Title: Enabling Internet-scale Holographic-Type Communications (HTC)

Abstract:

Holographic-type Communication (HTC) has been widely deemed as an emerging type of augmented reality (AR) media which offers Internet users deeply immersive experiences. In contrast to the traditional video content transmissions, the characteristics and network requirements of HTC have been much less studied in the literature. Due to the high bandwidth requirements and various limitations of today's HTC platforms, large-scale HTC streaming has never been systematically attempted and comprehensively evaluated till now.

We demonstrate a novel HTC based teleportation platform leveraging cloud-based remote production functions, also supported with newly proposed adaptive frame buffering and end-to-end signalling techniques against network uncertainties, which for the first time is able to provide assured user experiences at the public Internet scale.

In the demo we perform a live HTC-based teleportation sourced from University of Surrey in Guildford, UK to the ITU-T Network 2030 Focus Group workshop at Lisbon, through our AWS cloud based platform deployed at London. The demo will show the user Quality of Experiences (QoE) performances in terms of HTC frame per second (FPS) statistics in real-time.