

Paving the way for more efficient, video-rich internet

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No internet user can have failed to notice the explosion of online videos. And with video traffic already accounting for more than 90 percent of consumer content, the trend is set to continue.

But the internet, and in particular mobile internet, was not designed with videos in mind and, as a consequence, its architecture is very inefficient when handling [video traffic](#).

The EU-funded project MEDIEVAL ('Multimedia transport for mobile video applications') sought to design a new [internet architecture](#) able to support the requirements of video traffic.

To do so, project researchers, led by France's Alcatel-Lucent Bell Labs, focused on specific enhancements making it possible to move video data from one computer to another.

Today's internet protocol architecture is made up of a layered structure, with higher-level layers in the stack being more flexible and evolving through frequent innovations.

Middle-level layers are more stable. MEDIEVAL partners reasoned that the new architecture would have to have a cross-layer design, exploiting the interaction between layers and thus raising performance to previously unattainable levels.

The team's research focused on:

- enhanced wireless access support to optimise video performance;
- novel IP mobility architecture adapted to the requirements of video traffic;
- transport optimisation for video distribution;
- network-aware video services that interact with underlying layers.

The result is technology designed to improve the quality of experience for users. The solution also takes into account the requirements for commercial deployment. This meant, for example, reducing the associated operational costs for network operators.

By the time the project came to an end in June 2013, the team had developed new architecture solutions and validated them - both on a test-bed and through simulation activities - in three separate valuation scenarios for internet TV, personal broadcasting and video-on-demand. These solutions are now available as commercial products on the

marketplace.

The project's success was dependent upon contributions to standardisation and early incremental testing. The project's dissemination campaign involved exchanging the results with other European projects, the scientific community and with relevant standardisation bodies, including the IETF, IEEE and 3GPP.

More information: www.ict-medieval.eu/

Provided by CORDIS

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