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History of Revised Versions

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01	17 April 1996	Established
01	17 Dec. 1996	•Document No. is changed (Formerly IF2.03) •Document title is changed. (Formerly Personal Handy-Phone System Public Cell Station – ISDN Interface –Layer 2 Specification–)

Public Personal Handy-Phone System :
Interface between Public Cell Station and ISDN-based PHS
Switching Center-Layer 2 Specification

<Summary>

1. Relation with international standards

This specification conforms to ITU-T Recommendation Q.921.

2. Differences from ITU-T Recommendation Q.921

The ITU-T Recommendation specifies options for each of the following items and this specification recommends the specific options described below as a reference. It is a sub-set of ITU-T Q.921 and may be used to realize the minimum PHS functions.

(1) Initialization of link parameters

The ITU-T Recommendation provides an option for (a) initialization to the default values or (b) initialization based on negotiations with the peer as the methods of link parameter initialization. (Refer to the ITU-T Recommendation Q.921 sub-clause 5.4, Appendix IV.)

This Specification recommends (a) initialization to the default values as the standard method for the following reasons. The above ITU-T Recommendations does not sufficiently specify detailed procedures using the XID frames. For example, judgment of whether or not the parameter negotiation is permitted, and negotiation failure procedures are not clearly defined.

Furthermore, the burden on the network because of the need to support parameter negotiations for individual links has not yet been properly analyzed.

(2) LAPB operation on the D-channel

The ITU-T Recommendations specifies LAPB (Refer to ITU-T Recommendation X.25) operation on the D-channel as an option for both the user and the network. (Refer to ITU-T Recommendation Q.921 clause 2.3.)

This specification does not standardize LAPB operation on the D-channel, but LAPD operation only is specified for the following reason. This Layer 2 Specification, concerned with LAPD operation, does not need to describe specifications for LAPB operation and moreover PHS MoU Group does not find it necessary to implement LAPB on the D-channel.

(3) Access procedure

The access procedure of the point-to-point data link is recommended only in this specification.

(4) System parameter

N202, T201, and T202 system parameters are deleted, because it does not need procedure of a TEI ID request.

(5) TEI value for point-to point signaling connection

The ITU-T Recommendation acknowledges that in certain applications it may be advantageous to have a single point-to-point signaling connection provided for layer 3, and specifies a network option of using "0" as the TEI value in such applications. (Refer to ITU-T Recommendation Q.921, Annex A.)

This specification recommends the use of "0" as the TEI value in the above application of a single point-to-point signaling connection. (Thus, any frame having a TEI value other than 0 will be discarded in the above application.)

The reason for the above recommendation is as follows.

Only one TEI value should be defined for the user-network interface when the data link layer has only a single point-to-point signaling connection.

PHS MoU Group deems that defining a single TEI value would avoid confusion in determining the TEI value in the above application and would be effective from the point of view of standardization.

3. Reference

ITU-T Recommendations: Q.921

4. Item for further study

(1) The access procedure of the point-to-multipoint data link

The access procedure of the point-to-multipoint data link which is not specified in above minimum set specification is an item of further study for the following reason. It is necessary to study the feasibility of application to supplementary services etc. realized in the near future.

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Same specification as is specified in ITU-T Recommendation Q.921 is applied.