal, Czech Republic, Slovakia, Poland and Serbia**



What next?

European University MECA

This action will support the **creation of alliances, ideally composed of 5 to 8 partners, by either setting-up new cooperation partnerships or enhance existing ones**, through a step by step approach. They will have the possibility to **associate academic and non-academic partners from the world of work and to grow at a later stage.**

Budget EUR 5 000 000 for 3 years

Deadline 28th February 2019