Multiple Description Coding for Adaptive QoS Mechanism for Mobile Cloud Computing

Ilan Sadeh[1], Stojan Kitanov[1], and Danco Davcev[2]

[1] University for Information Science and Technology "St. Paul the Apostle",
Ohrid, Macedonia
ilansd@yahoo.com, stojankitanov@hotmail.com
[2] Faculty of Computer Science and Engineering,
"Ss. Cyril and Methodious" University, Skopje, Macedonia
danco.davcev@finki.ukim.mk

Abstract. Multimedia transmission over cloud infrastructure is a hot research topic worldwide. It is very strongly related to video streaming, VoIP, mobile networks, and computer networks. The goal is a reliable integration of telephony, video and audio transmission, computing and broadband transmission based on cloud computing. Multiple Description Coding (MDC) is the right approach to pave the way for mobile multimedia and cloud computing. It provides full separation of multimedia and text communication in the Cloud Computing and Mobile Cloud Computing techniques. Like that Multiple Description Coding improves the Quality of Service and provides new service of rate adaptive streaming. This paper presents a new approach for improving the quality of multimedia and other services in the cloud. Furthermore, it introduces a subset of Quality of Service that considers the blocking in multi-terminal multimedia network and fidelity losses.

Keywords: Cloud Computing (CC), Mobile Cloud Computing (M-CC), Quality of Service (QoS), Grade of Service (GoS), Quality of Experience (QoE), Multiple Description Coding (MDC), multimedia, rate adaptive, streaming.