



Award Details

Quality-adaptable over-the-top services

Research Details

Competition Year:	2013	Fiscal Year:	2013-2014
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Department:	Centre Énergie, Matériaux et Télécommunication - Montréal	Province:	Québec
Award Amount:	56,000	Installment:	1 - 3
Program:	Collaborative Research and Development Grants	Selection Committee:	RPP Internal Decision Cttee
Research Subject:	Communications systems	Area of Application:	Communication systems and services (planning, organization, services)
Co-Researchers:	No Co-Researcher	Partners:	Summit Tech Multimedia Communications

Award Summary

With greater demand on quality video, increased available bandwidth and ever-more capable terminals, the challenge remains to offer new services for mobile devices in a timely way, to capitalize as quickly as possible on new business opportunities. This, in turn has led to greater interest in Over-The-Top services, which do not require the availability of a service infrastructure integrated with the QoS mechanisms of the access networks and thus are deployed more easily, over a large variety of networking technologies. Nevertheless, such services must meet quality perception (or experience) objectives for users (QoP/QoE). These concerns extend beyond simple VVoIP services to other types of applications, more and more often collaborative, such as games. The challenge then is to create OTT services which can adapt the quality delivered to users to operational (e.g. network, usage) conditions. The practical issues are multiple. Essentially, unlike operator-controlled communications, there is a lack of control on the quality parameters of the communication channel. Hence, all forms of adaptation to establish and maintain quality must be performed by the application itself. There is a need to monitor and assess quality and manipulate application-level parameters and transport mechanisms to adapt to varying conditions. This research will focus on means to dynamically adapt media quality and communication robustness parameters to varying network conditions to optimize the quality perception of the users. We shall study - What circumstances to adapt to; - How to adapt to such circumstances, in terms of various terminal-related parameters; - What is the comparative cost of different solutions, that is, to explore tradeoffs between alternatives at different protocol layers. This work will provide scientific guidance for Summit Tech Multimedia Communication's future projects.