# Messaging without barriers

May 28 2008

Millions of people exchange electronic messages every day, but users of different systems often can't reach each other. New European research promises to put them all in touch.

The trouble with current messaging services is that many of them can't talk to each other. Heterogeneous networks, proprietary messaging services or competing standards and incompatible user devices get in the way of simple, seamless communication.

Now, however, European researchers from the COMET (COnverged MEssaging Technology) project say help is on the way. The researchers aimed at developing and implementing a messaging architecture and framework to let users send, receive, navigate and manage their messages irrespective of network technology and access device, at any time and wherever they are.

A key element of the COMET architecture is the Message Routing Protocol, which allows single messages as well as instant message dialogues to be exchanged between distinct and previously incompatible message domains, including SMS, MMS, IM, voicemail and videomail.

The researchers have also spearheaded new standards aimed at unifying the messaging world.

"The exchange of messages across messaging domains up to now is non-existent or not reliable at best," says John van Kemenade, COMET's Project Manager. "From an end-user perspective COMET allows a

messaging user to send and receive messages without having to know what messaging technology his or her counterpart is using. The user simply can focus on the message itself."

COMET may soon make sending and receiving a message as easy as having a telephone conversation.

"It demonstrates that a truly ubiquitous messaging experience, comparable to the global voice telephone service, is possible", Kemenade says.

## Expanding the electronic community

Users, from text-messaging students to busy executives using a panoply of services such as instant messaging, voicemail, voice-over-internet, videomail, text and multimedia, will not be the only beneficiaries of the new technology.

COMET's researchers hope that a more consistent and intuitive messaging service will allow new groups – for instance senior citizens or other groups that are less technology-savvy – to join the 'electronic messaging community'.

Operators and service providers can continue to offer their current internet, text, or multimedia messaging services, since the COMET technology integrates rather than replaces them. In addition, uniform standards and coordination across message domains will speed up the development of new products and accelerate the uptake of new messaging services.

"COMET technology protects existing messaging infrastructure investments while on the other hand it enables the operator to create new revenues." says Kemenade.

COMET's message convergence approach is based on seamless and presence-aware message inter-workings between the legacy message domains, he points out. That is, the system is aware when and where recipients are reachable, and by what kind of message service. Beyond that, the messaging experience is improved with user preferences.

"For example," says Kemenade, "we can have rules that I don't want any messages on Sunday except from my boss, and only on my phone. But not if it's a video message that runs for half an hour because my battery won't last that long."

## Free open-source software

Establishing the reliability of the new messaging framework under real-world conditions was vital. Consortium partners developed a laboratory to test a wide range of messaging scenarios, devices and access networks. They also released Seagull, a free, open-source traffic generator and suite of tools for testing the kinds of protocols developed or inspired by COMET.

The consortium has also created a messaging pilot centre in Grenoble, France, where researchers can demonstrate COMET-inspired messaging services. Developers of next-generation products can use the centre to test a concept or solution, and integrate new products into existing IP networks.

The consortium also focused on the user's experience. For this, they created a highly intuitive messaging user experience model and client software that can run on desktop computers, handsets, set-top boxes and a variety of other devices. The software can manage all messaging with a consistent look and feel.

"You have one user experience that looks the same and feels the same

across all kinds of devices, and is also capable of handling all kinds of messages," says Kemenade.

The consortium also performs fundamental research related to messaging quality control. Kemenade lauds the researchers for breakthrough findings on how to sustain user experience when multimedia messages are sent across public and open-access networks without overloading them with traffic.

The consortium wants to contribute to a unified set of standards to enable seamless, global, messaging. To accomplish this, they work closely with several international industry bodies, including the Internet Engineering Task Force (IETF), the 3rd Generation Partnership Project (3GPP), and especially the Open Mobile Alliance (OMA), created in 2002 specifically to deal with the proliferation of mobile applications and standards.

COMET also participates in a series of industry plugfests, which are workshops where companies link up and try out new telecommunications products. The consortium will report about their most recent accomplishments at the ICT Mobile Summit 2008, 10-12 June, in Stockholm, Sweden. Their finalised converged messaging service framework will appear as COMET Release 4, expected by October 2008.

The partners in the consortium include Acision, a Netherlands-based company delivering messaging infrastructures to operators and service providers and Colibria, a Norwegian company specialising in mobile instant messaging and presence systems.

SQS is a Spanish company delivering compliancy and validation services for converged messaging products and services'. HP's OpenCall unit in France, where products and solutions for the IMS world are initiated, is

another participant along with the Technical University Eindhoven, which is known for technological research in communication technology as well as modelling skills and capabilities. Movial is based in Finland and offers client software and services for the converged multimedia and presence-enabled application market.

The COMET project is due to end in October 2008 and is funded under the EU's Sixth Framework Programme for research.

Source: ICT Results