ITU-T TELECOMMUNICATION STANDARDIZATION SECTOR

Document AVC-738

Study Group 15

January 1995

Experts Group for Video Coding and Systems

in ATM and other Environments

(Rapporteur's Group on part of Q.2/15)

Study Group 15 · CONTRIBUTION

Question: 2/15

SOURCE: IBM

TITLE: **ATM Forum AMS Status**

ABSTRACT: At the December meeting, the ATM Forum Audiovisual and Multimedia Services (AMS) group agreed to adopt the 1-N PCR aware AAL5 packing proposal described in IBM's contribution 94-1000.

A baselevel of N = 2 (5/8 cell PDUs) was selected as the default PDU size and required to be supported.

THE FOLLOWING MOTIONS WERE PASSED AT THE DECEMBER AMS MEETING:

MOTION:

Equipment conformant to this (the Phase 1 AMS) Implementation Agreement mus be able to transmit a stream in which PCR jitter due to packetization is minimized.

Motion by Dave Singer (Apple)
Votes for: 21
Votes against: 4

MOTION: (BASED ON IBM'S CONTRIBUTION 94-1000)

Equipment conformant to the Phase 1 AMS Implementation Agreement must be able to transmit a stream with the following characteristics:

If an AAL-5 PDU contains a Transport Stream packet (TP) which contains a PCR, that TP will be the last TP in the AAL-5 PDU. In addition -

1. As a base level, a Maximum Transfer Unit (MTU) size of 2 packets (376 bytes) per PDU is required to be supported by source (Server or Real time encoder (RTE)),

2. In absence of signaling (negotiation), 2 TS packets per PDU is the defau MTU size,

3. Larger MTU size (>2) can be negotiated via signaling for SVC or by network provisioning for PVCs.

Motion by J Lynch (IBM) and M Perkins (Divicom)
Augmented by Arun Bellary, DSC
Votes for: 16
Votes against: 10

MOTION:

As a future work item; define a signaling technique to enable a sink (e.g. set top Box or PC) to indicate to the source if it has the ability to remove jitter.

In this scenario, if the source has the capability, it could bypass the PCR packetization jitter removal process & encapsulate TS packet into fixed length PDUs. The minimum PDU length should be 2 TS packets. Longer PDUs may be negotiated by signaling the maximum AAL PDU length.

Motion by Georgina Waide, (Cable & Wireless)
Votes for: 17
Votes against: 15

1/15/95

DRAFT LIAISON

To: ANSI T1S1 and ANSI X3L3.1

From: George Dubrowski Chair, ATM Forum Technical Committee
Dean Skidmore Chair, AMS

Subject: SA&A Subworking Group review of Phase 1 Audio-visual Multimedia Services (AMS) Implementation Agreement (IA).

PHASE 1 AMS IMPLEMENTATION AGREEMENT

With the ATM network bounding the cell jitter and the other QoS characteristics that an application can expect, Video-On-Demand using Constant Bit Rate (CBR) MPEG-2 over AAL5 is feasible. The following are Phase 1 work items:

1. Include Video-On-Demand using CBR MPEG-2 over AAL5 in the AMS workscope for Phase 1 (94-0688)

2. Phase 1 AMS IA section on Video-On-Demand should recommend one solution for AAL-5 to support CBR MPEG-2

3. Exclusive of the packing proposals, adopt 94-0857 as a strawman text for VOD section of Phase 1 AMS IA (over AAL5 using CBR MPEG-2 (TS))

4. Phase 1 AMS IA include an informative annex describing the accumulation and transformation of jitter terms affecting time critical information streams. This includes, terms related to CDV from cell switching or rate adaptation, AAL-PDU delay variation due to segmentation and reassembly, MPEG Transport Stream packet delay variation due to segmentation and reassembly etc.

AMS IA PHASE 1 DOCUMENT SCHEDULE

Feb-95 -- Initial draft of the baseline text

Apr 95 -- Editing session of Phase-1 document

June 95 -- AMS IA straw-vote document ready

Aug 95 -- Resolve major, minor issues & editorial comments, forward to technical committee for vote.

Equipment conformant to the Phase 1 AMS Implementation Agreement must be able to transmit a stream with the following characteristics:

If an AAL-5 PDU contains a TP which contains a PCR, the TP will be the last TP in the AAL-5 PDU.

In addition -

1. As a base level a Maximum Transfer Unit (MTU) size of 2 packets per PDU is required to be supported by source (Server or RTE).

2. In absence of signaling (negotiation), 2 TS packets per PDU is the default MTU size.

3. Larger MTU size (>2) can be negotiated via signaling for SVC or by network provisioning by PVCs.