

JT-I431-a Leased Line Primary Rate User-Network Interface Layer 1-Specification

1. Relations with international standards

JT-I431-a is applicable to the primary rate user-network interface for leased line services.

This Standard is based on ITU-T Recommendation I.431 approved at the WTSC-93.

2. Summary of departures from ITU-T Recommendations

(1) D channel

Specifications related with the D channel are deleted. Also, primitives between layer 1 and layer 2 are deleted.

<Reasoning>:

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

(2) Time slot assignment

Fixed time slot assignments are adopted.

<Reasoning>:

A call-by-call basis time slot assignment by the D channel is not available, because the D channel is not defined for this interface.

(3) Exclusion of 2048 kbit/s interface

Specifications related to a 2048 kbit/s interface are deleted.

<Reasoning>:

There is no need for standardization of a 2048 kbit/s interface at present.

(4) Exclusion of maintenance loopbacks.

<Reasoning>:

This option is not used in the TTC standard.

(5) Exclusion of option 1 and 4 according to ITU-T Recommendation I.604.

<Reasoning>:

Option 2 is used in the TTC standard.

(6) Exclusion of received signal transients and transmit signal transients for clock synchronization circuits.

<Reasoning>:

No need is recognized in Japan.

(7) Exclusion of performance report message with m-bit.

<Reasoning>:

This issue will be standardized at the same time of digital section standardization (ITU-T G.963).

(8) Power feeding

The power feeding function is not provided.

<Reasoning>:

The power feeding function across the user-network interface is not necessary for leased line applications.

(9) Electrical environment

<Reasoning>:

This issue is included in the standard, because specifications for lightning surges in groundings are necessary from the viewpoint of safety.

The issue, however, is still open for further study because it is being discussed by the ITU-T SG 5 and relevant national committees.

(10) Frame alignment procedures and monitoring for false framing

<Reasoning>:

For the above two issues in Recommendation I.431, it is possible to use the CRC-6 procedure to verify the correct frame alignment. But in this standard it is essential to use the CRC-6 procedure to avoid false framing.

3. History of revised versions

Version	Date	Outline
1	November 30, 1988	Established
2	April 28, 1989	Corrected a clerical error
3	April 25, 1990	Updated based on the result of the revision (the 4th edition) of TTC standard JT-I431.
4	April 27, 1993	Updated based on the result of the revision (the 5th edition) of TTC standard JT-I431.
5	April 23, 1997	Updated based on the result of the revision (the 6th edition) of TTC standard JT-I431.

4. Others

(1) The following issues are for further study.

- Operational functions
- Electrical environment
- Multiframe structure (use of m bit)
- Maintenance

(2) Recommendations and Standards to be referred to

(i) TTC Standards

JT-I411, JT-I431, JT-Q920, JT-Q921, JT-Q931, JT-G704, JT-G706, JT-G709

(ii) ITU-T Recommendations

I.431, I.604, G.704, G.963

(iii) Others

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