Understanding and Managing Quality of Experience for Emerging XR Services

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Abstract

Emerging eXtended Reality (XR) technologies have been recognized as a key enabler for the design of novel immersive experiences, often relying on the fusion of the digital and physical worlds. In particular, social and collaborative XR services enabling users to meet and interact in immersive environments have the potential of leading to an evolutionary step in communication services. Given service complexity, the availability of new hardware appearing on the market, and new application domains, the research community is faced with the challenges of exploring new methodologies, models, and metrics to understand and manage what we refer to as the Quality of Experience (QoE) or user experience (UX). UX/QoE research has thus received much attention over the past years and has become a prominent issue addressed by network, service, and content providers. Addressing these research challenges inherently calls for a highly multidisciplinary approach, combining expertise from disciplines such as engineering and networking, psychology, cognitive science, and human-computer interaction. In this talk, we will discuss key technologies and infrastructures needed to meet the requirements of emerging XR services, as well as key challenges related to assessing and modeling QoE.