



INTERNATIONAL TELECOMMUNICATION UNION

**ITU-T**

**H.320 System  
Implementors'  
Guide**

TELECOMMUNICATION  
STANDARDIZATION SECTOR  
OF ITU

(30 January 2004)

SERIES H: AUDIOVISUAL AND MULTIMEDIA SYSTEMS  
Infrastructure of audiovisual services – Communication  
procedures

---

**Implementors' Guide for Recommendations of  
the H.320 System (“Narrow-band visual  
telephone systems and terminal equipment”):  
*H.320, H.221, H.224, H.230, H.242, H.243***

---

**Attention:** This is not a publication made available to the public, but an **internal ITU-T Document** intended only for use by the Member States of the ITU, by ITU-T Sector Members and Associates, and their respective staff and collaborators in their ITU related work. It shall not be made available to, and used by, any other persons or entities without the prior written consent of the ITU-T.



## **Summary**

This document is a compilation of reported defects identified with the H.320-series Recommendations last approved in May 2003. It is intended to be read in conjunction with the Recommendations to serve as an additional authoritative source of information for implementors. The changes, clarifications and corrections defined herein are expected to be included in future versions of affected H.320-series Recommendations.

Changes are made against the 05/99 revisions of H.221, H.230, H.242 and H.320, and the 02/2000 revisions of H.224 and H.243. This Implementors Guide supersedes the ITU-T H.320 Recommendation series Implementors Guide approved on 30 May 2003.

## Document history

Revision	Date	Description
1	18 February 2000	Initial version - Reviewed at ITU-T Study Group 16 meeting.
2	17 November 2000	Second version - Completed at ITU-T Study Group 16 meeting.
3	8 June 2001	Third version - Completed at ITU-T Study Group 16 meeting.
4	15 February 2002	Fourth version - Completed at ITU-T Study Group 16 meeting.
5	30 May 2003	Fifth version - Completed at ITU-T Study Group 16 meeting.
6	30 January 2004	Sixth version - Completed at ITU-T Study Group 16 meeting. (TD 40R1/PLEN)

## Contact information

ITU-T Study Group 16/Question 1 Rapporteur	Patrick Luthi Tandberg Philip Pedersens vei 22 1366 Lysaker Norway	Tel: +47 67 125 125 Fax: +47 67 125 234 Email: <a href="mailto:patrick.luthi@tandberg.net">patrick.luthi@tandberg.net</a>
ITU-T Recommendation H.320-series Editor	Patrick Luthi	Tel: +47 67 125 125 Fax: +47 67 125 234 Email: <a href="mailto:patrick.luthi@tandberg.net">patrick.luthi@tandberg.net</a>

## Table of Contents

<b>1. INTRODUCTION.....</b>	<b>1</b>
<b>2. SCOPE .....</b>	<b>1</b>
<b>3. POLICIES FOR UPDATING THIS DOCUMENT .....</b>	<b>1</b>
<b>4. DEFECT RESOLUTION PROCEDURE .....</b>	<b>1</b>
<b>5. REFERENCES.....</b>	<b>1</b>
<b>6. NOMENCLATURE.....</b>	<b>2</b>
<b>7. TECHNICAL AND EDITORIAL CORRECTIONS .....</b>	<b>2</b>
7.1 TECHNICAL AND EDITORIAL CORRECTIONS TO ITU-T RECOMMENDATION H.221 .....	2
7.2 TECHNICAL AND EDITORIAL CORRECTIONS TO ITU-T RECOMMENDATION H.224 .....	2
7.3 TECHNICAL AND EDITORIAL CORRECTIONS TO ITU-T RECOMMENDATION H.230 .....	3
7.4 TECHNICAL AND EDITORIAL CORRECTIONS TO ITU-T RECOMMENDATION H.242 .....	3
7.5 TECHNICAL AND EDITORIAL CORRECTIONS TO ITU-T RECOMMENDATION H.243 .....	3
7.6 TECHNICAL AND EDITORIAL CORRECTIONS TO ITU-T RECOMMENDATION H.320 .....	4
<b>ANNEX A: DEFECT REPORT FORM FOR THE H.320 RECOMMENDATION SERIES ...</b>	<b>5</b>



# IMPLEMENTORS GUIDE FOR THE ITU-T H.320 RECOMMENDATION SERIES (H.320, H.221, H.224, H.230, H.242, H.243)

## 1. Introduction

This document is a compilation of reported defects identified with the 1997-2000 editions of the ITU-T H.320-series Recommendations. It is intended to be read in conjunction with the Recommendations to serve as an additional authoritative source of information for implementors. The changes, clarifications and corrections defined herein are expected to be included in future versions of affected H.320-series Recommendations.

The first version of the guide was produced following the October 1999 ITU-T Study Group 16/Question 11 Rapporteur meeting. Wide distribution of this document is expected and encouraged.

## 2. Scope

This guide resolves defects in the following categories:

- editorial errors;
- technical errors such as omissions or inconsistencies;
- ambiguities.

In addition, the Guide may include explanatory text found necessary as a result of interpretation difficulties apparent from the defect reports.

This Guide will not address proposed additions, deletions or modifications to the Recommendations that are not strictly related to implementation difficulties in the above categories. Proposals for new features should be made in the normal way through contributions to the ITU-T.

## 3. Policies for updating this document

This document is managed by the ITU-T Study Group 16 Question 1 Rapporteurs Group. It can be revised at any recognized Q.1/16 Rapporteurs Group meeting provided the proposed revisions are unanimously accepted by the members of the group. A revision history cataloguing the evolution of this document is included.

## 4. Defect resolution procedure

Upon discovering technical defects with any components of the H.320 Recommendations series, please provide a written description directly to the editors of the affected Recommendations with a copy to the Q.1/16 Rapporteur. The template for a defect report is enclosed. Contact information for these parties is included in this document. Return contact information should also be supplied so a dialogue can be established to resolve the matter and an appropriate reply to the defect report can be conveyed. This defect resolution process is open to anyone interested in H.320-series Recommendations. Formal membership in the ITU is not required to participate in this process.

## 5. References

This document refers to the following H.320-series Recommendations:

- ITU-T Recommendation H.221 (1999), *Frame Structure for a 64 to 1920 kbit/s channel in audiovisual teleservices.*
- ITU-T Recommendation H.224 (2000), *A real time control protocol for simplex applications using the H.221 LSD/HSD/MLP channels*

- ITU-T Recommendation H.239 (2003), *Role Management and Additional Media Channels for H.300-series Terminals*
- ITU-T Recommendation H.230 (1999), *Frame-synchronous control and indication signals for audiovisual systems*
- ITU-T Recommendation H.241 (2003), *Extended Video Procedures and Control Signals for H.300 Series Terminals*
- ITU-T Recommendation H.242 (1999), *System for establishing communication between audiovisual terminals using digital channel up to 2 Mbit/s.*
- ITU-T Recommendation H.243 (2000), *Procedures for establishing communication between three or more audiovisual terminals using digital channels up to 1920 kbit/s*
- ITU-T Recommendation H.320 (1999), *Narrow-band visual telephone systems and terminal equipment.*
- ITU-T Recommendation T.35 (2000), *Procedure for the allocation of ITU-T defined codes for non-standard facilities*

## 6. Nomenclature

In addition to traditional revision marks, the following marks and symbols are used to indicate to the reader how changes to the text of a Recommendation should be applied:

<b>Symbol</b>	<b>Description</b>
<u><i>[Begin Correction]</i></u>	Identifies the start of revision marked text based on extractions from the published Recommendations affected by the correction being described.
<u><i>[End Correction]</i></u>	Identifies the end of revision marked text based on extractions from the published Recommendations affected by the correction being described.
...	Indicates that the portion of the Recommendation between the text appearing before and after this symbol has remained unaffected by the correction being described and has been omitted for brevity.
--- <i>SPECIAL INSTRUCTIONS</i> --- <i>{instructions}</i>	Indicates a set of special editing instructions to be followed.

## 7. Technical and editorial corrections

### 7.1 Technical and editorial corrections to ITU-T Recommendation H.221

*Changes from the previous version were incorporated in H.221 (2004)*

### 7.2 Technical and editorial corrections to ITU-T Recommendation H.224

#### 7.2.1 New section 11 – Generic Capability Object Identifier

To allow the usage of H.281 FECC in H.323, a new section 11 is being added to H.224 as follows:

## 11. Generic Capability Object Identifier

The object identifier shown in Table 2 shall be used to identify Recommendation H.224 in the signalling procedures of Recommendation H.245.

**Table 2/H.224 – Generic Capability identifier**

Capability name	ITU-T Recommendation H.224
Capability class	Data protocol
Capability identifier type	Standard
Capability identifier value	itu-t(0) recommendation(0) h(8) 224 generic-capabilities (1) 0
Capability parameter type	No parameters
MaxBitRate	Not used

---

[End Correction]

### 7.3 Technical and editorial corrections to ITU-T Recommendation H.230

*Changes from the previous version were incorporated in H.230 (2004)*

### 7.4 Technical and editorial corrections to ITU-T Recommendation H.242

*Changes from the previous version were incorporated in H.242 (2004)*

### 7.5 Technical and editorial corrections to ITU-T Recommendation H.243

A couple of editorial typos in section 5.5 and in Appendix II of the published version H.243 (05/99) were discovered by TTC (a standardization body in Japan) when translating H.243 to Japanese. The editorial corrections needed are described below.

#### 7.5.1 Editorial corrections to section 5.5/H.243

In section 5.5 of H.243, there is a reference to Q.939, but it should read Q.931. The exiting text needs to be corrected as shown below.

---

[Begin Correction]

### 5.5 Extension to multiple channels

If the intended SCM of the conference communication involves multiple channels, then the transmitted MCU transfer-rate capability reflects the appropriate rate to all terminals, and the additional channels are set up according to the procedures defined in Recommendations H.242, H.221, and Q.939-931 and/or 7.2 as appropriate.

Having received MCC, the terminals cannot transmit at the higher transfer rate until the MCU does so, which could be when the other terminals are all ready, or after a time-out, or when at least one terminal has all the requested additional channels available; the MCU itself adopts the higher rate and the terminals shall follow suit.

...

---

**[End Correction]**

### 7.5.2 Editorial corrections to Appendix II/H.243

In Appendix II, in the table the values RIR, RID, and RIU have, in addition to the normal values, "#" signs (such as CM# or CM##). These are typos and the “#” signs should be removed.

Since RIR, RID, and RIU are messages sent between Master MCUs and Slave MCUs, the table rows need to be corrected as follows:

---

**[Begin Correction]**

	[29]	RIR	NA	CM#	NA	CM	H.243
	[30]	RID	NA	CM#	NA	CM##	H.243
	[31]	RIU	NA	CM#	NA	CM##	H.243

---

**[End Correction]**

### 7.5.3 Editorial corrections to section 2/H.243 – References

While it has not been added previously, a reference to Q.931 is now being added to the list for completeness as follows:

---

**[Begin Correction]**

- ...
- Recommendation Q.931 (1998) - *ISDN user-network interface layer 3 specification for basic call control*

...

---

**[End Correction]**

### 7.6 Technical and editorial corrections to ITU-T Recommendation H.320

*Changes from the previous version were incorporated in H.320 (2004)*

**Annex A: Defect Report Form for the H.320 Recommendation Series**

<b>DATE:</b>	
<b>CONTACT INFORMATION</b> <b>NAME:</b> <b>COMPANY:</b> <b>ADDRESS:</b>  <b>TEL:</b> <b>FAX:</b> <b>EMAIL:</b>	
<b>AFFECTED RECOMMENDATIONS:</b>	
<b>DESCRIPTION OF PROBLEM:</b>	
<b>SUGGESTIONS FOR RESOLUTION:</b>	

NOTE - Attach additional pages if more space is required than is provided above.

\_\_\_\_\_