

02/06/2010

## SECOND USAGE AREA WORKSHOP—Position Statement

Exent Technologies response is referring to **Cross Sectors Use Cases**

It is Exent intention to propose cross sectors use case and scenarios dealing with highly interactive graphics content.

Our proposal will focus on applying new network technologies to support highly interactive Cloud located applications. The Consortium will include representatives for the planned UC, research teams for 3D Streaming and Video Streaming, Users Interface (UI) designers and specialists on networks to collaborate with the Infrastructure Project in adapting the proposed techniques to the Future Internet Network.

Some of UC main cover the following domains:

- Leisure (entertainment and games):
  - Use cases in relation to Leisure will include video for entertainment (including HD and 3D), and digital gaming (ranging from casual to more involved gaming). Advanced broadcast standards, including hybrid broadcast/online solutions are moving towards the mainstream. Online game activities are growing exponentially due to the advances in the generation of immersive content and the availability of high speed and capacity networks. As such, Leisure focused UCs stand to be key drivers online for consumers who are currently relatively disengaged.
- Health and wellbeing (e-health, etc.);
  - In relation to health and wellbeing, key advances now rolling out include: monitoring services (e.g., vital sign, and security monitoring), media services for healthytainment (e.g., Vital Mind), and online social, psychological and medical care (e.g., Virtex, visiting GP via 2-way HD video link). Because users who can benefit most from health and wellbeing services tend to be older, and because older people tend to be less media literate (online/PC), health and wellbeing services are another group of services which could constitute positive drivers to getting online for current non-adopters.
- Work and Education;
  - Next generation enabled services will aid remote working and learning, and thus will constitute compelling UCs .
- Online commerce and participation (e-commerce, e-democracy)
  - Another UCs can be bundled under the heading of online participation, and include e-commerce (e.g., online shopping and selling), e-democracy (e.g., online voting, contacting elected representatives etc.) and community participation (e.g., social networks, community volunteering activities, online sustainable living initiatives.) Given that the activities bundled here are those which everyone uses in the real world (to some extent), again they constitute excellent potential drivers to increase the proportion of European citizens who go online.

The project is targeted toward 4G/LTE (Long Term Evolution) cellular networks as well as fibre based NGN (Next Generation Networks) to enable thousands of users to communicate in multiple complex online worlds in real time. These requirements create substantial network demands, in terms of required bandwidth and low latency for rewarding user experiences

Current network architectures already provide some tools to control Quality of Service (QoS), mainly with regards to bandwidth and only in specific parts of the NGN or LTE Network. The project intends to enhance QoS modes of LTE as well as NGN to meet the needs of the different UC taking into consideration Bandwidth and Latency requirements.

The project intends to research, develop and implement some new innovative ideas and act on the following:

- Use of new methods for graphics rendering on HTML5 and/or WebGL
- Use of 3D Streaming and Advanced Video Streaming for highly interactive Future Internet applications
- New business models for a broad range of Use Cases
- Support to Infrastructure Project Group on:
  - Bandwidth and Latencies required by different UC
  - QoS modes for different high interactive applications

World statistics indicate a sharp increase in using video online games in absolute values and as part of Annual Consumer Spending on Communication. Remote Video Gaming as well as other interactive applications may take the shape of distributed computing with execution of the applications in the Cloud as a service to users using mobile, netbooks as well as low power PCs and TV with the required rendering capabilities. The ability for user's interaction with graphical content applied also to UC in other areas such as e-Learning, e-health (medical devices), e-Commerce, and Computer-aided design (CAD).

In principle such future solutions will be based around a centralized interactive application server (in the Cloud), responsible for the storage and execution of the interactive application, interfacing with multiple, distributed users' display and control units, including the TV, hand-held devices and other elements.

The project intends to create a new paradigm in the delivery of interactive applications over broadband connectivity which will be balanced well to cater for the needs and goals of all parties involved.

The project will include a short phase of Research and Implementation (15 months) and 9 months for Proof of Concept in 3-5 focus areas.

Exent, a leading provider of Games on Demand software and an SME, will lead the project both as a coordinator and a technical provider.