630

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Source: KPN, PTT Research (NL)
Title: Inclusion of MPEG TS-layer with jitter compensation in H.22x.
Purpose: Proposal

1. Introduction

In document AVC-606 we describe two versions of a layer model for H.22x, for the purpose of discussion: one including the MPEG2 TS-layer, the other not including the MPEG2 TS-layer.

We emphasized in this document that the MPEG2 TS-layer will be a commonly supported service access point for decoders in a wide range of distributive networks and also that its application in ATM networks had been anticipated during its design, although the related issues haven't been solved completely yet.

MPEG-2 TS-layer solves many of the multimedia multiplexing problems and its structure of extendible PSI tables is attractive for multimedia applications. In this approach, the association table needed by H.22x can be fairly simple and is not needed if a single virtual channel (VC) is used.

Tools for end-to-end synchronisation have been included, but acceptable jitter has not been specified by MPEG. We suggest that the time-stamping system in MPEG2-TS bit stream specification offers sufficient information for the design of circuits for timing recovery in the presence of jittered time-stamps. This would greatly simplify the AAL2, since the timing recovery may be handled completely in the TS-layer.

We therefore propose:

2. Proposals

1. To include the MPEG2 TS-layer in H.22x under the condition that the MPEG2 TS-layer shall handle timing jitter introduced by the network on an end-to-end basis, without time stamp correction in the network.

2. To study and specify jitter margins that clock recovery systems of H.22x shall meet and that shall be supported by the network on the User-Network Interface.

3. To liaise with ISO-MPEG to reach a common TS-layer for H.22x and other applications.

3. Comment

The MPEG2 system target decoder (STD) model assumes zero timing jitter. The jitter tolerances that MPEG2 TS system decoders will meet depend on their intended application. We suggest to specify values for applications using ATM.