

Ericsson and Japan Telecom complete world's first trial of Voice-over-IP over WCDMA

Ericsson and Japan Telecom have successfully completed the world's first field trial of Voice over IP over WCDMA. The field trial results prove that voice can be efficiently transported over an IP-based mobile network, including the cellular air-interface, to mobile terminals, with full quality of voice service as well as full quality of other service features such as data, without loss of capacity.

The trial was made over Japan Telecom's WCDMA experimental system by running Ericsson's new robust header-compression algorithm, called Robust Checksum-based Header Compression (ROCCO), which is currently undergoing standardization within the Internet Engineering Task Force.

The field trial was conducted in July and August with Japan Telecom at its network center in Chiba, Japan.

Voice has special demands on quality, and until now the challenge has been to achieve high enough voice quality over a multiservice fixed IP network.

"The trend in today's telecoms industry is towards 'all-IP' transport networks," says Håkan Eriksson, Vice President and General Manager, Ericsson Research. "Operators want to be able to use the same network for all services; data, voice and video. The field trial conducted together with Japan Telecom has proven that it is possible to transport voice over an IP-based mobile network, without compromising quality or system performance."

"As the trend of wireless communications demands all service data to run on the same operating network, increasing efficiency of using WCDMA frequency is the main concern for securing service quality on an 'all-IP' network as well as promoting the quality in network operation," says Tetsuya Yuge, Vice President, Information and Communication Lab. of Japan Telecom. "I believe that the success in this trial gave us further breakthrough in the future mobile Internet that requires high quality and broadband all-IP needs."

Ericsson is the leading communications supplier, combining innovation in mobility and Internet in creating the new era of Mobile Internet. Ericsson provides total solutions covering everything from systems and applications to mobile phones and other communications tools. With more than 100,000 employees in 140 countries, Ericsson simplifies communications for customers all over the world.

Read more at <http://www.ericsson.com/pressroom>

FOR FURTHER INFORMATION, PLEASE CONTACT

Ericsson Corporate Communications Press Office,
Division Mobile Systems, Phone: +46 70 699 9412
Email: antoINETte.torell@lme.ericsson.se

Håkan Eriksson, Vice President and General Manager, Ericsson Research
Phone: +46 70 592 1462
Email: hakan.o.eriksson@era.ericsson.se

Morgan Bengtsson, President, Nippon Ericsson K.K.
Phone: +81 3 3221 8200

About Japan Telecom

Japan Telecom is the total communication company that provides a full range of seamless services covering voice and data transmission from fixed-line and mobile communications, and from domestic to international. About mobile communication fields, Japan Telecom is doing business development in cooperate with J-PHONE companies for providing cellular phone services nationwide. http://www.japan-telecom.co.jp/index_e.html

About ROCCO

ROCCO improves the transport efficiency of real-time traffic, such as voice over cellular links by compressing header information down to only 3 percent of the original size of header information to save the bandwidth of cellular links. It is important to resolve a key problem of convergence between mobile telephony's traditional circuit switched telecom world and the Internet's packet switched datacoms world.

ROCCO's algorithm enables the efficient transportation of IP/UDP/RTP datagrams over wireless links, reducing the 40 octets (=320 bits) (or 60 octets for IPv6) IP/UDP/RTP headers to a minimum of one octet (=8 bits, =one byte), while remaining resilient to bit-errors on wireless links.

During the field trial, different parameters, such as Packet Error Rate (PER), Frame Error Rate (FER) and voice applications, were tested under different radio conditions. The results corroborate findings obtained in previous theoretical simulations and emulation within a laboratory of Voice over IP over WCDMA, and indicate that ROCCO performs better than existing header-compression algorithms (CRTP: Compressed RTP) when applied over a live air interface.