FRAUNHOFER INSTITUTE FOR OPEN COMMUNICATION SYSTEMS FOKUS
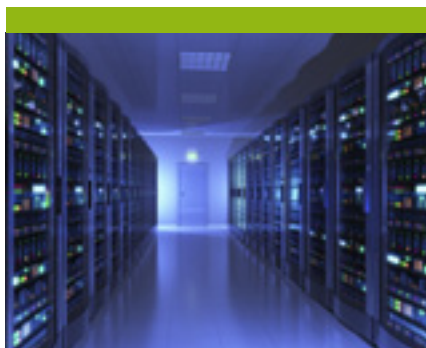

SQC NEWS
14
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The SQC-Newsletter will inform you quarterly about the projects, events and publications of the System Quality Center of Fraunhofer FOKUS.

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SQC submitted the paper ‚Open on-board Avionics Architecture for high Performance Satellite Applications'
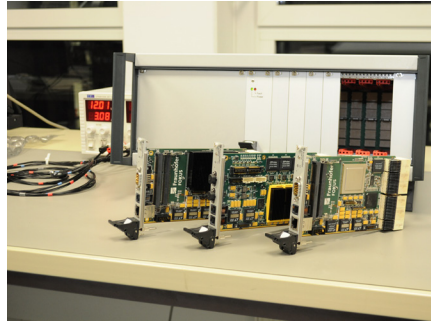

SQC presented a network simulation of IPv6 addressing and routing for the German governmental networks

SQC congratulates Jürgen Großmann on his graduation. The PhD was awarded for his research on TTCN-3 testing.

## projects & activities

The SQC's Guide to the Galaxy: OBCSA Paper

As part of the Fraunhofer Space Alliance, SQC submitted the paper ‚Open on-board Avionics Architecture for high Performance Satellite Applications' to the German Congress for Aeronautics and Astronautics 2014. The On-Board Computer - System Architecture project develops an architectural framework for on-board computer systems to enable modular integration of systems into IT infrastructure of spacecrafts.

Towards the UML Testing Profile 2

In May, the UTP working group of research and industry partners, whose activities are coordinated by Marc-Florian Wendland from SQC, successfully submitted the first version of the UML Testing Profile 2 to the OMG. UTP 2, a successor specification of UTP 1, builds upon reliable capabilities of UTP 1 and augments them with concepts that are expected by (model-based) testing experts.

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events & presentations
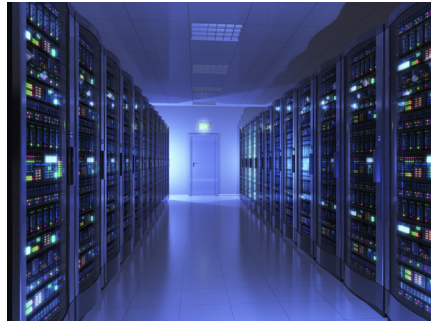
Smart routing for governmental networks: IPv6

SQC presented a network simulation of IPv6 addressing and routing for the German governmental networks at the IPv6 Congress in Frankfurt. The simulation shows the feasibility of a particular routing and addressing concept for governmental networks. The results are particularly relevant in the light of securing public IPv6 networks through smart routing of governmental traffic over backbone networks.

Life in outer space: ILA Berlin Air Show 2014

At the ILA Berlin Air Show, SQC presented an On-Board Computer-System Architecture (OBC-SA) for spacecrafts. The architectural framework enables the modular integration of systems with different performance and functional characteristics into the IT-infrastructure of a spacecraft and allows the easy configuration of future on-board computer systems.
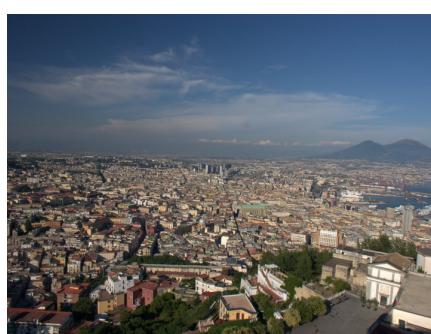
2nd RISK Workshop - Call for Submissions started

In November, the 2nd International Workshop on Risk Assessment and Risk-driven Testing (RISK) will take place in Naples, Italy. The workshop addresses systematic approaches combining risk assessment and testing and is held within the context of the ISSRE 2014 conference. Paper Submissions can be handed in until August 15, 2014. More information here.

Review of the 5th Eclipse IDD

On June 3rd, 2014 Fraunhofer FOKUS hosted the 5th Eclipse Integrated Development Day (IDD) that focused on today's interoperability challenges in system engineering. By using the Eclipse technology, leading experts and practitioners discussed solutions regarding this problem domain. More information here.

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publications & awards

Testing Hybrid Systems with TTCN-3: PhD awarded

SQC congratulates Jürgen Großmann on his graduation. The PhD was awarded at the Faculty of Electrical Engineering and Computer Science at TU Berlin in May 2014. His thesis „Testing Hybrid Systems with TTCN-3" includes case studies as well as extensions for Testing and Test Control Notation (TTCN-3) and contributes to various Car2X projects.

Quality assurance in automotive and aviation industry

SQC will be publishing a study about quality assurance of networked embedded systems. This study concludes that quality assurance is essential for the German industry. Even though the researchers noted an awareness for quality assurance in the industry, they still concluded that more improvements and investments have to be made. About 20 experts of automotive and aviation industry were interviewed for the study.

Framework for Ensuring Runtime Stability

Prof Dr. Ina Schieferdecker and Nikolay Tcholtchev from SQC have published a paper on a novel approach to ensure runtime synchronization and stability of multiple parallel autonomic control loops. In it they formally model the problem of runtime action synchronization, propose different possible solutions, and provide a case study, as well as different performance measurements based on a prototype. More

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With best regards
Dr. Tom Ritter & Friedrich Schön and the Fraunhofer FOKUS SQC-Team

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