

JT-V120

Support of Data Terminal Equipments (DTEs) with V-series Type Interfaces by an ISDN and Interface Specifications (Statistical Multiplexing Method)

1. Relations with international recommendations

This Standard is based on the ITU-T Recommendation V.120 approved by accelerated procedure in October 1992.

2. Summary of differences from the international recommendations

2.1 Selection of options from the international recommendations

None

2.2 National specific items

None

2.3 Others

This Standard has excluded the descriptions concerning the following item (s).

(a) Restricted 64kb/s transfer capability

Reason for exclusion: non-existence of restricted 64kb/s transfer capability in Japan

2.4 Differences in structure of ITU-T Recommendation and TTC Standard

None

3. Others

(1) Identification of options

To satisfy the requirements on the services to be provided by Standard JT-V120, at least one of the options may be chosen for the items as identified below. However, compatibility checking of options adopted is required between the communicating users over the network for each communication based on this Standard.

List of items with selectable options

Symbol E: Essential

O: optional

A: Either or both options selectable

No.	Item (Section No.)	Options	Option Selection and Remarks
1	H-Header octet (3.1.1)	i. To be used ii. Not to be used	E (Protocol Sensitive mode) O (Bit Transparent mode)
2	CS-Control State Octet (2.3.3) (3.1.2) (3.2.3)	i. To be used ii. Not to be used	O
3	Multiple frame acknowledged information transfer procedure (3.2.1) (4.1)	i. To be used ii. Not to be used	E
4	Encapsulated or omitted the Parity bit, if present (3.2.1.1)	i. Encapsulated ii. Not encapsulated	A(except as noted in § 7.2)
5	Action of TA when either or both of the C1 and C2 bits is set to "1"	i. discard the frame and previously received segments ii. abort the HDLC frame being sent across the R interface or internal interface iii. generate an incorrect FCS in the HDLC frame being sent across the R interface or internal interface	A

(2) Items for further study

List of Items for Further Study

No.	Item (Section No.)	Contents
1	The use of the Bit Transparent mode with Frame Mode connections (1)	Used or not used as the JT-V120 protocol
2	Non-octed-aligned frames (3.2.1.2)	Support of non-octed-aligned frames
3	Bit Transparent Operation (3.2.1.3)	Detail of Bit Transparent Operation

(3) Relation between this Standard and JT-V110

ITU-T provides for two Recommendations V.110 and V.120 that are not compatible with each other, for support of V-series data terminal equipments by an ISDN. TTC also provides for two corresponding Standards JT-V110 and JT-V120 based on these Recommendations. The rationale for this standardization is as follows.

This Standard and Standard JT-V110 have different characteristics because of differences in technical approaches and consequently they have differed suitable areas of application. Standardization of both the specifications widens the application areas in total and provides the users with greater convenience and selection.

The following Table compares the major features of each of the Standards and their application areas.

Features and Application Areas

JT-V110	This Standard (JT-V120)
1)Rate adaptation based on bit mapping	1)Rate adaptation based on HDLC flag stuffing
2)Transparent transfer of terminal data by the layer 1 capability	2)Provision of error correction capability between TAs based on Standard JT-Q922
3)Multiplexing capability based on fixed multiplexing (further study)	3)Using for Circuit-mode connections and Frame-mode connections
4) Using for Circuit-mode connections	4)Efficient multiplexing based on statistical multiplexing 5)Generation of delay caused by assembling/disassembling of HDLC frames

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s</p> | <p>1) Generally easy in system designing, being similar to replacement of modems</p> <p>2) No necessity to consider the effect of terminal-to-terminal delay and applicable in future not only to low bit-rate data but also to low bit-rate encoded voice signals (of less than or equal to 32kb/s) when standards for multiplexing will be ready</p> <p>3) Suitable for applications with high-speed data transfer such as file transfer and batch processing (faster than or equal to 48kb/s)</p> <p>4) The same rate adaptation mechanism is being used, so it enables terminals based on this Standard to communicate with X.21 based terminals (further study required for half-duplex mode of operation)</p> | <p>1) More reliable in transmission thanks to error correction between TAs when start-stop mode terminals are connected</p> <p>2) May be necessary to take the terminal-to-terminal delay into consideration in system designing. Possible to send low bit-rate encoded voice signals in broadcasting mode as delay has no significance</p> <p>3) As multiplexing not only on a B-channel but also on an H0-or H11-channel will be possible if standards on multiplexing are provided, this Standard will be applied to multiplexed transmission of communication information between the same endpoints including TA-host, PBX-host, and between PBXs</p> |
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(4) It is planned to revised the formerly Supplement to complement the contents of this Standard.

(5) Recommendations and Standards to be referred to

TTC Standards : JT-V110, JT-Q922, JT-Q931, JT-Q933, JT-I430, JT-I431, JT-I233
 ITU-T Recommendations : V.120, V.24, X.212