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INTERNATIONAL TELECOMMUNICATION UNION

**ITU-T**

TELECOMMUNICATION  
STANDARDIZATION SECTOR  
OF ITU

**DRAFT H.32Z**

(25/11/94)

**LINE TRANSMISSION OF NON-TELEPHONE  
SIGNALS**

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**VISUAL TELEPHONE SYSTEMS AND  
TERMINAL EQUIPMENT FOR  
LOCAL AREA NETWORKS**

**DRAFT ITU-T Recommendation H.32Z**

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## FOREWORD

The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of the International Telecommunication Union. The ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Conference (WTSC), which meets every four years, established the topics for study by the ITU-T Study Groups which, in their turn, produce Recommendations on these topics.

ITU-T Recommendation H.32Z was prepared by the ITU-T Study Group 15 (199x-199x) and was approved by the WTSC (Place, Month xx-xx, 199x).

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## NOTES

1 In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

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## VISUAL TELEPHONE SYSTEMS AND TERMINAL EQUIPMENT FOR LOCAL AREA NETWORKS

(Place, 199x)

{Ed. Text within curly brackets beginning "Ed" is not part of the Recommendation, but serves to hold notes, questions etc by the editor.}

{Ed. Updated following discussion on 4 November 1994 during Singapore meeting.}

{Ed. This framework is taken directly from H.320. Perusal of H.320 shows that §3.3 and §3.4 constitute the major part and are concerned with all the various modes and set-up. To interwork with H.320 all this will need to be repeated or referenced in H.32Z. Use of something other than H.221 on the LAN will require the design and validation of this alternative and the translations necessary at the LAN/ISDN interface. Direct "encapsulation" of the H.320 bit stream begins to look attractive! If that is the chosen route then H.32Z will look very different from the framework here. This point must be decided before much of the new parts of the Recommendation can be fleshed out.

This point is still not resolved. For Iso-Ethernet LANs, H.32Z need be little more than one page because the ISDN is effectively extended over the LAN to the terminal. For other LANs, including Switched Ethernet, it is not clear that this is possible. Many issues such as matching to the ISDN network clock, call set up signalling, ISDN termination approval etc need to be considered in addition to the normal LAN topics of packet delay, LAN protocol, etc. The members of the Rapporteur's group are not providing enough contributions containing engineering level detail based on findings from trials, experiments, etc.}

{Ed. It is intended that those sections which are identical to H.320 will not be repeated in full, but merely referenced.}

The ITU,

*considering*

(a)

*appreciating*

*and noting*

*recommends*

### 1 Scope

This Recommendation covers the technical requirements for narrow-band visual telephone services defined in H.200/AV.120-Series Recommendations, in those situations where the transmission path includes one or more Local Area Networks (LAN), each of which is configured to provide guaranteed delivery. {Ed. "guaranteed delivery" to be defined when its precise meaning is agreed. Needs to include "timely" aspect.}. Examples of such LANs are those

conforming to at least one of the following specifications: IEEE 802.9 (Isochronous Ethernet), {Ed. Others to be inserted here - Switched Ethernet?}

Systems and terminal equipment complying with this Recommendation are able to interwork with those complying with Recommendation H.320.

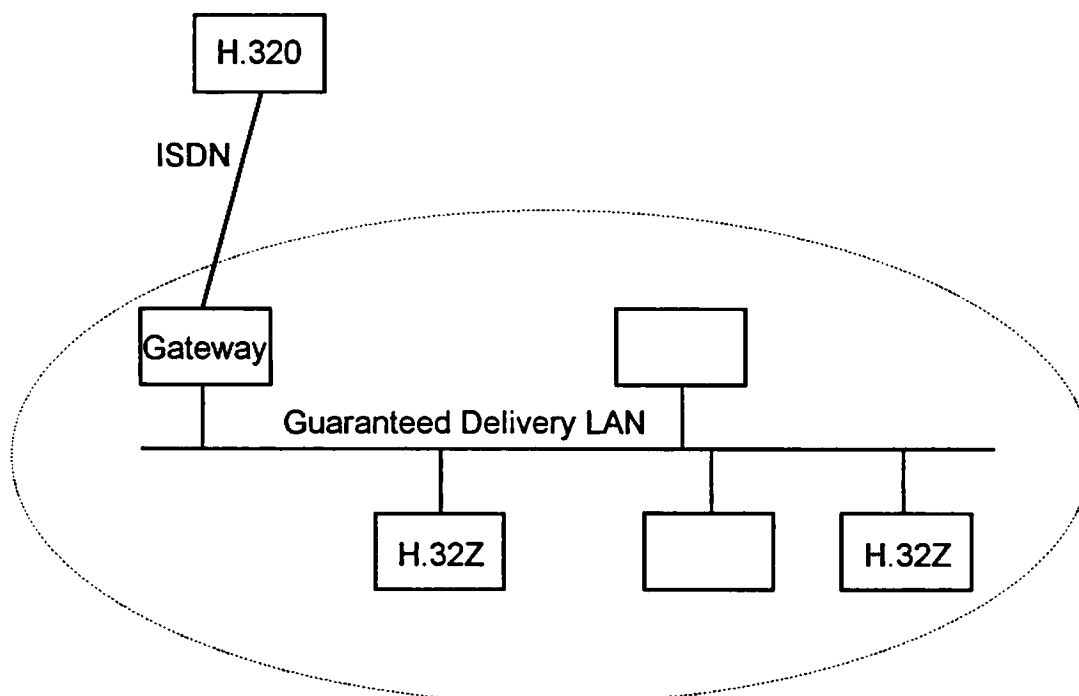


FIGURE 1/H.32Z

{Ed. What needs to be specified for the gateway and should the necessary be part of H.32Z or another recommendation? See §8.}

## 2 Definitions

{Ed. If stand-alone, probably all definitions in H.320 will be repeated here. Any new ones specific to H.32Z?}

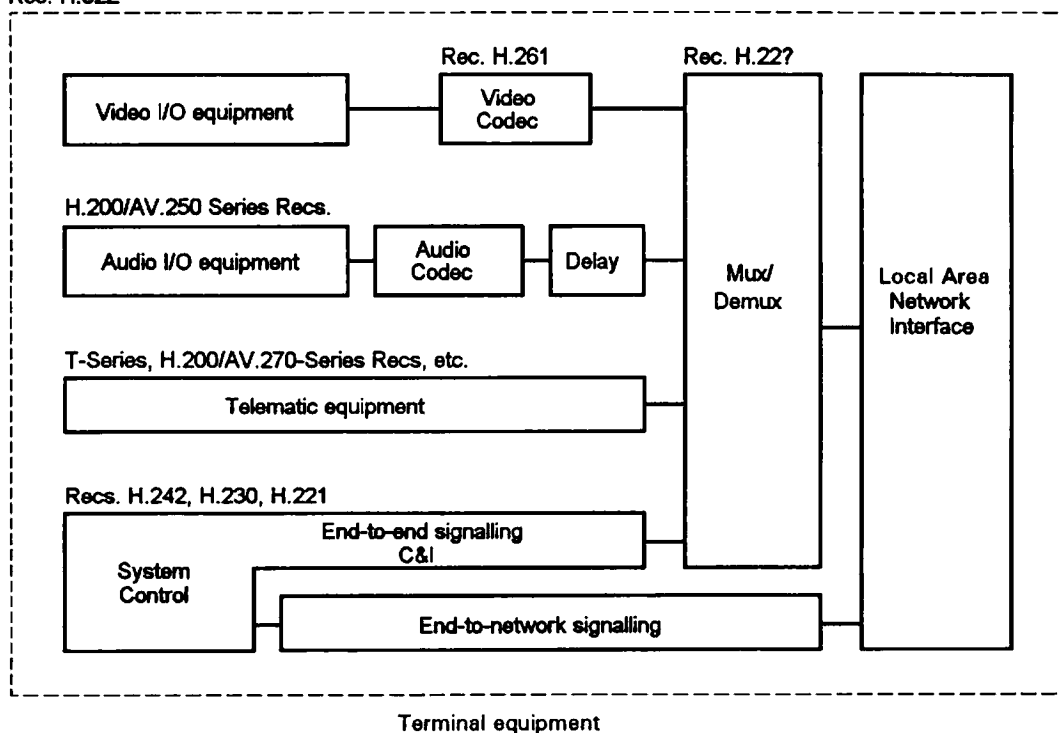


FIGURE 2/H.32Z

{Ed. Diagram has been take from H.320 with few changes and is only intended to be a starting point. Items requiring major focus are the multiplex - H.221 or other (see AVC-587) and network interface.}

### 3 System Description

#### 3.1 Block diagram and identification of elements

{Ed. As §3.1 of H.320 but change I.400 in final sentence??}

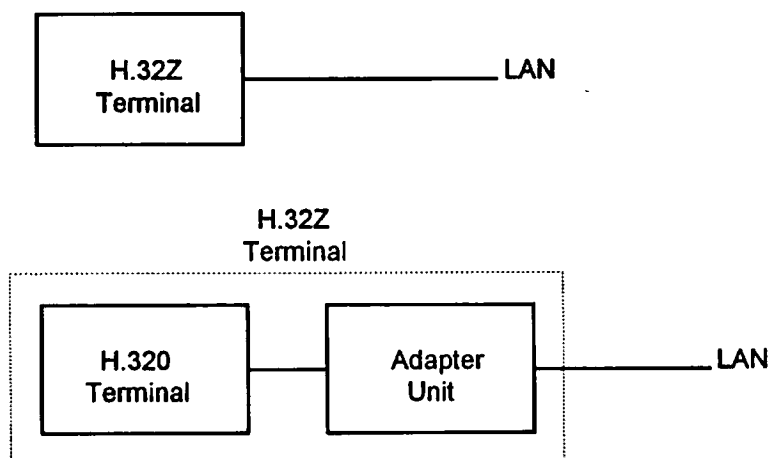


FIGURE 3/H.32Z

As illustrated in Figure 3/H.32Z an H.32Z terminal may be implemented as an integrated unit or as the combination of an H.320 terminal and an adapter unit.

## **3.2 Signals**

{Ed. As §3.2 of H.320 but change final bullet to reflect additions if H.221 not used on LAN.}

## **3.3 Bit rate options and infrastructure**

### **3.3.1 Communication modes of visual telephone**

{Ed. As §3.3.1 of H.320 for connection to H.320 off-LAN? Allow other modes for on-LAN H.32Z to H.32Z?}

### **3.3.2 Terminal types of visual telephone**

{Ed. Need §3.3.2 of H.320 for connection to H.320 off-LAN. New types for on-LAN H.32Z to H.32Z?}

### **3.3.3 Video codec**

As per Recommendation H.261.

### **3.3.4 Audio codec**

As per Recommendations G.711, G.722, H.200/AV.254, AV.253 (see Table 1/H.320).



- 3.3.5    **Frame structure**
- 3.3.6    **Control and indication (C&I)**
- 3.3.7    **Communication procedure**
- 3.4      **Call control arrangements**
- 3.4.1    **Establishment of a visual telephone call - normal procedure**
- 3.4.5    **Addition and dropping of channels during a visual telephone call**
- 3.4.5    **Transmission and display of pictures at the start of a visual telephone call**
- 3.5      **Optional enhancements**
- 3.5.1    **Data ports**
- 3.5.2    **Encryption**
- 4        **Terminal requirements**
- 4.1      **Environments**
- 4.2      **Audio and video arrangements**
- 4.3      **Delay compensation in the audio path**
- 4.4      **Control and Indications (C&I)**
- 5        **Intercommunications**
- 5.1      **Intercommunication between different terminal types**
- 5.2      **Intercommunication with telephony**
- 5.2.1    **Intercommunication with ISDN telephones**
- 5.2.2    **Intercommunication with PSTN telephones**
- 5.2.3    **Intercommunication with other audiovisual terminals**
- 6        **Maintenance**
- 7        **Human factor aspects**
- 8        **LAN-ISDN Gateway**

{Ed. This section put here just as a holder for the meantime.}

Functionalities required:

ISDN side Interface, LAN side interface, MCU capabilities?

Numbering, translations.

H.32Z terminal to gateway call set up (=dialling) not standardised? - see AVC-696.