

SOURCE : JAPAN
TITLE : Considerations on H.310 communication protocol
PURPOSE : Discussion

1. Introduction

Some signalling procedures are defined as tools in draft Rec. H.245. Draft Rec. H.310 should define upper layer communication procedures, which include the usage of each H.245 signalling procedure and error handling and recovery procedure.

This document discusses the concept of H.310 protocol definition and also shows examples of procedure with the relation to H.245.

2. Approach toward the H.310 communication procedure definition

In H.245 procedures, irregular situations which are not expected are indicated as error to the upper H.310 Call Management layer. H.310 should define handling and recovery procedure of those errors.

There are two candidate approaches for this protocol definition.

- (1) Error indications from H.245 is indicated to a user, that is more upper layer than H.310. Rec. H.310 define nothing for error handling, leaving it for human user's decision or implementation.
- (2) H.310 defines how to deal with and recover from error situation. The H.310 protocol will guarantee the completion of the procedure against error conditions.

We think that above (2) is more desirable, because the interworking among different manufacturer's H.310 terminals by detailed definition in H.310 as well as that in H.245. However, enough time for this detailed definition does not remain until Nov. SG15 meeting where draft Rec. H.310 will be frozen. It is suggested that we should concentrate on the definition of necessary minimum set of procedures at this stage, leaving optional or extendable mechanisms for further study.

3. Example of H.310 procedure

The followings are examples of H.310 protocol definition based on the concept described in section 2 (2).

3.1 Example of Capability Exchange (outgoing)

- (a) H.310 sets the terminal capability to CAPTABLE parameter and issues TRANSFER.request H.245 primitive.
- (b) H.310 waits for a primitive from H.245.
 - (b-1) If TRANSFER.confirm is received from H.245, capability transmission is successfully completed.
 - (b-2) If REJECT.indication is received, H.310 should check SOURCE and CAUSE parameters in the primitive.
H.310 issues TRANSFER.request primitive again.
- (c) H.245 is capable to deal with new TRANSFER.request during AWAITING RESPONSE state. But procedure of H.310 for duplicate TRANSFER.request is for further study.

3.2 Example of Logical Channel Signalling (outgoing)

- (a) H.310 sets the requesting mode of communication to DATATYPE and LC_PARAM parameter and issues ESTABLISH.request primitive.
- (b) H.310 waits for a primitive from H.245.
 - (b-1) If ESTABLISH.confirm is received from H.245, the logical channel is successfully established.
 - (b-2) If REJECT.indication is received, H.310 should check SOURCE and CAUSE parameters in the primitive.
H.310 may issue ESTABLISH.request primitive again.
- (c) Once a logical channel is established, the channel will be maintained until H.310 issues RELEASE.request primitive or RELEASE.indication primitive is received from H.245.
- (d) If ERROR.indication is received for the RELEASED logical channel, mismatch of H.245 state with the remote terminal may have been occurred. H.310 is preferred to issue RELEASE.request for that logical channel to reset both remote and local H.245 state to RELEASED.
- (e) H.310 can issue ESTABLISH.request primitive for the logical channel, even when that logical channel is not completely released, i.e. waiting for response to RELEASE.request. The H.310 procedure of this case is for further study.

4. Conclusions

This document has been discussed the concept of H.310 procedures and suggested to define necessary minimum set of procedures including recovery process from error. Examples of H.310 procedure definition has been also shown.

Reference

- [1] Draft Rec. H.245, July 6, 1995.
- [2] Draft Rec. H.310, September 30, 1995.

END