



TOPIC Research project promises 'true' QoS

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MUNICH, Germany — With quality-of-service still being more a promise than a real feature of today's packet-oriented public networks, multimedia services across the internet still face problems to maintain packet priority over large distances. A research project completed recently could provide relief, the participants claim.

The project PlaNets aims at enabling telecommunication providers to offer guaranteed bandwidth and transmission delays in packet-oriented networks in order to achieve what participants call "true QoS". Unlike in available approaches to ensure QoS where every data packet bears a label stating its priority which has to be read by every router passed on its way, the PlaNets approach provides for a fixed and exclusive path for all packets belonging to a data stream through the network, and since this path is exclusive, problems with prioritization between different data streams cannot arise, the group claims.

Involved in the research project were all parts of the telecommunications value chain, from the chip level through telcos. Alcatel-Lucent, Deutsche Telekom, data communications equipment manufacturer Stollmann GmbH, Infineon, the Paderborn university and Fraunhofer entity for communication systems (Fraunhofer ESK, Munich) were participating. The project focused on data path elements between customer premises equipment and access network, using in part concepts developed by the MUSE EU research program. The PlaNets approach now will be gradually integrated into network equipment. Infineon announced to implement the respective algorithms as part of the firmware for its Convergate network processors. Fraunhofer ESK developed an PlaNets-enabled Ethernet switch.

The decisive contribution to the project came from Alcatel-Lucent, the group said in a press release. The telecommunications equipment provider developed a border gateway that offers guaranteed service quality for the connections routed through it. The gateway is tailored for use in access networks, the press release said.

Being part of the European Medea+ program, the PlaNets project was also funded with €3.9 million (about \$5.8 million) from the German federal research ministry.

While the scheme developed by the PlaNets group might work better than conventional QoS routing algorithms, they still have one crucial property in common: in order to enable truly QoS-enabled data streams, the entire data path through the network needs to comply to the respective approach. For this reason, it might be possible that even with PlaNets, QoS remains a promise as long as

the data path is not predictable from end to end.