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Source: Japan
Title: Interworking between RAST-5 and RAST-1 terminals
Purpose: Discussion

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1. Introduction

H.310 subclause 12.1 specifies that RAST-5 terminals (and RAST-1&5 terminals working in the AAL5 mode) shall interwork with RAST-1 terminals (and RAST-1&5 terminals working in the AAL1 mode) with a gateway that is located in the customer premises ATM Network. This document discusses how this gateway should be structured for the native H.310 communication mode toward an eventual enhancement of H.310.

2. Communication model

Let us assume an H.310 RAST-1 terminal is connected to B-ISDN and an H.310 RAST-5 terminal to a customer premises ATM network. For their intercommunication a gateway is needed. Figure 1 depicts the three entities with their protocol stacks. Only the H.310 native mode is concerned here.

3. Gateway functions

When the RAST-1 terminal calls the RAST-5 terminal, the communication may proceed as follows:

1) Calls are terminated between the terminal and gateway (? see Note). It means that the call from the RAST-1 terminal to the gateway is terminated at the gateway, then the gateway places a call to the RAST-5 terminal. The gateway has its own number (?). How the customer premises network terminal is numbered?

NOTE - This is true.in case of the H.323 SCN gateway [1].

2) H.245 is similarly terminated at the gateway (?). Note that once the connection between the RAST-1 terminal to RAST-5 terminal is established, the gateway does not need to interpret the H.245 messages any more.

3) The destination RAST-5 terminal address which the gateway requires is obtained through the H.245 procedures (?). Or the RAST-1 terminal indicates the RAST-5 terminal number and then the gateway is activated?

4) The audiovisual signal (use of TS is assumed here) consists of a constant byte rate stream at the AAL1-SAP, while it consists of (constant rate?) 376 byte long packets at the AAL5-SAP if the default AAL-PDU size is chosen. The gateway needs to convert between the two streams. From the AAL5 to AAL1 direction, reproduction of the original transfer rate clock (e.g. mandatory 6.144 Mbit/s) is required. From the AAL1 to AAL5 direction, demarcation of TS packet boundaries and the mapping to AAL-PDU are required.

4. Conclusion

This document has tried to understand the necessary gateway functions when an H.310 RAST-1 terminal communicates with an H.310 RAST-5 terminal. If some common understanding is obtained, the same principle may be applied to the interworking between RAST-5 and H.320/H.321.

Consideration and comments of the interested parties are requested.

END

References

[1] ITU-T Recommendation H.323 - Visual telephone systems and terminal equipment for local area networks which provide a non-guaranteed quality of service, 1996.

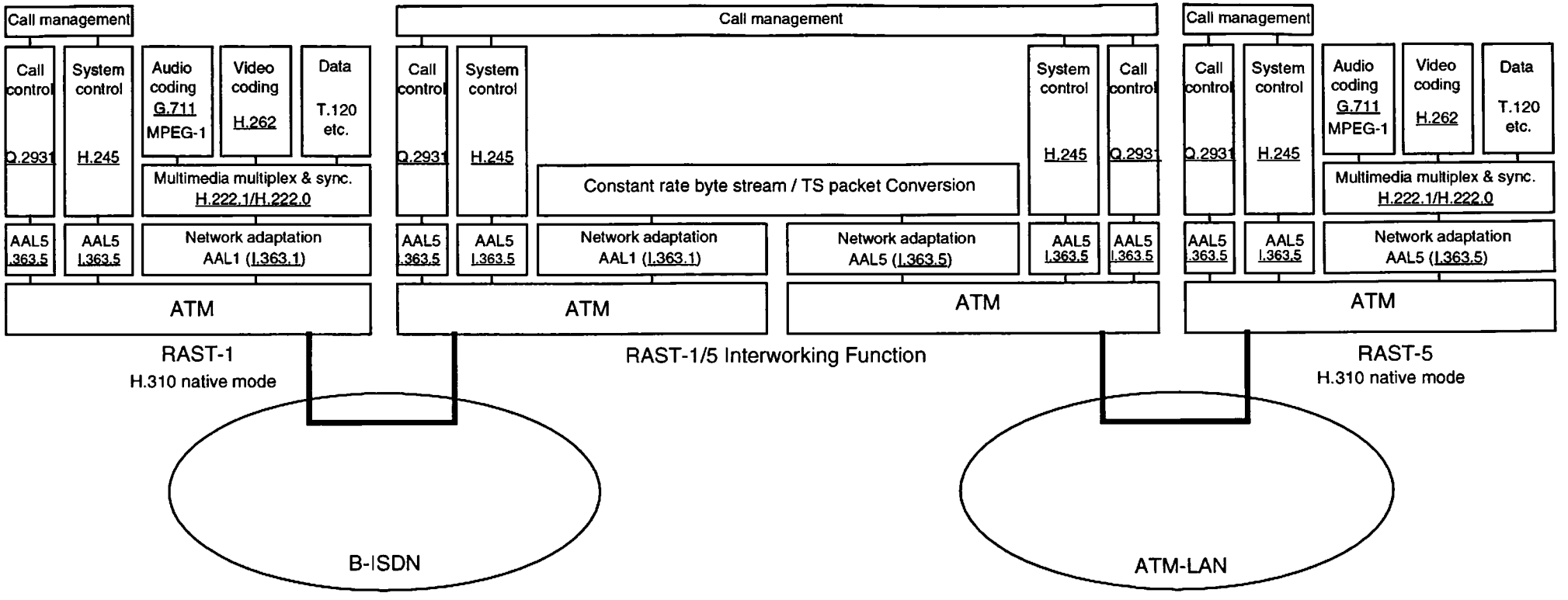

Figure 1 Interworking of RAST-1 and RAST-5 terminals through a gateway