

RoHC enabled 802.16 WiMAX network

VTT and acticom have integrated RoHC (Robust Header Compression) into WiMAX gateway and WiMAX terminals – the world's first RoHC enhanced WiMAX network is running at VTT in Finland.

The Technical Research Centre of Finland VTT and the German company acticom joined forces to integrate Robust Header Compression (RoHC) defined by RFC3095 into fixed and mobile WiMAX systems.

The scope of this collaboration is to enhance capacity and service quality in WiMAX multimedia networks. To minimize the IP/UDP/RTP header overhead, the acticom RoHC protocol stack is used to compress the header information on both the infrastructure side and the mobile terminal side. The first transfers installed at the VTT facilities, with the IEEE 802.16 WiMAX environment using IP multimedia traffic streams, were successful.

"The integration of the acticom RoHC protocol stack to the VTT systems was carried out by the acticom RoHC development team, while the VTT researchers and engineers focused on the WiMAX environment and traffic setup. After integration and setup were completed, the teams were able to send the first multimedia streams compressed and de-compressed by RoHC - a breakthrough for WiMAX, VTT, and acticom. Further measurements will show the benefits that RoHC can add to IP based real-time traffic in a WiMAX network, such as VoIP." says Gerrit Schulte, Managing Director at acticom.

"Our WiMAX environment setup has been improved, specific IP multimedia streams have been identified as suitable for measuring the improvements we expected to see when using RoHC, and acticom delivered a RoHC add-on that fits very smoothly into our systems. First tests resulted in a noticeably improved transfer of IP multimedia streams for the user. During our ongoing cooperation we will now be able to measure the improvements RoHC adds to our WiMAX network, and we believe those results will support our expectations of better and more natural IP multimedia experiences thanks to the presence of RoHC and WiMAX." says Dr. Marcos Katz, Chief Research Scientist at VTT.

About VTT

VTT is renowned for their long involvement in wireless technologies. WiMAX in particular has been one of VTT's focus research areas for several years, both with in-house, European and joint industrial projects.

About acticom

acticom is renowned for being a leading provider of Robust Header Compression protocol stacks. The acticom RoHC solution has already been integrated into 3GPP cellular systems, such as mobile handsets or infrastructure systems. In this joint initiative, RoHC has been combined with WiMAX technology, opening up new opportunities for enhancing network and link performance.

WiMAX: WiMAX stands for World Wide Interoperability for Microwave Access and provides wireless access in metropolitan areas over long distances at high data rates.

RoHC: Robust Header Compression (RoHC), standardized in RFC 3095, is a technology to compress the IP/UDP/RTP protocol header information down to a minimum while remaining robust against errors.

Contact Persons: Dr. Marcos Katz
VTT, Finland
Marcos.Katz@vtt.fi

Gerrit Schulte
acticom GmbH, Germany
gerrit.schulte@acticom.de

Jyrki Huusko
VTT, Finland

Olaf Kehrer
acticom GmbH, Germany

Websites: VTT:
<http://www.vtt.fi>

acticom:
<http://www.acticom.de>