

JT-I430-a Leased Line Basic Rate User-Network Interface Layer 1-Specification

1. Relations with international standards

JT-I430-a is applicable to the basic rate user-network interface for leased line services.

This standard is based on ITU-T Recommendation I.430 (1995 Version) approved in ITU-T SG13.

2. Summary of departures from ITU-T Recommendations

(1) D channel

Specifications related with the D channel are deleted. The bit positions assigned to the D channel and Echo channel (E bits) in ITU-T Recommendation I.430 are specified as unused bits.

Also, the D channel access procedure is deleted.

<Reasoning>:

The D channel is not necessary for leased line user-network interface at present.

(2) Activation/deactivation

The finite state matrixes in ITU-T Recommendation I.430 are modified for non-activating/non-deactivating NTs. The procedure is the same as that for non-activating/non-deactivating NTs specified in Recommendation I.430.

Also, MPH-deactivate primitives and primitives between layer 1 and layer 2 are deleted.

<Reasoning>:

The leased line basic rate user-network interfaces is always active.

(3) Power feeding

The power feeding function across the interface is not provided. Power feeding specifications are deleted.

<Reasoning>:

Power feeding across the interface is not necessary for leased line services.

(4) Figure 16/I.430

Deletion of Figure 16/I.430

<Reasoning>:

In the Blue Book, Figure 16/I.430 is referred to in section 8.5.6.2 (Output signal balance).

In the 1992 version, section 8.5.6.2 is deleted, and longitudinal output voltage is newly specified in section 8.10.

Since the section in which Figure 16/I.430 is referred to no longer exists, we think the inclusion of this figure is meaningless and it should be deleted.

(5) Electrical environment

<Reasoning>:

This issue is included in the standardization because specifications for inevitable lightning surges to the groundings are necessary from the viewpoint of safety.

The issue, however, is one for further study because it is still being discussed in the ITU-T SG V and relevant national committees.

(6) D.C. resistance limit of interface line

<Reasoning>:

This limit is required for determining the interface line range due to power supply capabilities through the copper interface line extended from the T/S reference point.

(7) Parameters for artificial lines

<Reasoning>:

Annex D of Recommendation I.430 does not include parameter values for inductance (L) and conductance (G) of artificial lines to be used for interface transmission measurement. In the standards, these two parameter values are added to describe more accurate measurement configurations.

An impedance template relevant to seven terminals is also added to the standards.

(8) Layer 1 maintenance

Loop-back 2 definitions and its characteristic descriptions are included as follows.

A non-transparent, complete, and echoing loop-back 2 is adopted in the standards.

<Reasoning>:

It is advantageous to specify the above characteristics for loop-back 2 for layer 1 maintenance and testing activities involving troubleshooting. This is done by separating the network side and the user side although several test loops are recommended, desired or optional in the ITU-T Recommendation.

3. History of revised versions

Version	Date	Outline
1	November 30, 1988	Established
2	April 26, 1991	Updated based on the revision of JT-I430 (the 4th edition).
3	April 27, 1993	Updated based on the revision of JT-I430 (the 5th edition).
4	November 27, 1996	Updated based on the revision of JT-I430 (the 6th edition).
4.1	February 4, 1997	Correction about the contents of description.

4. Others

(1) The following issues are for further study:

- test loop-backs other than loop 2

(2) Recommendations and Standards to be referred to

(i) TTC Standards

JT-I430

(ii) ITU-T Recommendations

I.430, X.211, G.117, O.121

(iii) ISO Standards

IS8877