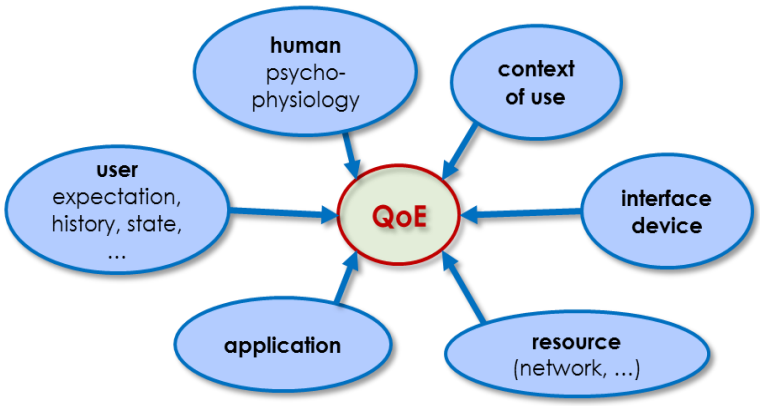
# Novel quality-of-experience agent for higher communication quality

## Celtic-Plus project QuEEN

Zaragoza, Spain. On 22 January 2015, Celtic-Plus project QuEEN presented a new modular and layered quality-of-experience (QoE) agent, which can flexibly aggregate different quality-of-experience (QoE) components. The project has translated bits and pieces from existing QoE concepts, mostly linked to specific applications, into a powerful quality assessment tool that adapts to various communication technologies, including Internet, voice, video, IPTV, and Web.

In the near future, the QuEEN agent might enable a complete new way of using QoE, allowing to control the fulfilment of service level agreements (SLAs) between service providers and service consumers in all fields of communication.




The QuEEN agent integrates in its layered structure classical network connectivity parameters know as quality of service (QoS) together with user expectations that can even take human perception into account; for example, if the person is in a good mood or angry. For this it has the capability to aggregate data from various probes anywhere in the network.

The business relevance of this new concept was proven in the project's Snow Demo, in which the work of a fleet of snowploughs was managed. The demo consisted of a geolocation application, which tracked in real time the progress of roads being freed from snow. It monitored the progress of the work of each vehicle, making transparent the contractual fulfilments between the stakeholders: snow workers, the information broker, and the operational office of the municipalities. For this to work, the constant monitoring of the communication quality is key, as non-fulfilment could even lead to penalties.

The QuEEN agent was created during the three years of the project. It started from first concepts, which were translated into specifications, then implemented, and finally successfully tested for usability and functionality. The complete approach of the QoE agent has been standardized in different ETSI and ITU standards.


The QuEEN project ran from September 2011 to December 2014. The consortium, led by Orange SA, France, included 21 organisations from 8 countries:

Austria: ftw and University of Vienna

Belgium: iMinds

Croatia: University of Zagreb

Finland: VTT Technical Research Centre of Finland, Rugged Tooling Oy

France: INRIA, IP-Label Newtest and Orange SA

Germany: Technical University Berlin

Spain: Embou, Hiberius Tecnologias de la Informacion, S.L., ITAINNOVA, INDRA Sistemas, Telnet Redes Inteligentes SA,

Sweden: Acreo AB, BTH, Info24, Telenor Sweden AB, TCO Development AB and Volvo Car Corporation

For further information, see the project website at: https://www.celticplus.eu/project-queen/

See also: the open source QuEEN agent.