e-islands project

connecting schools on the islands

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republikahrvatska = republicofcroatia

ministarstvoznanostiobrazovanjasporta = ministryofscienceeducationandsports

Agenda:

1. New school video (e-education film)
2. About the project (*goals & technology*)
3. Pedagogical & methodological part of the project
   - Distant learning
   - Education of teachers
   - Practical usage

About CARNet

- CARNet (**C**roatian **A**cademic and Research **Net**work) was created in **1991.** as a project of the Ministry of Science and Technology of the Republic of Croatia
- CARNet is:
  - Internet service provider for academic, research and school society in Croatia,
  - 10 Gbit/s connection to Geant2 network,
  - provider for e-content service (LMS, ELA...),
  - manages central DNS service.
- Vision: "*Croatia in the society of knowledge*".
- **1997.** first videoconference distance lecture (*over ATM network*)
- **2004.** CARNet started connecting primary and secondary schools to its backbone network.

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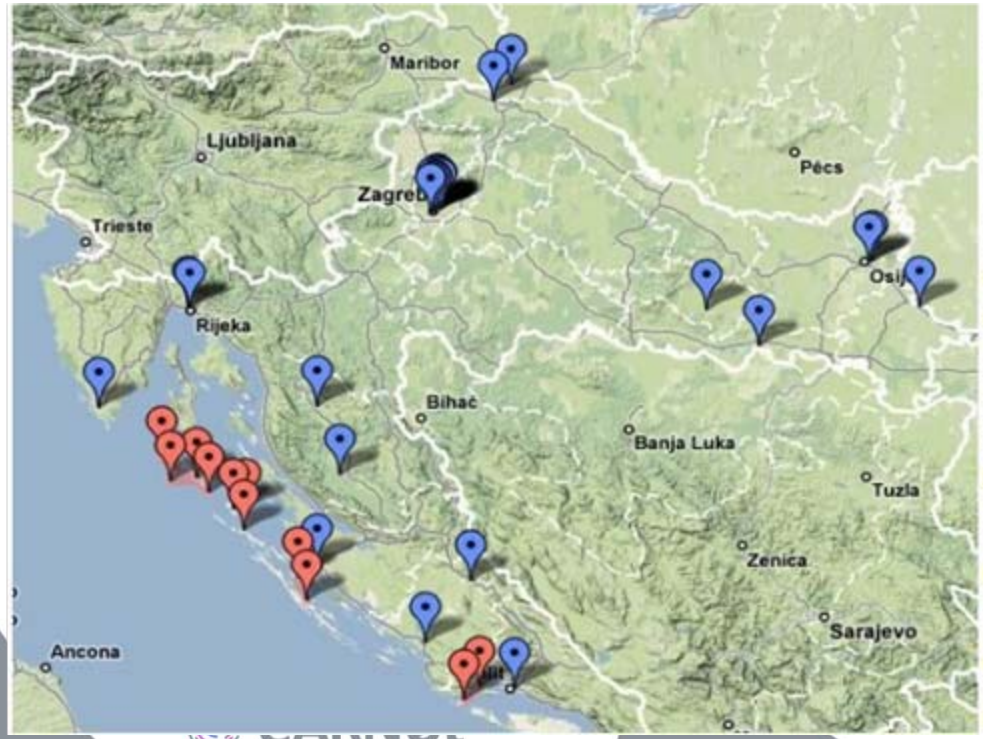
Today – CARNet videoconference system:

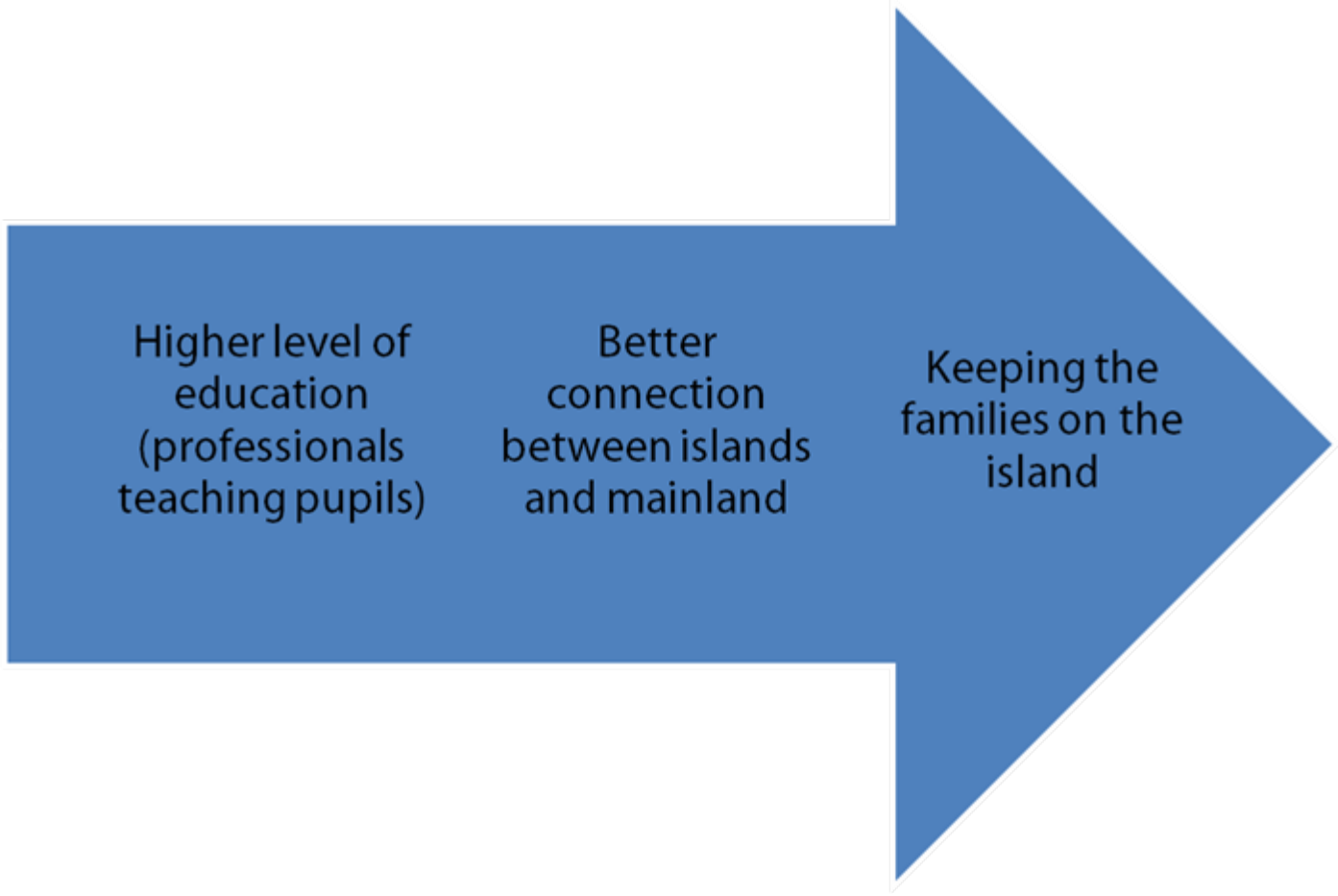
- 35 fully equipped videoconference room (TCR) in 16 city
- + 22 small videoconference classrooms on islands
- + 120 other office&desktop videoconference rooms (schools, institutions...)



e-islands project (partners):

- Partners in project:
  - e-Croatia (Central State Administrative Office for e-Croatia, http://www.e-hrvatska.hr/),
  - Ministry of science education and sports (http://www.mzos.hr),
  - CARNet (http://www.carnet.hr).
- Project started in 2006. , financing was provided by Government of Croatia.
- Greatest challenge: "*How to enable pupils from low inhabited islands with low commercial activities, connection to the Internet and access to modern technologies?*"

e-islands project (goals I.):



e-islands project (goals II.):

- Enabling "**e-learning**" & “remote teaching” on low inhabited Croatian islands.
- Connecting **17** islands schools with 5 mainland schools via wireless/radio infrastructure and connecting it to CARNet backbone.
- Installing **newest** available technology for e-learning (H.323 videoconference system, wireless infrastructure – WiMax, micro-links, smart boards).

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e-islands project enables:

- Stopping and reducing **negative** demographics trends on remote islands.
- Increasing quality of educational system on the islands.
- Connection to the Internet via CARNet network.
- Providing access to the network services that are provided by Ministry of science education and sports.
- Installing newest technology in classrooms, for distance learning (videoconference codec, audio&video systems, smart boards...).

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How (distant learning)?

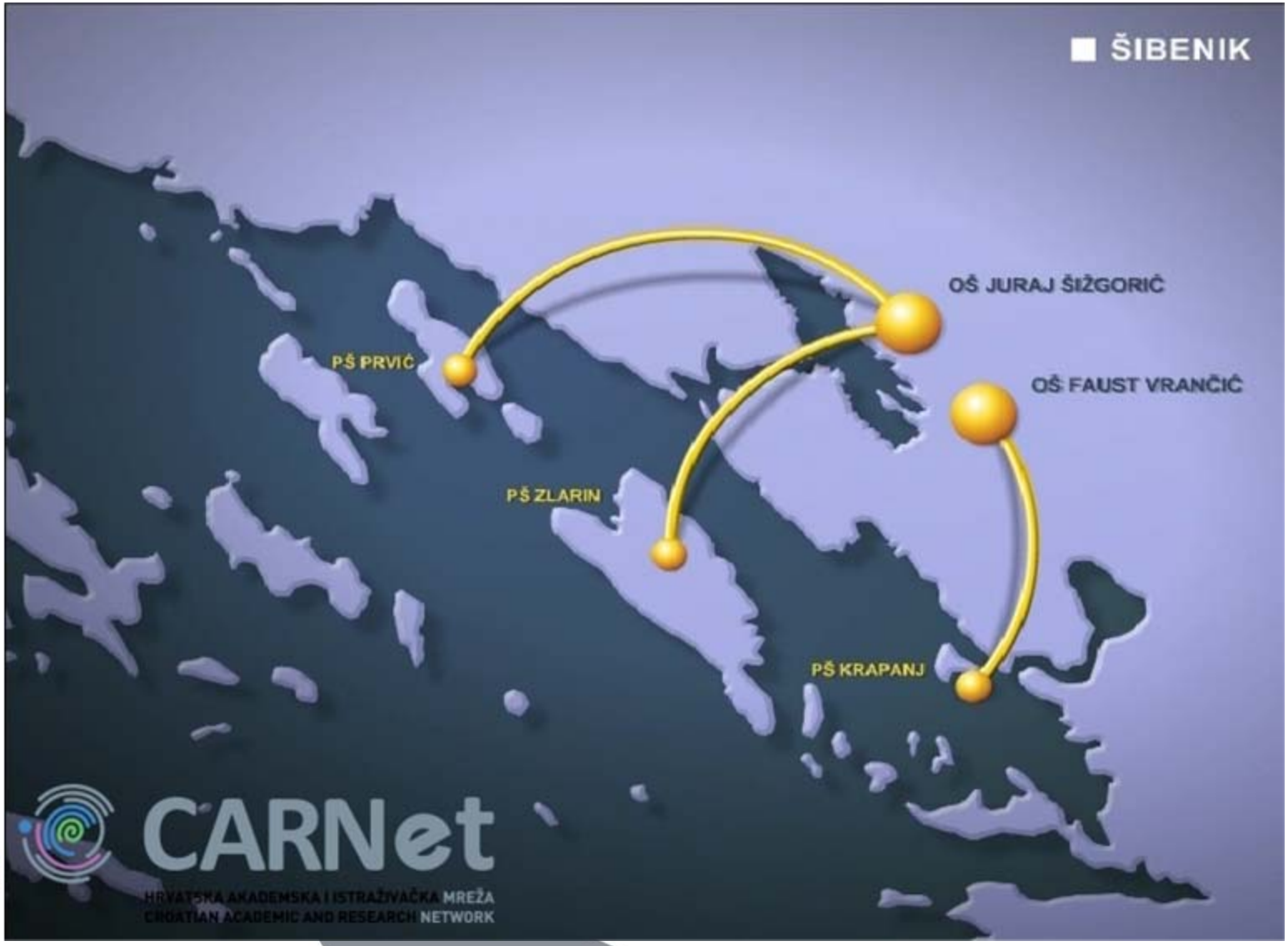
By organizing classes in the parent the schools (mostly on the mainland) or on the bigger, more popolated Islands) for the branch schools on the islands

Using standard videoconference tools for video and content sharing:
Videoconference terminal
&
Smartboard

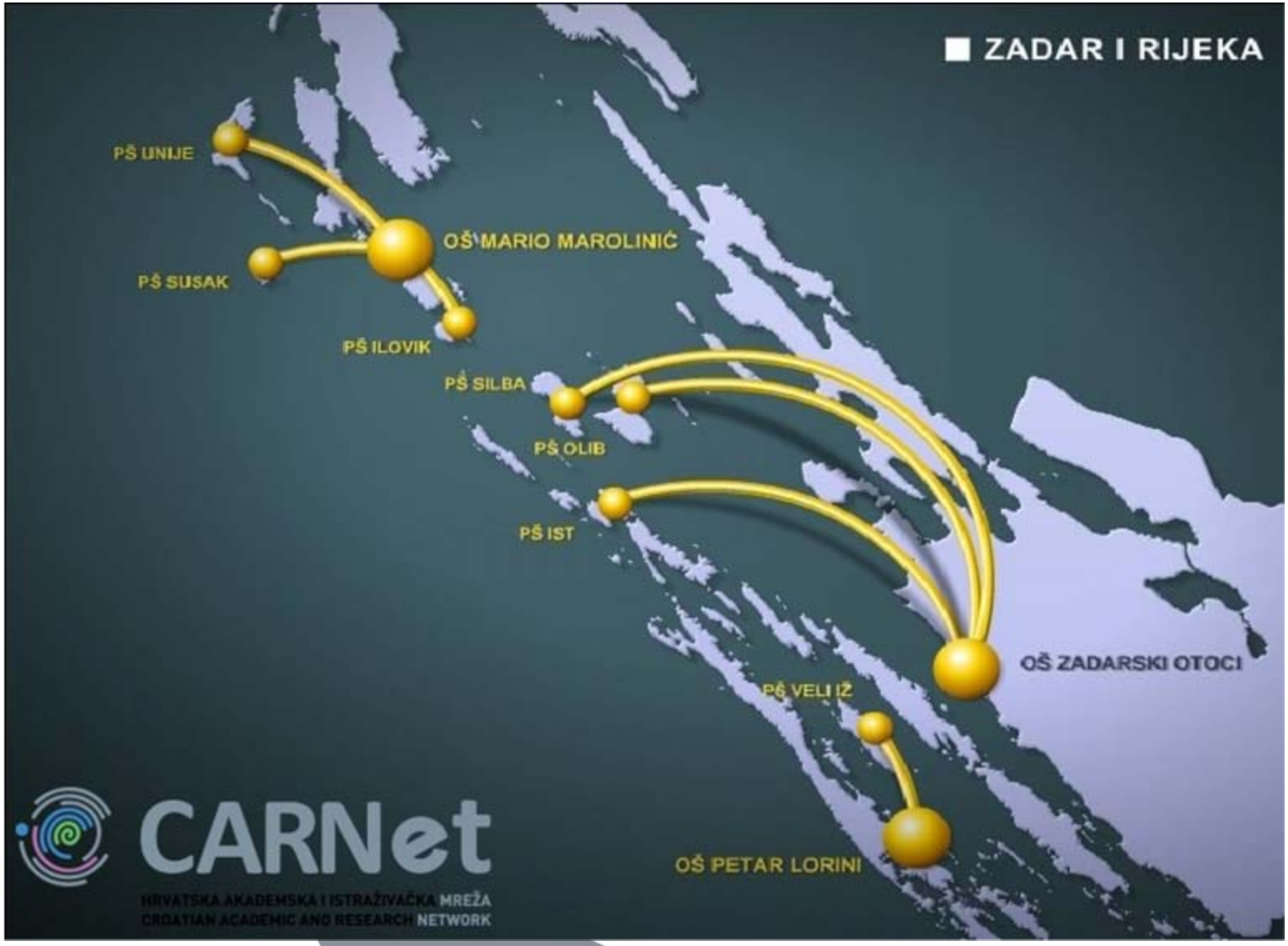
"Interactive Videoconferencing is an effective tool for use in *distance education* settings and is designed to support two-way video and audio communication between multiple locations"

E-island schools (Dubrovnik region)

E-island schools (Šibenik region)

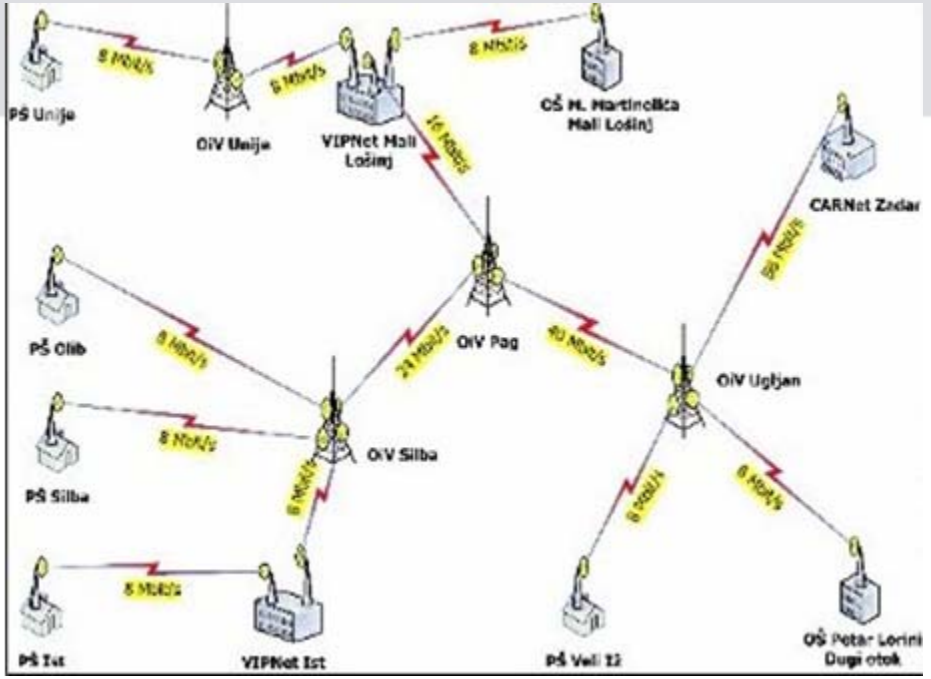


E-island schools (Zadar region)



Tools (hardware)

- Network
- Videoconference
- Smartboard



Hadrware works...

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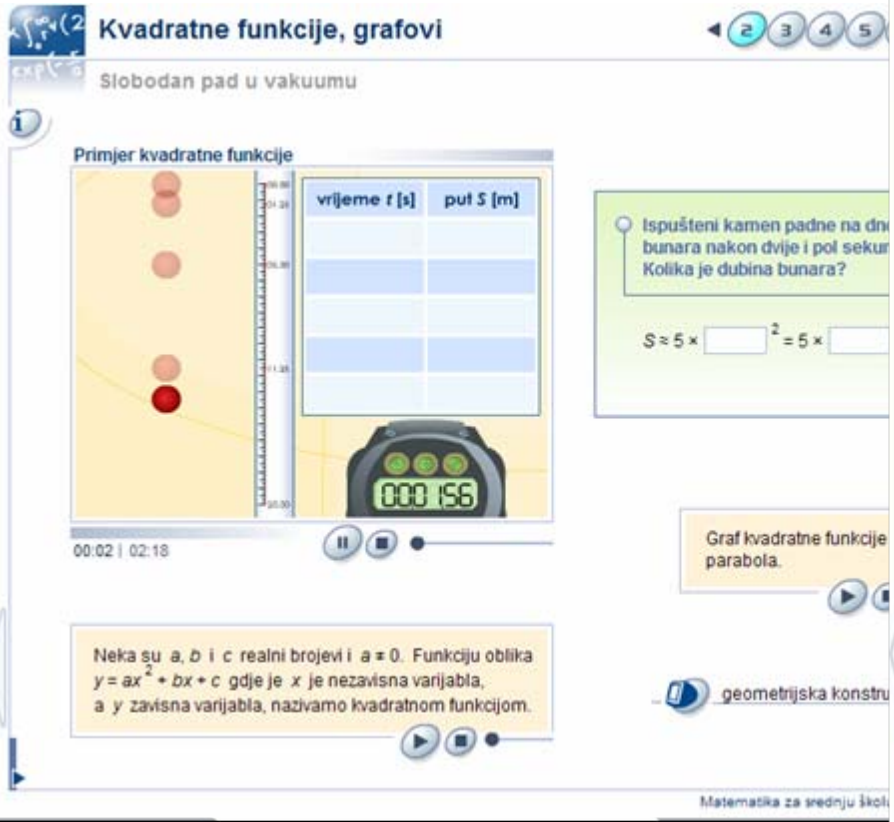
Tools (software 1/3)

- Portal Nikola Tesla

(http://lms.carnet.hr)

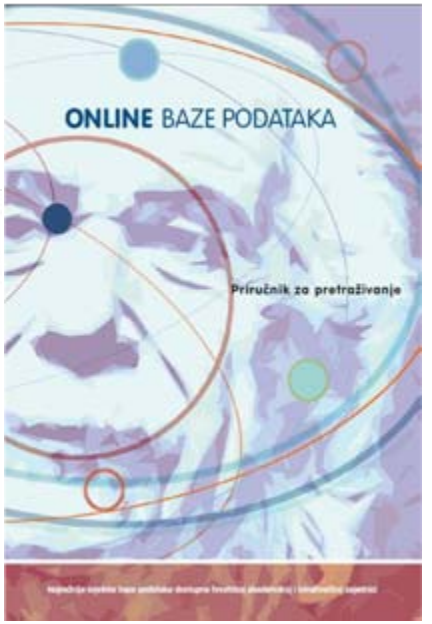


Tools (software 2/3)

- Učilica.CARNet.Hr

Tools (software 3/3)

- E-knjižnica (e-library)
- On-line encyclopedia
- On-line data base
- Etc... (more on school portal: http://www.skole.hr)



Education Process - Three stages

1 Presentation of VC tools

2 Education of parent schools on digital contents TESLA/LMS

3 Education - How to effectively use VC tools in classes

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Basic tips for good VC education:

- Come an hour earlier (check the functioning of the equipment and talk to the pupil)
- Camera should be often directed towards the class (during the break as well)
- Take care of the camera position
- Pupils at the main site can help the teacher with handling the VC equipment

Tips (2):

- Make pupils (at remote site) aware that they are being heard and seen
- Be loud enough, articulate and speak at slower pace.
- When you ask the class if there are some questions, address the pupil at remote site respectively (and wait for the answer because it might take longer due to technical reasons)
- Occasionally take a look at the camera during presentations and practice
- Often ask the pupils at the remote site for feedback

Tips (3):

- Pupils from the remote site can add notes on their interactive board
- Do not insist on integrating pupils from the distant site (if someone does not want to participate, try to get him/her into participation by using different methods, for example ask him/her to read something, praise him/her for being loud enough…)
- Make sure that the hand-outs are given at both sites

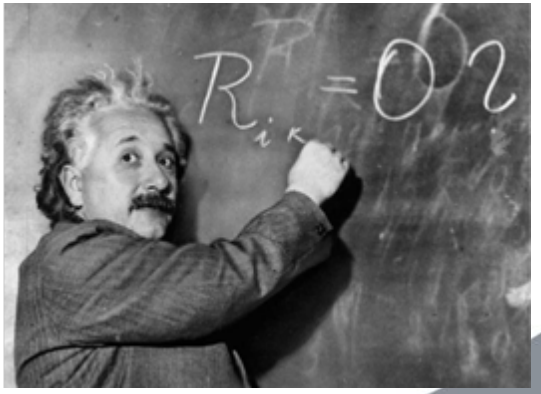
Tips (4):

- Pupils at the remote location should be kept busy till the end of the lesson (give additional tasks)
- Be competent in classroom management – this is specially needed in VC classes
- Keep on stimulating interaction during lesson
- Develop elements of socialization (hold F2F meetings occasionally at the joint location)
- Develop positive atmosphere

Education of teachers in the project E-islands

CARNet has organized three cycles of education for teachers so far:

- **1st cycle:** symposium of all the teachers-participants at one location with a theme Usage of VC system in schools
- **2nd cycle:** symposiums at parent schools (main locations) with a theme Technical side of the VC system usage and digital educational materials (Portal for distance learning: Nikola Tesla http://lms.carnet.hr)
- **3rd cycle:** VC symposiums at main and remote locations with a theme Delivering of lessons with VC equipment



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Teachers' feedback on the education:

They had the most use of:

- Exchange of experience with the colleagues and the leaders of an assembly
- Real participation in videoconference (3rd cycle)
- Methodical and technical instructions for the use of VC equipment and classes delivery
- Good manners in VC communication
- Use of interactive board (board sharing)
- An overview - how it works in practice (pedagogical advice)
- How to defeat the fear of the unknown

Difficulties in realization:

- Parallel talking (*cross talk*)
- Difficulties with hearing (*bad or unrecognizable sound*)
- At moments it can be to loud
- Necessary elimination of all extraneous noise (*dragging of chairs, door opening, classroom hum, cellular phones tone etc.*)
- Clumsiness and not feeling natural
- Being more focused on the camera and technology than on the contents of the lesson

Teachers' plans for further work:

- Accept the new knowledge and carry out VC classes with the help of colleagues and support from CARNet
- Advancement of the VC usage with the help of colleagues
- "To use this wonderful technology in classes every day"
- To continue with education in order to make the best use of the equipment
- Work a lot on socialization of the "lonesome" pupil at the remote location demonstrating to the pupils at the "home" location the richness of different contents and different ways of holding lessons
- Continue with professional improvement and education
- "Make a lonely child on the island, pupils at the parent school and myself happier with the help of advanced technology "
- "**Practice, practice and just practice**"

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CARNet experience (1/2)

- Lack of technical knowledge of the teachers for using VC equipment (and IT in general – ECDL?)
  - Constant education by CARNet & AZOO
  - CARNet helpdesk
  - Pupils are more familiar and IT friendly with installed technology then the teachers
- Schools are afraid that they "*can break*" equipment
  - Not likely :-)
  - 5 year warranty
- Teachers have to put extra hours in preparation of materials for VC teaching then in "normal" conditions

CARNet experience (2/2)

- Children and teachers have no need for constant everyday ferry traveling
- Class can now go on during bad weather
- Pupils wanna stay longer in school (new high tech.)
- Pupils like new methods of teaching (LMS)
- High speed Internet connection

Future of e-islands project

- Connecting more islands to CARNet network
- Broadband Internet for local community
- Wireless Hot-spots
- Telemedicine
- Establishing Internet kiosks to extend tourist services
- Panoramic web cameras...

Q&A

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