ITEA

INFORMATION TECHNOLOGY FOR EUROPEAN ADVANCEMENT

PROJECT RESULTS

Real-Time Internet Platform Architectures

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Networks for speech, video, and data are increasingly being connected and streaming media is growing faster than the Internet itself. Providers and their clients rely equally on a high quality of service for these new applications, but this cannot be achieved within the existing Internet architecture.

A new architecture for multimedia data streaming

Although the foundations for speeding up the development of the Internet originated in Europe, the main suppliers of Internet infrastructure equipment are in the USA. US-based companies also have a very important vote in standardisation bodies. However, mobile applications are growing faster in Europe than in the USA and European industry is strong in mobile services. Also, Internet address space is unevenly distributed around the world, so the growing number of mobile Internet-connected devices is rapidly depleting the available space. This presents European companies with an opportunity to develop network infrastructure equipment for a more modern version of the Internet.

RTIPA has contributed to building a leadership role for European industry in providing solutions for the market in networked distribution of speech, video, and data, and to paving the way for the enhancement of Europe's communication infrastructure e.g. in implementing the next-generation Internet Protocol (including IPV6, security, QoS, multi-cast, mobility and policy management).

RTIPA has developed a novel Internet protocol network architecture to cope with the requirements of real-time streaming of multimedia data that includes existing products and standards. RTIPA results make it possible to build Internet-related applications with high Quality of Service (QoS) and to promote interest in QoS-related Internet services and applications.

A comprehensive platform for real-time Internet

RTIPA has shown that reducing fragmentation in the market for Internet-based multimedia goods and services will significantly benefit the European economy, as the standardised infrastructure will enable new market opportunities for new content and service providers. Improved multimedia communication will speed up the development of many industries and facilitate greater cooperation.

As the market becomes more homogenous, suppliers with compliant products will be able to supply equipment such as servers, terminals, routers, and switches to create interactive multimedia services. These products, which themselves contain a lot of software, will require compatible software on computers, phones and Personal Digital Assistants (PDAs).

Internet is becoming a medium for distributed interactive audio and video, offering huge possibilities for new services as well as enhancing existing services. As these become more standards-compliant, there will be a growing demand for service providers' expertise. Also, the pervasive use of home shopping, home banking and home study via the Internet will help stimulate economic activity.

RTIPA – a comprehensive platform for real-time Internet – is part of the drive to make Internet

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multimedia communications more homogeneous and efficient. Increased demand for real-time services will boost European job and wealth creation.

QoS-related Internet applications and services
Thanks to RTIPA, European companies can prepare future QoS-related applications such as Internet video broadcasting and telephony, improved multimedia support, mobile Internet, routing and infrastructure services.

Some of the many opportunities the project partners are pursuing:
- A spin-off company sponsored by Thales has developed an edge device product that is located at the border of the network, offering the network services studied during the RTIPA project.

- Philips intends to integrate RTIPA work on data networking for telephony, surveillance and video reception in its products.
- RTIPA results are allowing France Telecom to further develop its market for data networking.
- The RTIPA work done in the mobile Internet area is speeding up the availability of Siemens' mobile Internet services and mobile equipment as well as infrastructure supporting their mobile equipment.
- EolRing's future network products will include features that result from the QoS work done in RTIPA.

RTIPA has also made major contributions to the standardisation of QoS and other Internet services for real-time streaming applications (at the Internet Engineering Task Force - IETF).