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# ITU-T

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STANDARDIZATION SECTOR  
OF ITU

# X.421

(06/1999)

SERIES X: DATA NETWORKS AND OPEN SYSTEM  
COMMUNICATIONS

Message Handling Systems

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## Message Handling Systems: COMFAX use of MHS

ITU-T Recommendation X.421

(Previously CCITT Recommendation)



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# ITU-T RECOMMENDATION X.421

## MESSAGE HANDLING SYSTEMS: COMFAX USE OF MHS

### Summary

This revision of Recommendation X.421 is a consolidation of Recommendation X.421 (07/94) and Recommendation X.421/Amd.1 (12/97). Recommendation X.421 defines the usage of the X.400 protocols, mainly the Interpersonal Messaging protocol (P2) and the Message Transfer protocol (P1), to provide a global COMFAX service. The COMFAX service, as defined in Recommendations F.162 (1996) and F.163 (1996), specifies a store and forward facsimile service where MHS may be used to provide a means of moving facsimile messages in COMFAX services. Recommendations F.162 and F.163 describe the COMFAX service using Facsimile store and Forward units (Fax SFUs) and its interconnection requirements. This Recommendation describes an X.400-based protocol for interconnecting Fax SFUs.

### Source

Following ITU-T decision to publish new editions of the set of Message Handling Recommendations, this edition of ITU-T Recommendations X.421, dated 18 June 1999, consolidates X.421 (07/94) and X.421 Amendment 1 (12/97).

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## FOREWORD

ITU (International Telecommunication Union) is the United Nations Specialized Agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of the 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.

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, the 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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## MESSAGE HANDLING SYSTEMS: COMFAX USE OF MHS

### 1 Scope

This Recommendation defines a functional model and operational procedures to interconnect Fax SFUs using MHS protocols.

To provide seamless interaction, this Recommendation details the specific elements of P1 and P2 protocols defined in the X.400-series Recommendations to be used for the store and forward exchange of facsimile messages between SFUs. Interworking between the COMFAX service and other MHS services is for further study.

### 2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; all users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published.

- ITU-T Recommendation F.162 (1996), *Service and operational requirements of store-and-forward facsimile service (COMFAX)*.
- ITU-T Recommendation F.163 (1996), *Operational requirements of the interconnection of facsimile store-and-forward units*.
- ITU-T Recommendation F.400/X.400 (1999), *Message handling system and service overview*.
- ISO/IEC 10021-1:1999, *Information technology – Text Communication – Message Handling Systems (MHS) – Part 1: System and Service Overview*.
- CCITT Recommendation F.410 (1992), *The public message transfer service*.
- ITU-T Recommendation X.402 (1999) | ISO/IEC 10021-2:1999, *Information technology – Message Handling Systems (MHS): Overall architecture*.
- ITU-T Recommendation X.411 (1999) | ISO/IEC 10021-4:1999, *Information technology – Message Handling Systems (MHS): Message transfer system: Abstract service definition and procedures*.
- ITU-T Recommendation X.420 (1999) | ISO/IEC 10021-7:1999, *Information technology – Message Handling Systems (MHS): Interpersonal messaging system*.

### 3 Definitions

#### 3.1 Terms defined in this Recommendation

This Recommendation defines the following terms:

**3.1.1 originating Fax SFU:** The Fax SFU which has accepted a message from a user of COMFAX is defined as the Originating Fax SFU of this message.

**3.1.2 destination Fax SFU:** The Fax SFU which has the responsibility to deliver a message to a recipient is defined as the Destination Fax SFU of this message.

**3.1.3 originating COMFAX-AU:** The COMFAX-AU which has accepted a message from a user of COMFAX is defined as the Originating COMFAX-AU of this message.