

JT-I431 ISDN Primary-Rate User-Network Interface Layer 1 - Specification

1. Relations with international standards

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

2. Summary of departures from ITU-T Recommendations

- (1) Exclusion of 2048 kbit/s interface

<Reasoning>:

This interface has been already standardized in JT-I431-b.

- (2) Exclusion of power available at NT via the user-network interface.

<Reasoning>:

This option is not used in the TTC standard.

- (3) Exclusion of leased line user-network interface

<Reasoning>:

This interface has been already standardized in JT-I431-a.

- (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 Recommendation G.963).

- (8) Electrical environment

<Reasoning>:

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

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

committees.

(9) Power feeding

<Reasoning>:

Power feeding is included for clarification because it is not described in Recommendation I.431.

(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 evade false framing.

3. History of revised versions

Version	Date	Outline
1	April 28, 1987	Established
2	May 31, 1988	Updated based on the result of ITU-T SGXVIII soul meeting in January, 1988.
3	April 28, 1989	Revised based on " Correction " and " Revision " .
4	April 25, 1990	Updated based on the contents of ITU-T recommendation I.431(1988). And updated based on the result of the standard work progress in the meeting in January, 1990.
5	April 27, 1993	Updated based on the result of the standard work progress in WTSC-93 in June, 1993.
6	April 23, 1997	Deleted the disturbance wave regulation from this standard, in order to specify independently.
6.1	March 1, 2002	Corrected clerical errors of references described in Section 3.4.1.2 (signal detection algorithm) : JT-G704,JT-G706 ITU-T Rec. G.704,G.706.

4. Others

(1) The following issues are for further study.

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

(2) This standard is concerned with layer 1 characteristics at S and T reference points, and it is applicable to ISDN interface of PBX and so on.

(3) Recommendations and Standards to be referred to

() TTC Standards

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

() ITU-T Recommendations

I.431, I.604, G.704, G.706, G.963

() Others

IS10173

5. Section that developed this standard

Technical Committee 2, Working Group1