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TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

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SERIES V: DATA COMMUNICATION OVER THE TELEPHONE NETWORK

Interfaces and voiceband modems

**Automatic answering equipment and general
procedures for automatic calling equipment
on the general switched telephone network
including procedures for disabling of echo
control devices for both manually and
automatically established calls**

ITU-T Recommendation V.25

(Previously CCITT Recommendation)



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DATA COMMUNICATION OVER THE TELEPHONE NETWORK

- 1 – General
- 2 – **Interfaces and voiceband modems**
- 3 – Wideband modems
- 4 – Error control
- 5 – Transmission quality and maintenance
- 6 – Interworking with other networks

For further details, please refer to ITU-T List of Recommendations.

FOREWORD

The ITU-T (Telecommunication Standardization Sector) is a permanent organ of the International Telecommunication Union (ITU). 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, establishes the topics for study by the ITU-T Study Groups which, in their turn, produce Recommendations on these topics.

The approval of Recommendations by the Members of the ITU-T is covered by the procedure laid down in WTSC Resolution No. 1 (Helsinki, March 1-12, 1993).

ITU-T Recommendation V.25, was revised by ITU-T Study Group 14 (1993-1996) and was approved by the WTSC (Geneva, October 9-18, 1996).

NOTES

1. In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.
2. The status of annexes and appendices attached to the Series V Recommendations should be interpreted as follows:
 - an *annex* to a Recommendation forms an integral part of the Recommendation;
 - an *appendix* to a Recommendation does not form part of the Recommendation and only provides some complementary explanation or information specific to that Recommendation.

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Recommendation V.25

AUTOMATIC ANSWERING EQUIPMENT AND GENERAL PROCEDURES FOR AUTOMATIC CALLING EQUIPMENT ON THE GENERAL SWITCHED TELEPHONE NETWORK INCLUDING PROCEDURES FOR DISABLING OF ECHO CONTROL DEVICES FOR BOTH MANUALLY AND AUTOMATICALLY ESTABLISHED CALLS

*(Mar del Plata, 1968; amended at Geneva, 1972 and 1976;
revised at Malaga-Torremolinos in 1984 and at Geneva in 1996)*

1 Scope

1.1 This Recommendation is concerned with the setting-up of a data connection when Data Circuit-terminating Equipment (DCE) comprising automatic answering equipment is used over international circuits. Automatic calling procedures are defined in Recommendations V.25 *bis* and V.25 *ter*.

NOTE – Up to and including the 1988 (*Blue Book*) version, this Recommendation, in addition to what is outlined herein, specified parallel automatic calling equipment using the 200-Series interchange circuits defined in Recommendation V.24, and an associated automatic call set-up protocol. It is the opinion of the ITU-T that both this type of equipment and the associated protocol are out of date, and that more modern techniques and protocols are specified in Recommendations V.25 *bis* and V.25 *ter*. It is therefore not recommended to use this technique for new designs.

Automatic answering equipment used within any single Member's area or between two Members by bilateral agreement is not necessarily constrained by the procedures specified herein. In particular, the use of the 2100 Hz answering tone, as described in this Recommendation, could be substituted by another tone when the equipment is used over circuits not equipped with echo control devices. Similarly, the calling tone could be omitted by bilateral agreements, but attention is drawn to clauses 7 and 8 below.

In addition, the provisions for echo canceller disabling and for a "calling station response" prior to the termination of the answer tone are optional and only applicable to Data Circuit-terminating Equipment (DCE) for which the relevant V-Series Recommendation specifically calls for such provision(s).

1.2 This Recommendation describes the sequence of events involved in establishing a connection between an automatic calling data station¹⁾ and an automatic answering data station for V-Series Recommendations modems specified for general switched telephone network operations.

Consideration is given only to:

- a) the events which affect the interfaces between the data terminal equipment and the data circuit-terminating equipment at the answering data station; and
- b) the events on the line during establishment of a data call.

Interactions within the data circuit-terminating equipment are not considered, since such consideration is unnecessary for purposes of international standardization.

1.3 The proposed procedures are intended to be suitable for four types of calls, namely:

- a) automatic calling data station to automatic answering data station;
- b) manual calling data station to automatic answering data station;
- c) automatic calling data station to manual answering data station;
- d) disabling of echo suppressors in the case of manual calling data stations.

¹⁾ In this Recommendation, the term "data station" is synonymous with the term "terminal installation for data transmission" [1].