

Modelo de evaluación de calidad de experiencia para servicios de vídeo inmersivo por LTE basado en drones

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Several upcoming 5G and 6G services rely on Unmanned Aerial Vehicles (UAV) sending live data to other remote User Equipments (UEs) in Beyond Visual Line of Sight (BVLOS) scenarios. Thus, understanding the traffic flows implied in these services and estimating Quality of Experience (QoE) perceived by end-users is key for network operators. One of these services is First Person View (FPV), consisting on the remote control of the UAV by the live video visualised in the Ground Control Station (GCS). In this work, an UAV quadrotor for FPV system connected by LTE is presented. The main contribution is the definition of a closed mathematical expression provided to define the Quality of Experience (QoE) for FPV use cases considering the video quality in terms of Video Multimethod Assessment Fusion (VMAF), network latency and video resolution as inputs. This expression will be applied to lab experiments taking into account link performance, in which network changes based on packet loss, throttling and latency alterations will be introduced to measure the QoE of the UAV system.