



Press Release

Berlin
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Service-Oriented Network
Architecture (SONA)

Application support through
network self-management

Fraunhofer FOKUS is one of the first research partners to use
Cisco System's AXP/Javalin Router for Future Internet Development

Well New at the FOKUS Future Internet Lab – Network Supported Service Orientation

The Fraunhofer Institute FOKUS in Berlin is one of the first research partners to use AXP/Javalin modules as part of the latest generation of Cisco Integrated Services Routers (ISR). This new router generation enables researchers and developers to implement complex network functionalities directly in network nodes – with the aim of providing direct network support for services and business applications through comprehensive self-management of central network nodes and standardized interfaces. At the Fraunhofer FOKUS Future Internet Lab a number of FOKUS working groups are engaged on the development of future Internet structures based on the principles of service orientation that will integrate infrastructure components and applications in one single seamless concept and make network administration and use much easier.

“With this new router generation we can now intervene flexibly and directly in the functionality of lower network levels,” says Dr. Tanja Zseby, head of Network Research at Fraunhofer FOKUS, commenting on the project. “Our aim is to introduce a maximum level of ‘autonomy’ into networks so that we can reduce administration time and effort while also using autonomously acting networks or network components and standardized interfaces to support applications at higher network levels – and also to make them more secure.”

FOKUS researchers are engaged on a broad array of projects to provide solutions that facilitate services and applications through targeted network support. Working in the sense of service-oriented architecture (SOA) Fraunhofer FOKUS is taking Service Oriented Network Architecture (SONA), an architectural approach pioneered by Cisco Systems, to orchestrate networks from the IT component level to the applications level.

“By embracing the Service Oriented Network approach we are making a considerable advance on the current SOA approach which is mainly focussed on application levels”, says Prof. Radu Popescu-Zeletin, director

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of the Fraunhofer Institute FOKUS, explaining the underlying philosophy. "Only by including the network infrastructure in service orientation we can realize and manage complex applications like the planned 'Service115'."

Other FOKUS research groups are working on connecting up developments on the lower network levels with the higher-level services and applications. "The new router architecture enables a totally new distribution of service and application logic which means that both the networks themselves and the applications can be given a much higher degree of efficiency. Servers and clients are less loaded and users can appreciate clearly improved reaction times," says Dr. Stephan Steglich, head of the Open Communication Systems division at the Fraunhofer Institute FOKUS, explaining the benefits of SONA at application level.

The Future Internet Lab is the coordination point for the broad array of activities pursued by the Fraunhofer Institute FOKUS – including R&D on 'Autonomic Communication', 'Next Generation Network Infrastructure' and 'Integrated System and Test Development' or 'Service Oriented and Mobile Computing'.

Informationen

<http://www.fokus.fraunhofer.de/bereichsseiten/kompetenzzentrum/net/projekte.php>

<http://www.cisco.com/en/US/products/ps9701/index.html>

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