Telecommunication Standardisation Sector
Study Group 15
Experts Group for Video Coding and Systems in
ATM and Other Network Environments

Document AVC-801

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SOURCE : Stuart Dunstan, Siemens Ltd
TITLE : H.310 Network Adaptation Protocol Reference Model following Haninge meeting
PURPOSE :

The H.310 Network Adaptation Protocol Reference Model following discussions at the Haninge meeting, is shown attached.

This document attempts to illustrate,

- all of the Recommendations employed in H.310 and their relationships
- location of network adaptation functions

The diagram may be suitable for inclusion as an informative annex in H.310.

Changes from the previous version (Annex 9 to AVC-743R) include the following,

- changes relating to H.245 as agreed to in Haninge
- the T.120 protocol stack is left unspecified.
- mention of AAL type 2 has been removed.
- use of AAL type 5 CPCS for DSM-CC is indicated.

It is noted that H.261 is mentioned in the video coding part, but H.221 does not appear. It should be resolved as to how H.221 relates to the other protocols.

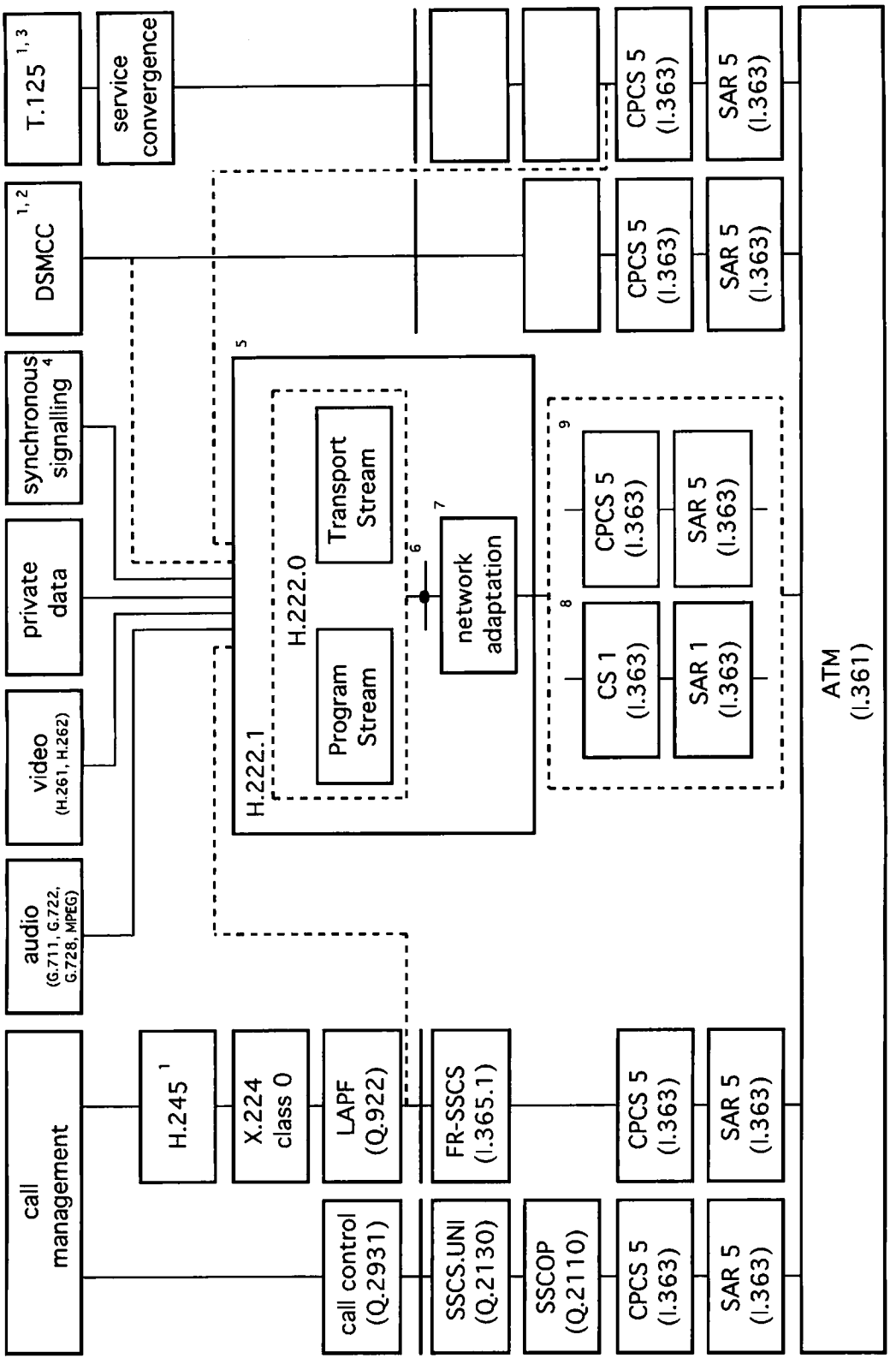

Figure 1.

H.310 network adaptation protocol reference model.

Notes to Figure 1.

1) H.245, DSM-CC (ISO/IEC 13818-6), and the T.120 protocol stacks may be carried in,
   - independent ATM Virtual Channels, or
   - H.222.1
   In the later case, the anticipated points of connection are shown in the figure.

2) Clause 1.3 of ISO/IEC 13818-6 states that AAL5 is suitable for the transport of DSM-CC messages on ATM. The figure indicates this, but leaves unspecified as to whether additional protocol beyond AAL type 5 CPCS is required.

3) The protocol stack for the T.120 series protocols has not yet been specified by Study Group 8.

4) Video frame synchronous signals are described in H.310.

5) H.222.1/H.222.0 functions:
   - multiplexing
   - timebase recovery
   - media synchronization
   - jitter removal
   - buffer management
   - security and access control
   - in-band signalling
   - trick modes

6) This point represents the point at which the ISO/IEC 13818-9: Real Time Interface applies, if it is applicable. This point may not always be physically realised.

7) H.222.1 network adaptation functions:
   - jitter removal

8) Although AAL type 1 currently addresses constant bit rate operation, it is anticipated that the AAL type 1 SAR sublayer, and perhaps some of the AAL type 1 CS toolkit, will be used for variable bit rate operation. In the case of variable bit rate operation not all of the following AAL type 1 CS sublayer functions are applicable.

   AAL type 1 CS functions:
   - transmission clock recovery
   - jitter removal
   - bit error correction
   - cell loss correction
   - data structure preservation

9) AAL type 5 (CPCS) functions:
   - bit error detection
   - cell loss detection
   - data structure preservation

- end -