

MailBox X.400 (IPM Service)

Introduction

MailBox X.400 is an electronic message handling system based on the X.400 international standard.

The system can be regarded as a centralized processor system (based in Mannheim) in which mailboxes can be leased for electronic message handling. All message transfers for a particular box user pass through his/her mailbox in the system – i.e., from the sender's box to the recipient's box. Users send data from their data terminals over public telecommunications networks to the boxes of other users. Open, global communication has become possible with the introduction of the X.400 international standard for electronic message handling systems. The impact of the standard means that not only is each particular mailbox in the MailBox X.400 system accessible from anywhere in the world, but also mailbox users both at home and abroad.

BusinessMail offers the products MailBox X.400 and MailGate X.400, both based on the X.400 standard.

- **MailBox X.400 (IPM service → interpersonal messaging)**
MailBox X.400 enables communication between individual users or application processes (for example, between mailbox owners A and B).
- **MailGate X.400 (MT service → message transfer)**
MailGate X.400 provides a platform for non-application-specific exchange of messages between different public and private message handling systems or management domains. Public message handling systems and management domains are referred to as the ADMD (Administration Management Domain), while the private systems and management domains are known as the PRMD (Private Management Domain).

The information provided in this document applies to MailBox X.400 only. MailGate X.400 is described in detail in a separate file.

MailBox X.400 allows users to quickly and simply transfer text, data, graphics, images, and audio and video files. Messages can be sent, received, saved and edited.

MailBox X.400 users do not communicate directly with the recipients of their mails, but instead with their mailboxes. This means that MailBox X.400 allows you to use its services regardless of time and place in that you can send and receive information at any time, even after business hours, and from anywhere – from your home, the office or when traveling nationally or internationally.

MailBox X.400 supports both the standard features and additional optional features that are internationally offered in compliance with the X.400/F.400 Recommendations in the versions from 1988/92 by telecommunications administrations and recognized operating agencies. Further system extensions are also being added in succession.

The X.400 protocol agreements also include rules governing the exchange of messages and the specification and design of the address structure (X.400 address) required for standardized addressing. This standardized addressing facilitates global message transfer between users.

MailBox X.400 features

- Messages can be transferred at the 'touch of a button'.
- 'Busy' responses or 'recipient cannot be reached' cases never occur because there is no direct communication with other users, but instead with their boxes – and the boxes can always be reached. Different time zones are no longer a problem in international data transfers.
- Mailbox owners can log into the system from any telephone line.
- Message handling is not limited to text only; computer programs and business documents of all kinds (graphics, order forms, audio and video files, etc.) can also be securely transferred.
- The system's independent access mode allows communication between any kind of data terminal – from a simple terminal or PC through to large data processing systems. The scope of communication partners can be easily expanded as a result.
- High level of protection against unauthorized access based on user identities and passwords.
- Thanks to its gateways to other services (e.g., telefax, Internet e-mail, SMS messages for mobile telephone users), MailBox X.400 users can reach other communication partners throughout the world who do not belong to an X.400-based messaging system.
- The discontinuity of transfer media, which is a common cause of errors, is avoided by electronic data transfer over MailBox X.400. You can process received data directly and efficiently using your own data processing system.
- Dialup of the MailBox X.400 system and message handling can be automated with the PC software 'FileWork'.

X.400 addresses

X.400 addresses must be unique and generally understandable. However, you should use no more than the address components you require in order to keep the addressing as simple as possible.

X.400 addresses comprise the following components.

C	Country	'DE' is internationally defined as the code for Germany
A	(ADMD)	This address component is

	Public Management Domain	'viaT' for the MailBox X.400 system
P	(PRMD) Private Management Domain	This address component contains the registered name for connection to the ADMD
S	Surname	The user's surname
G	Given name	The user's first name
O	Organization	Name of the company, if applicable
OU1	Organizational unit 1	Used in large companies for specification of a department or business area, for example
OU2-OU4	Organizational units 2–4	Used for further organizational subunits, if necessary
CN	Common name	This address component may be used for addressing in place of 'G' and 'S'

Accessing MailBox X.400

The MailBox X.400 system is accessed through the public telecommunications networks or over an existing Internet connection. The standard connection rates based on time and distance to Mannheim or the charges for the Internet provider apply.

The MailBox X.400 system can be reached from anywhere in the world at all times – 24 hours a day, 7 days a week. Information on maintenance periods can be found in the INFOBOX under the keyword 'Maintenance'.

Access by modem

The transmission rate depends on the modem and compression method used. MailBox X.400 has multifunctional modem ports that adapt themselves automatically to the transmission rate and modulation method used by the dialing modem. Transmission rates of up to 56 kbit/s are possible.

The system supports the following security protocols:

- X modem
- Y modem
- Kermit
- MNP4/MNP5
- V.42/V.42bis

ISDN access

Using ISDN adapters that provide the CAPI 2.0 interface or external terminal adapters using the X.75 protocol, you can communicate with your MailBox X.400 connection (for example, with the FileWork software), and at the same time enjoy the other benefits of ISDN (transmission rates of up to 64 kbit/s, for instance).

Access by Internet connection

An SSL/TSL-encrypted connection is set up to the MailBox X.400 system over the Internet using the P7 client software (FileWork or Secure UAFI). The add-on software needed for FileWork can be

downloaded from the Internet at the following URL:
<http://www.e-business.telekom.de>

Datex-P

MailBox X.400 also permits access over Datex-P and foreign data networks using packet switching. Transmission rates of up to 64 kbit/s are possible.

Accesses operating synchronously on Datex-P (terminal equipment using the X.25 protocol on Datex-P10H) must be able to interpret protocols according to X.29.

Batch job communication with HOST processors

MailBox X.400 communicates with HOST processors over TCP-IP using FTP protocol. ISDN or Frame Link Plus are available as access media.

Mobile radio networks

MailBox X.400 can be reached from D networks with a transmission rate of 9.6 kbit/s. The abbreviated dialing number 4400 has been created for access from the D1 network.

MailBox X.400 access types

Access	Remarks	Access call numbers
Modem (LUA)	Protocols: V.34/V.FAST/V.32bis V.32/V.23/V.22bis/V.22 V.21/V.42bis	(0621) 42 99 20
ISDN (LUA)	Protocol: HDLC-transparent	(0621) 42 99 20
Modem (P7)	Access for FileWork and UAFI	(0621) 42 99 10
ISDN (P7)	Access for FileWork and UAFI Capi 2.0 drivers	(0621) 42 99 10
Modem (P7) ISDN (P7)	Access for FileWork and UAFI over data networks Protocol: TCP/IP over PPP connect IP address: 164.31.4.139 Port: 102 User ID: P7CONNECT Password: FILEWORK (encrypted password) Case-sensitive!	(0621) 4 18 99
Datex-P (LUA)	X.25	45 6211 22335 45 6211 22435

Note:

The access types indicated by (P7) can be used with FileWork, UAFI, ABS software or ELRE Trans software. UAFI is available for DOS, Windows and LINUX operating systems. The access types indicated by (LUA) are provided for direct access with the corresponding terminal software or the PC Box program.

Message structure

All messages contain a message header and text.

Message header

The message header contains the items 'Address' and 'Subject':

- Address
Every destination address is identified by standardized address components. Recipients' addresses are written as destination addresses in the message header.
- Subject
The subject component gives a brief description of the message contents. It is not permitted to have more than 128 characters.

Message text

The actual information content is in the message text. Message text refers to the two types: text and attachment.

- Text
The text of a message can be written, saved, edited any number of times and sent using the editor included with the communication software; no additional text processing application is required.
- Attachment
You can use the PC Box software to send and receive a maximum of 25 attachments, or FileWork for unlimited numbers of attachments (or other programs with a corresponding attachment handling capacity).
Attachments can contain any kind of coded data (e.g. graphics, programs, Excel or Winword documents).
Transmitted or read messages can also be attached to other messages for sending.

Message status

The system distinguishes between different messages statuses indicating the current processing situation as follows:

- Unread
The message has been received but not yet read.
- Listed
The message has been changed from the status 'unread' to 'listed' after listing of the mailbox contents.
- Read
The message has been opened and read.
- Sent
The message has already been sent.

Service gateways

The following gateways to additional services are provided to expand the circle of potential recipients from MailBox X.400 and X.400 users to include other users:

- MailBox X.400 to telefax
- MailBox X.400 to telefax (delivered via the Deutsche Telekom telefax 400 service)
- MailBox X.400 to the Short Message Service
SMS messages can be sent to the mobile network
- MailBox X.400 from/to Internet e-mail

The service gateways are explained in detail in separate documents.

Group administrator

MailBox X.400 also offers a group administration function. This functionality is useful, for example, if a company maintains a number of boxes for its employees.

The group administrator can freely assign addresses and passwords to the boxes, and can also modify them if necessary. In this way you can quickly make changes to the configuration of the individual boxes in the group as required without incurring much cost.

The FileWork software offers various forms to enable you to prepare your administration offline.

Further information on the group administrator functionality can be found in the 'Local User Agent Manual'.

User-friendly addressing system

The MailBox X.400 addressing system allows you to send messages to different recipients at the same time. Using service gateways (e.g. telefax), messages can be sent simultaneously by mixed addressing to box owners and non-MailBox X.400 recipients.

Each MailBox X.400 user is uniquely specified by means of an entry in the X.500 directory for the Telekom Deutschland administration domain (ADMD = viaT). In addition to the name, the address may also include organizational details regarding his or her company. Added to this, each user also has a unique MailBox X.400 identification – the so-called UNIQUE-UA ID, a 7-digit code).

An X.400 address should only have as many attributes as are needed for clear identification. A number of attributes are prescribed (e.g. country, ADMD, PRMD (if applicable)), while others are optional.

Addressing can be limited to the entry of an alias name when using the FileWork software. You can address recipients by marking them in the directory.

Communication with the MailBox X.400 system

Online

Users can directly contact their box in the MailBox X.400 system on-line using the following functions, which can be controlled with an editor:

- Compose a message
- Send a message
- Read a message
- Multiple addressing
- Delayed sending
- Request confirmation
- Save messages
- Delete a message
- Retrieve messages from the trashcan
- Call up help
- File transfer with any software

Further information on these topics can be found in the 'Local User Agent Manual'.

Offline

The 'FileWork' software program offered by Telekom Deutschland provides uncomplicated, user-friendly functions for composing and editing your messages offline on your PC.

Further details on this topic can be found in the FileWork Manual on this server.

Availability

The redundant configuration of the central system ensures a very low risk of outage in the event of faults occurring. The operability of all systems involved in public message transfer is maintained throughout.

Data integrity

The security of message transfer between the Telekom Deutschland ADMD and the connected PRMDs is based on procedures specified in the X.25 ITU-T Recommendation for data transfer over packet switching networks and other applicable OSI standards.

A complete series of additional technical and administrative precautions make electronic information transfer a reliable medium.

Data protection

The organizational regulations for operation of the MailBox X.400 system comply with the stipulations laid down in the data protection law.

Transfer of personal messages and business data demands a high level of security, a demand that is fully met by the MailBox X.400 system concept.

Access to owners' boxes in the MailBox X.400 system is protected by password. A password is always needed for access and is defined when configuring a box in the MailBox X.400 system. Box owners can change their password at any time.

Automatic answering boxes

MailBox X.400 provides a number of automatic answering boxes to allow you to obtain further information.

DIR box (address inquiry in the MailBox X.400 directory)

X.400 address:

S=dirbox
A=viaT
C=de

Information on X.400 addresses is provided at this address. When used with the FileWork software, you can easily copy the addresses found to your personal address book.

INFO box

X.400 address:

S=infobox
A=viaT
C=de
Subject: Maintenance

On calling this box, you obtain up-to-date information on the next scheduled maintenance periods during which the MailBox X.400 system is unavailable.

AUTOANSWER box

X.400 address:

S=autoanswer
A=viaT
C=de

This is a special X.400 address in the MailBox X.400 system used for automatic retrieval of test responses. If a user sends a message to this address, a programmed response is automatically returned. The ability to communicate with another system can be easily checked in this way.



Service

You need further information, assistance with the configuration or troubleshooting?

Please contact our BusinessMail X.400 hotline:

Tel: +49 4121 244 811 18

Fax: +49 4121 283 319

E-Mail: businessmail.help@telekom.de

X.400: C=de; A=viaT; P=t400; S=help; G=businessmail

Internet: <http://geschaeftskunden.telekom.de> (search word: X.400)