Abstract

High Quality of Service Video Conferencing over IMS

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Nowadays the internet network technology is emerging rapidly because the demand of
the users next generation of IMS system is being able to provide a variety of applications
for users satisfaction.
IMS is an evolving definition of an architecture that solves the continuing demands and
frustrations of users and enterprises. IMS is a whole new way to deliver multimedia ser-
vices (voice, video, data, etc.) regardless of the device (mobile phone, landline phone,
cable, Internet, etc.) and will change the way all of us relate to our increasingly digital
world. Real-time applications such as voice and video conferencing have a great deal of
demand over IMS network. The quality of service (QoS) is the major concern for real-time
application such as video conferencing. In order to fulfill the users demand, it is necessary
to improve the QoS. In this thesis work, we implement IntServ and DiffServ with MPLS
which can have great potential in improving the QoS scheme in IMS for video conferencing.
We evaluate the performance of QoS for video conferencing over those mechanism perform
with IMS. The performance is evaluated based on some QoS parameters such as packet
loss, end-to-end delay, throughput and jitter. In order to investigate the performance of
QoS scheme in IMS, we analyze the simulation results. The investigation shows that proper
adaptation of QoS provides qualitative transmission of video in wireline.
Finally on the basis of the simulation results, we study the QoS performance and propose
difference schemes to enhance the QoS performance in IMS based on the QoS parameters.
This frame work will be effective to design the QoS for heterogeneous network in IMS.

Keywords: IP Multimedia Subsystem (IMS), Multi-Protocol Label Switching (MPLS),
Video Conferencing (VC), Quality of Service (QoS).