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**ITU-T**

TELECOMMUNICATION  
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OF ITU

**V.250**

**Amendment 2**

(03/2002)

SERIES V: DATA COMMUNICATION OVER THE  
TELEPHONE NETWORK

Control procedures

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Serial asynchronous automatic dialling and control  
**Amendment 2**

ITU-T Recommendation V.250 (1999) – Amendment 2

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# **ITU-T Recommendation V.250**

## **Serial asynchronous automatic dialling and control**

### **Amendment 2**

#### **Summary**

This amendment to ITU-T Rec. V.250 redefines the AT commands for support of ITU-T Rec. V.59 (Managed objects for diagnostic information of public switched telephone network connected V-series modem DCEs) and supersedes previous definitions found in ITU-T Rec. V.250/Amd.1.

#### **Source**

Amendment 2 to ITU-T Recommendation V.250 (1999) was prepared by ITU-T Study Group 16 (2001-2004) and approved under the WTSA Resolution 1 procedure on 29 March 2002.

## FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. 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 Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

## NOTE

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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As of the date of approval of this Recommendation, ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementors are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database.

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# ITU-T Recommendation V.250

## Serial asynchronous automatic dialling and control

### Amendment 2

#### 0) Introduction

This document is an amendment to the 1999 edition of the ITU-T Rec. V.250. It is intended to be read in conjunction with the Recommendation and Amendment 1 (2001).

#### 1) Clause 6.9 – Additional commands to support ITU-T Rec. V.59

This clause supersedes the description of the commands to support ITU-T Rec. V.59 as described in ITU-T Rec. V.250/Amd.1. Replace the text in clause 6.9, V.59 Command (+TMO), with the following:

*REPLACEMENT TEXT*

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#### 6.9 V.59 Command (+TMO)

This extended-format command causes the DCE to transmit one or more lines of information text in specific formats. The command retrieves the information from the managed objects in ITU-T Rec. V.59. The command can be used in three ways as described in the following clauses.

##### 6.9.1 Repeat last +TMO command

*Syntax*

**+TMO**

*Description*

The +TMO command without extensions will cause the DCE to repeat the last +TMO command that was issued.

NOTE – For all common mid-level objects retrieved by the +TMO command, only the one applicable to the most recent modulation used, irrespective of how many modulations the modem has operated in during the previous connection, is returned.

##### 6.9.2 Retrieve diagnostic supported

*Syntax*

**+TMO [<list level><n>]=?**

*Defined list levels:*

- 0 The DCE shall transmit information text which reports the list of all objects support as defined in ITU-T Rec. V.59.
- 1 The DCE shall transmit information text which reports the list of all high-level objects supported as defined in ITU-T Rec. V.59.
- 2 The DCE shall transmit information text which reports the list of all mid-level objects supported as defined in ITU-T Rec. V.59.
- 3 The DCE shall transmit information text which reports the list of all low-level objects supported as defined in ITU-T Rec. V.59.
- 4 The DCE shall transmit 0 if it supports object names, and 1 if it supports tagIDs.

*Defined* <n>:

n If present, the object names are returned; if not present, tagIDs are returned. n shall not be used with list level 4. If a DCE supports only tagIDs and n is included with the +TMO command, **ERROR** will be returned.

For example, a DCE that supported both object names and tagIDs would report:

**+TMO 4=? (0,1)**

### **6.9.3 Retrieve specific diagnostic information**

*Syntax*

**+TMO <tagID or Name> <all or only>**

*Description*

This command retrieves the diagnostic identified by either the V.59 tagID or the name. The response from the DCE shall be in the same form as the request, i.e. a tagID will return a response identified by the tagID. A named diagnostic will return the name and the requested information.

A two-digit tagID indicates that the request is for the high-level V.59 objects. A four-digit tagID indicates that the request is for a mid-level or a low-level V.59 object.

<all or only> specifies if any or all sub-objects of a high- or mid-level objects are returned in response to the command.

For example:

+TMO <Name> <all or only>

+TMO V92 All would return all the diagnostics defined for ITU-T Rec. V.92 in ITU-T Rec. V.59.

+TMO V92 rxHistory would only return the rx rate history of the V.92 diagnostic as defined in ITU-T Rec. V.59.

+TMO <tagID> <all or only>

+TMO 09 would return the entire V.90 object.

+TMO 0900 would return mode V.90 object only.

*END REPLACEMENT*

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