ITU Telecommunication Standardization Study Group 15

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Experts Group for Video Coding and Systems in ATM and Other Network Environments

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PURPOSE: Proposal

TITLE : RTP/RTCP use for H.22Z

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1.

Introduction

This Submission is part of a group of submissions relevant to the H.323 standards. We have chosen to break out our recommendations into several discrete Submissions, where each Submission is focused on a specific topic, but with an eye to the whole. The list of RADVision's Submissions includes:

AVC-810 Numbering and Addressing System for H.323 Terminals and Gateways
AVC-811 Defining Session ID for H.323
AVC-812 H.22Z Frame and LAN packet
AVC-813 Requirements for H.Signalling Recommendation within the scope of H.323
AVC-814 Providing Quality of Service on NGQoS LANs/H.323
AVC-815 RTP/RTCP use for H.22Z (the current submission)
AVC-816 Video Payload for the H.22Z

2.   Purpose of this Submission

The current H.22Z Draft (August 1995) proposes to use the formats of RTP and RTCP and the control mechanisms of RTCP for H.22Z.

We feel that RTP does not provide the functionality needed for H.22Z and should not be adopted. It is reasonable that a new suite of standards (like H.323) will rely as much as possible on existing standards. The RTP was designed by the IETF to provide m multimedia services over packet networks, so why not use it?

As will shown later in this document, we feel that the RTP is inappropriate to H.323, and should not be used.

Other Submissions (AVC 810, 811, 813, 814, 816) provide alternative proposals.

3.   In a Nutshell - Why not RTP?

3.1.   The Services

The services that were the focus of the RTP are unicast (datagram) and multi-cast (one to many datagram) multimedia services. RTP is used as a means to distribute real time Audio and Video as uncontrolled, non-structured sessions where some participants are active, others are passive, and control is loose. There is no attempt to provide quality of service, management and access control.

RTP defined PDUs (Payloads) do not support the payloads of videoconferencing (e.g. 48/56kbps G.711 or H.263 Video).This creates a situation where services that H.323 has to support are out of the scope oh RTP.

3.2. The Network

RTP was designed and optimized for the Internet, a non-structured packet based Wide Area Network. H.323 is defined for LANs. Both networks are packet based networks, however the physical constraints are very different. RTP has to contend with issues like different time zones, random packet routing and very long delays. RTP cannot assume any control over the network. In order to provide acceptable QoS, H.22Z must be optimized for the LAN.

3.3. The Architecture

RTP defines Mixers and Translators as network functions that provide minimal connectivity functions. The standard includes Mixer and Translator specific messages.

H.323 assumes Gateways to the Synchronous H.320 or to ATM and POTS. The controls necessary for Gateways are missing in RTP, and the features provided for Mixers and Translators are not utilized in H.323.

3.4. Procedural Issues

RTP is a standard controlled by the IETF. As such, the changes, updates and modifications will be driven by the needs of the Internet community (and not the ITU-T). In addition, the whole approval process of the two bodies are very different.

The RTP Standard covers in one document topics which are relevant to different H.323 standards, and only some chapters are relevant.

4. The Right Approach

Adopt whatever is relevant from RTP and RTCP and incorporate it into the relevant standards (H.323, 245, 22z and H.Signaling). Specifically:

Addressing per AVC 810
Session Numbering per AVC 811
Frame Format per AVC 812 and AVC 814
Payload per AVC 816