

University of Szeged TANGO collaboration



TANGO meeting

20-22 May, 2015, SOLARIS, Poland

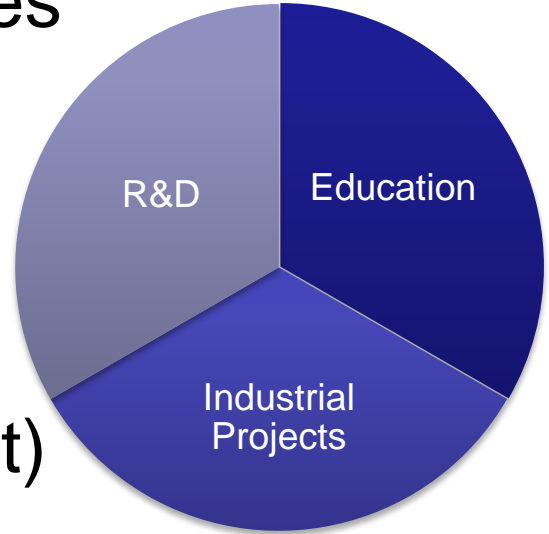
University of Szeged (USZ)

- ▶ Ranked 2nd in Hungary, in the top 400 worldwide
- ▶ About 30 000 students, 8 000 employees, 12 faculties
- ▶ Institute of Informatics
 - About 2 000 students
 - Six departments
- ▶ TANGO community members since 2014



USZ (SZTE) – SED

- ▶ One of the top 10 software quality R&D teams of the world
- ▶ More than 150 employees
 - University & spin off companies
- ▶ R&D areas:
 - Source code quality
 - M2M systems
 - Open-source systems (Webkit)
 - Embedded systems



Columbus team

- ▶ 65 people
- ▶ Software Engineering Department
 - Research & Development of the Columbus technology
 - Teaching
- ▶ FrontEndART Software Ltd.
 - Founded in 2001 by academic researchers and professors
 - Commercialization of the Columbus technology
 - Product development
 - Testing services
 - Consultancy
- ▶ More than 400 person-years R&D investment in software quality assurance methods and tools



Our mission

- ▶ Technologies for Improving Software Quality
 - Improve maintainability
 - Reducing costs of development and testing
 - Static code analysis
 - Find and reduce the number of bugs
 - Continuous quality monitoring and assessment
 - Following the ISO/IEC 9126 & ISO/IEC 25010 standards
 - Testing
 - Real-time coverage measurement (Java EE, Android, C/C++)
 - Test-suite optimization/selection



TANGO at USZ



- ▶ USZ is not a „usual” TANGO user/contributor
 - We do not operate large instruments and/or hardware by TANGO
- ▶ USZ contribution focuses on the following areas
 - Teaching basic TANGO skills and practical knowledge for MSc students
 - Tightly co-operating with ELI-ALPS in student training and providing the students job opportunities
 - Help in planning and executing Q&A of TANGO developments
 - Provide resources for code improvement/refactoring of the TANGO codebase
 - Search and apply for funding





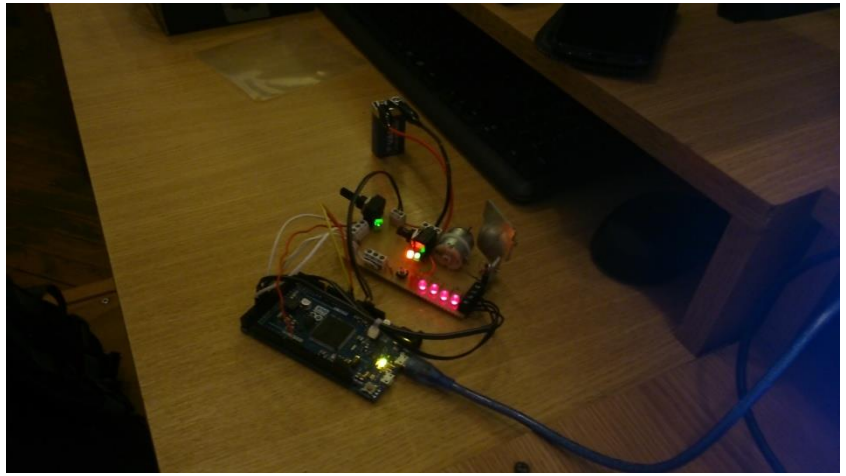
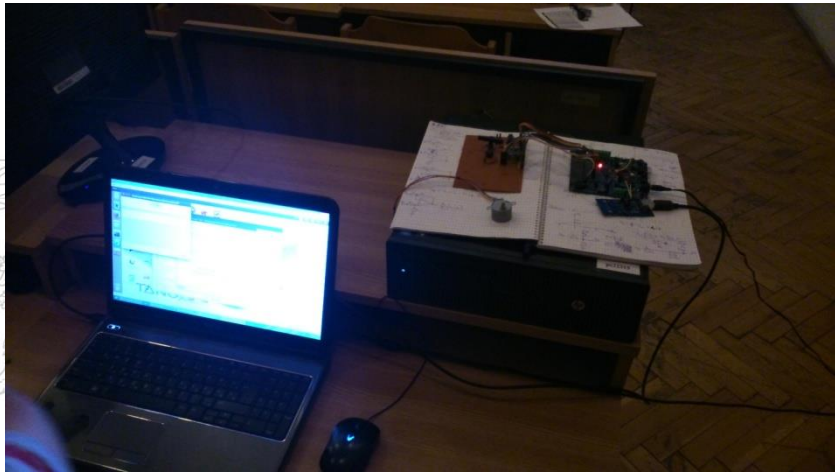
TANGO course news

- ▶ A TANGO university course for MSc students
 - Successfully finished our second semester
 - Exams are taking place this and next month
 - 22 participants in the first semester, 23 in the second
 - Improved teaching material
 - More practical knowledge with Arduino based test devices
 - Course topic outlines
 - Introduction, TANGO backgrounds
 - Basic tools (Astor, Jive, etc.)
 - Client API (Java, C++, Python)
 - Device server programming
 - Alarming, locking
 - Logging, events, asynchron communication
 - Database, DServer



TANGO course news

- ▶ Student interest was high
 - Exceptional projects
 - Some students built their own hardware
 - The first MSc thesis has been submitted
 - TANGO-LabVIEW bridge prototype solutions



Grants and projects

- ▶ USZ is taking part in an EU-supported national project
 - „ELI Team at USZ”
 - USZ is involved in teaching TANGO and Q&A (monitor, analyze and refactor) its codebase
 - In accordance with ELI-ALPS needs and requirements
 - The project’s spectrum is much wider and more general than our small part
- ▶ A large application is under evaluation
 - VKSZ Hungarian grant
 - Together with evopro Ltd., Wigner, and BRC
 - TANGO specialized Q&A techniques, developments (~30-40 person months)



Ongoing collaborations

- ▶ National Instruments
 - General Tango-LabVIEW integration
- ▶ ELI-ALPS
 - Teaching
 - TANGO Q&A
- ▶ ESRF, Soleil and others
 - To find an appropriate call for a large TANGO related H2020 application

