Session Title: Mobile games in the Cloud
Session organiser(s): Jean-Charles Point (JCP-Consult), Gwendal Simon (Telecom Bretagne), Malte Behrmann (EGDF)

Purpose & Audience
The workshop aimed at addressing two issues related to mobile games and mobile game development: Game evolution for Cloud and standardization issues related to Cloud and Middleware. The session gathered different stakeholders representing network operators, game developers, game engine providers, standardization bodies, and research community. They exchanged their views on the requirements and related research priorities.

Key message(s):
- Mobile game is a key application for defining cloud future requirements and how cloud can be linked to network performances
- Cloud decentralisation would boost and require significant standardisation work in order to allow openness to mobile application developers in general and game developers in particular
- The position of the mobile games community is uncertain in front of the cloud landscape complexity as they do not necessarily believe, that cloud will enhance their future positioning in this framework
- Standardisation of decentralised cloud is essential but appears to be very challenging and will not necessarily leverage the EU.

Summary
The different presentations highlighted the various trends and positions of stakeholders: network operators are preparing the evolution to decentralised cloud by evolving their infrastructure, embracing SDN paradigm, and thus interfacing with cloud providers on these aspects. The game development community has mixed feeling about this new paradigm: they found many advantages in a small number of appstores, and they now feel cautious in front of the more complex business models introduced by cloud gaming. Mainly they do not necessarily see an added value. The overall advantages and technical solutions linked to cloud decentralisations were clearly emphasized by the different speakers (link between cloud and network performances, pushing the cloud into subscriber premises, the different steps of middleware evolutions,...).
The complex business models introduced by this evolution was discussed, showing opportunity for new entrants, as well as new chances for network operators.
The debate after the presentation addressed different issues. One of them was the standardisation question: game developers, although they feel they could get benefit out of introducing their requirements into standards, are reluctant to be involved. It appeared during the discussion that a unique organisation representing them would be a way to bring efficient influence. A more general discussion followed on the problem of cloud standardisation where the dominant players are non-European: how can we have weight in a process that we do not control? This debate showed different positions but the agreed conclusion was that the issue is crucial as having large influence on application developers. The general conclusion was that the session had been useful to make the different communities express their view and better understand each other.

**Recommendations**

- Support the creation of a forum representing the mobile game developers, or more largely the mobile game community in their requirements on standards.
- Define a full open framework for mobile cloud including network issues
- Evolve mobile game engine for full scalability and resource sharing in the cloud
- Facilitate integration of game community in future H2020 framework