Always best connected

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Following sports events while you are on the move? Fraunhofer FOKUS will introduce the FUSECO Playground mid of May 2010. This laboratory allows mobile multimedia services based on future broadband mobile phone technologies to be field-tested. Credit: Fraunhofer FOKUS

Design multimedia services and mobile cloud applications for smart phones and Tablet PCs. Fraunhofer FOKUS introduces the FUSECO Playground. The open testbed -- thus far unique worldwide -- enables research and development facilities to practically field-test applications, protocols and components for next generation mobile broadband networks.

It is Sunday evening. Once again, the soccer match is going into overtime. And once more, departure time for the airport is getting inexorably closer. Follow the game on my smart phone? Hardly possible. The inconsistent coverage from the apartment to the departure lounge often does not allow a high-quality and continuous display.

The Fraunhofer Institute for Open Communication Systems (Fraunhofer FOKUS) is now presenting a solution for the design and field-testing of mobile multimedia services and cloud applications based on state-of-the-art and future broadband mobile phone technologies. The open test and development environment "Future Seamless Communication Playground", abbreviated as FUSECO Playground, enables developers for the first time to research, optimize and test prototypes for next generation mobile broadband applications: end-devices, services and business models. In addition, net components and protocols can be developed, upgraded and practically field-tested.

The test and development environment FUSECO Playground will be launched on 17th May 2010 at the 6th International Testbed Conference "TridentCom2010" in Berlin. To develop the technology - thus far unique worldwide - Fraunhofer FOKUS has collaborated with the Technische Universität Berlin, the Fraunhofer Heinrich-Hertz Institute and Deutsche Telekom Laboratories.

Independent of the end-device manufacturer and mobile network provider

"The FUSECO Playground is unparalleled in the fact that it makes it possible to develop technologies for mobile broadband services andend-devices, mainly smart phones and tablet PCs, which are inde¬pendent of end-device manufacturers, mobile network providers and service providers" explains Prof. Dr. Thomas Magedanz of Fraunhofer FOKUS. This means that newly developed applications, including all relevant functions and components, can be integrated within current mobile networks and next generation networks, e.g. femto cells, 3G-nets, WLAN and in particular LTE (Long Term Evolution) nets.

He emphasizes: "Through the fusion of new and old mobile network

providers, federative communication network environ¬ments will be on the market within the next three years. They can be created and tested in the laboratory today through FUSECO Playground's open and upgradeable laboratory environment."

Linking mobile networks seamlessly

The technical core of the FUSECO Playground is the Open Evolved Packet Core (OpenEPC). This software tool, which was developed by Fraunhofer FOKUS and Technische Universität Berlin, equips the test and development environment with a crucial function: IP (Internet Protocol) based service platforms of different application domains can be integrated within different IP-based broadband networks. OpenEPC can link the whole range of IP platforms seamlessly and according to the lastet standards - from IPTV and cloud platforms over IP multimedia sub system (IMS) based service platforms to proprietary company platforms.

For example, if a service is developed in order to receive sports events live on ones smart phone, the OpenEPC is able to link the IP-based streaming platform of a broadcasting company to different mobile networks. Furthermore, FUSECO Playground allows the testing of different approaches to dynamically establish the best connection and initialize handovers.

In addition, the OpenEPC is able to meet the different services' quality requirements of the application domains. Thus, IP connections can maintain quality characteristics across different network technology borders. As a consequence, connections can be prioritized and individual IP tunnels can be reserved for particular applications like telephone services or premium internet access.

The technology developed by Fraunhofer FOKUS constitutes the basis for testing different business and supply-of-service models: Cloud-based

applications can be used safely everywhere, on every mobile end-device. In future, network operators can ensure for their clients privileged handling of their calls or access to particular services. The end user, on the other hand, would be able to subscribe to a supply-of-services in a predefined transmission quality - e.g. to follow a sports event live on his smart phone.

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