



Writing and Defending a Diploma Thesis VÕSA seminar

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My Subjects 2007-2017:

- Introduction to Cyber Security
- Configuration management systems (puppet)
- IT Infrastructure Services (DNS, DHCP, HTTPD, HTTPD, e-mail...)
- Linux Administration
- Scripting Languages (bash, python)
- Introduction to profession
- Digital processing of audio/video (OpenCV, C++)
- Operating Systems
- Logging and Monitoring
- Robotics (local robotics club)
- etc

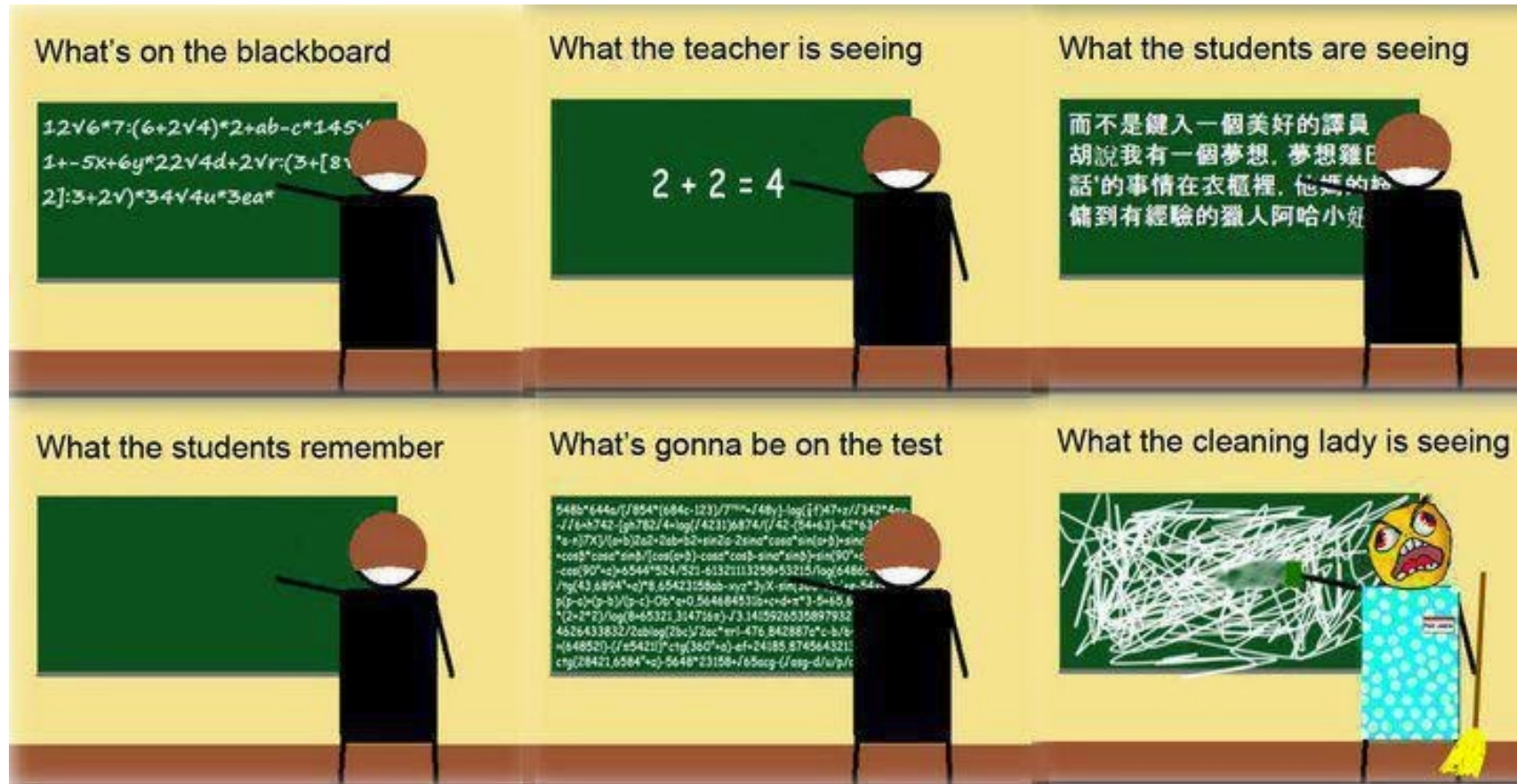
<http://enos.itcollege.ee/~mernits/cv/Margus%20Ernits%20CV%202015.pdf>



Outline

- VÕSA project and virtual learningspaces
- Thesis (Thanks to Henn Sarvele and Priit Raspel for greates ideas)
- DEMO – thesises done in VÕSA project
- Possible topics

The problem with lecturing



Problems

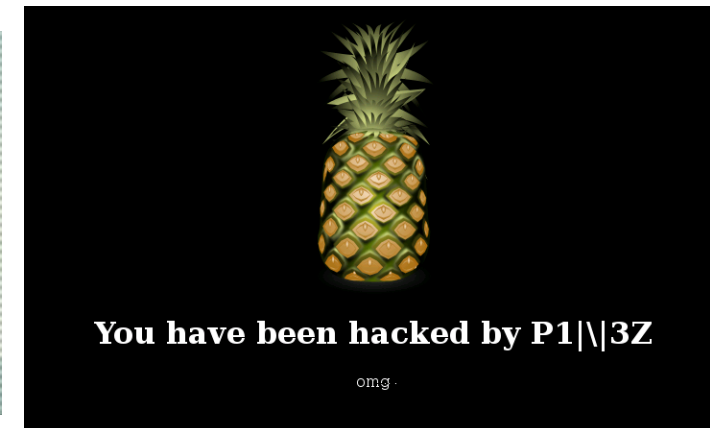
- Teaching the cyber (or ICT) is too theoretical and relies on powerpoint
- Distance learners don't have enough time
- Learners do not get enough hands on learning
- To learn cyber or ICT you need administrative privileges
- To play with malware or cyberattacks we need a safe sandbox for each student

Idea

- **VOSA – Virtual Learningspaces and Simulation Environment (VLSE)**
- **The aim of the project is to create Simulation Environment and LearningSpaces** for teaching ICT in problem based and hands-on
- Simulation environment is accessible from home (and from classroom)
- Simulation environment provides sandbox for each student
- Create learningspaces
 - Problem based
 - Hands-on
 - Interactive feedback

Sample problem

- Web page -> Media Inject -> Defacement -> Solutuion



start very early or early (most important thing)

- Cooperate with your supervisor
 - Regular meeting with your supervisor
 - Choose your supervisor carefully

Common mistakes

- Weak topic
 - Hard to defend
 - Not novel

- Before start writing prepare a presentation
 - Topic
 - Background
 - Problem statement
 - Hypothesis
 - Method
- Present the problem to your friends, students, co-workers

- Abstract
- Introduction
- The Problem (use examples to explain the problem)
- Related work
- Your Idea
- Details (state clearly your's contributions)
- Future work
- Evaluation (provide evidence that your solution solves the problem)
- Conclusions

Your's contribution

- Make sure that you state clearly:
 - What is your's contribution

Citations

- Text
- Tables
- Illustrations
- Code

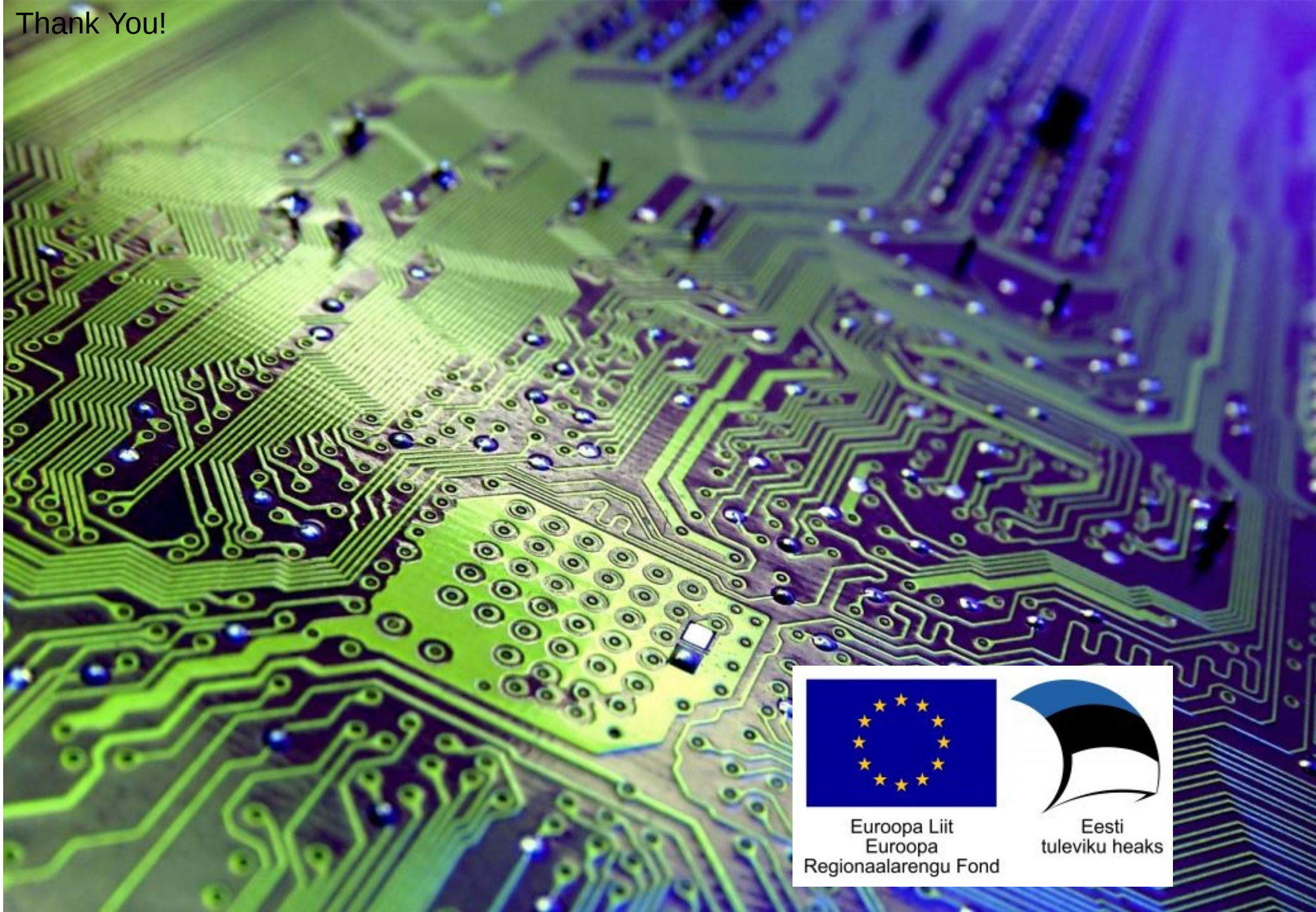
Content for defense

- There is a real problem
- This is important problem
- This is unsolved problem (at least for your company, research group etc)
- Present your idea how to solve this problem
- Present how your idea works
- How other people solved similar type of problems

- Document with topics and subjects
 - https://docs.google.com/document/d/1Amp_Th6LcbK34yLGvI51OXzKnjStzAlFdqgoS0UiCQ/edit?usp=sharing
- List is under construction
- In case you want topic and supervisor then send an e-mail
vosa@itcollege.ee

Thank You!

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