CMC - CSCW Technical Implementation Issues

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Non-Simultaneous Groups

	Mailing lists	Usenet News, First Class, Lotus Notes	Web-based forum systems
Clients	E-mail client	Special client	Web browser
News control	Filtering into folders in e-mail client	In server or client	Sometines not, sometimes in server

Gateways

News control

Store for each message whether each person has seen it or not

Store compact info, like in Usenet Hews:

```
Has seen:
0-156
178-180
```

Store in client or server

Web browser change of colour on links

Sort in news order, often with the newest first (common in blogs)

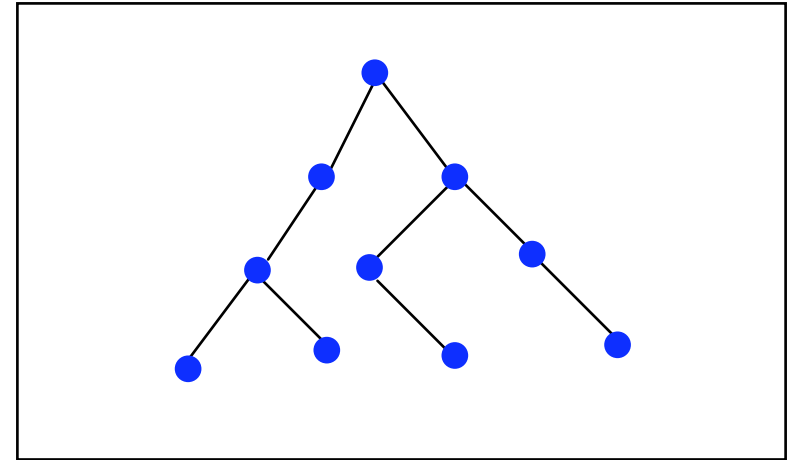Store news information in server or client

Categories of importance

Concurrent modifications of data

- Locking

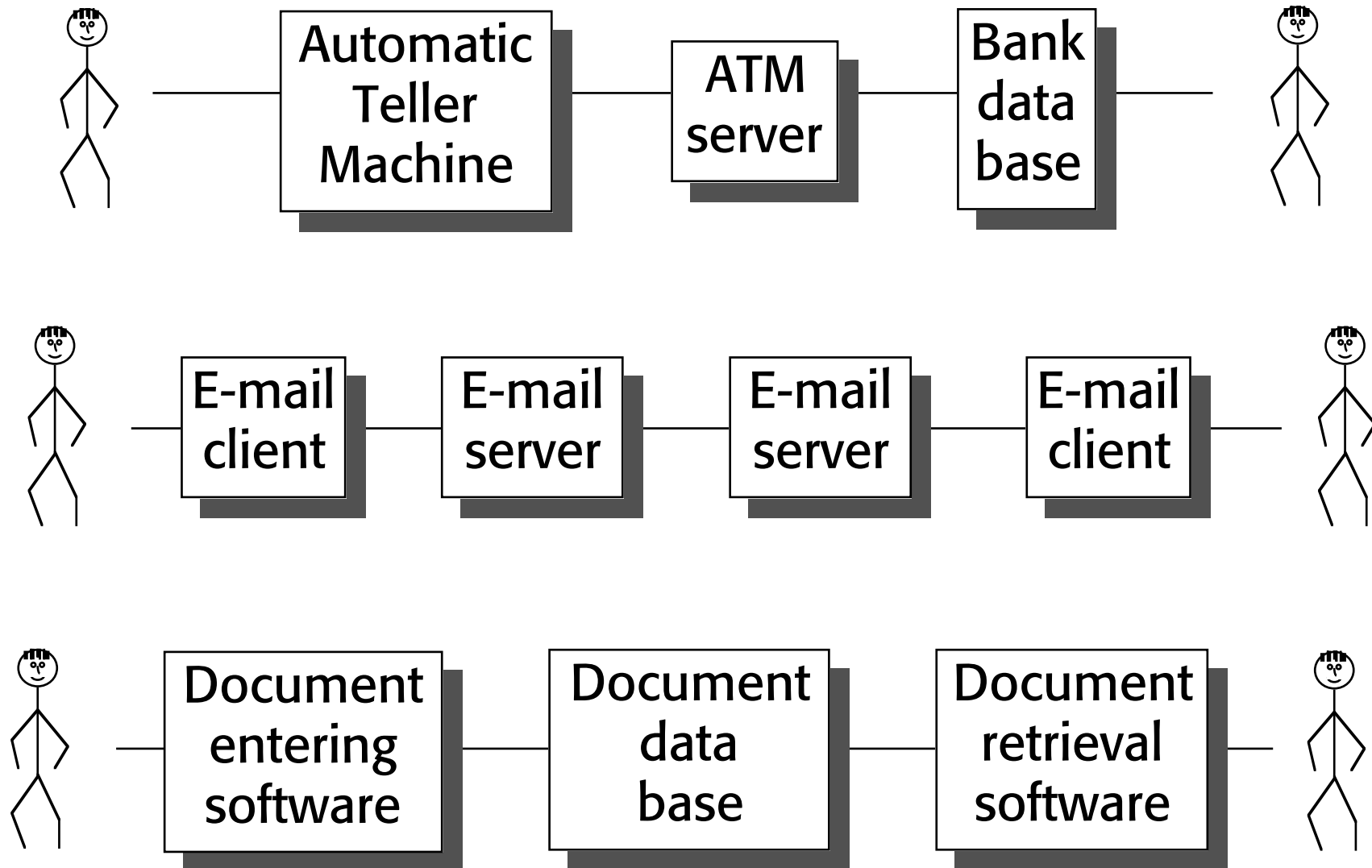 ⇒ For how long time

  ⇒ How much is locked?
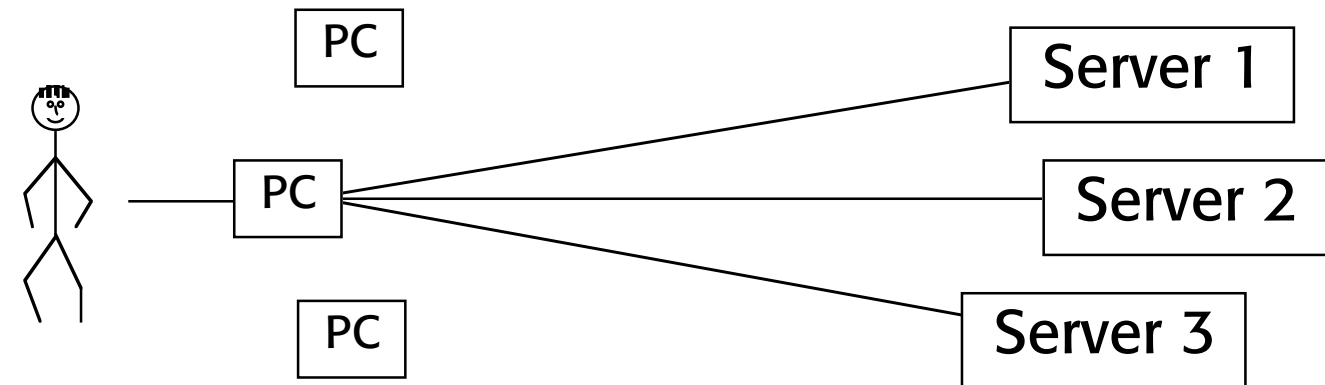

- Version handling

- Warning but not physical locking
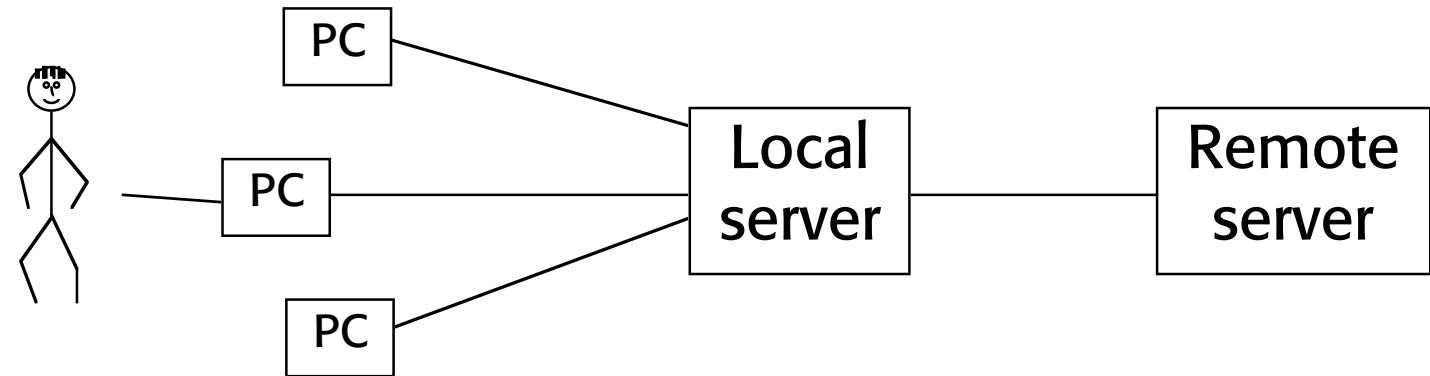
- Comparing and merging (example: Microsoft Word)

- Very rapid direct updating on screen

Architectures

Automatic Teller Machine	ATM server	Bank data base	

E-mail client	E-mail server	E-mail server	E-mail client

Document entering software	Document data base	Document retrieval software

Distributed archi-tectures

Ter-minal

Ter-minal

Central data base

Ter-minal

Ter-minal

Ter-minal

Ter-minal

Ter-minal

PC

PC

PC

Local server

Remote server

PC

PC

PC

Server 1

Server 2

Server 3
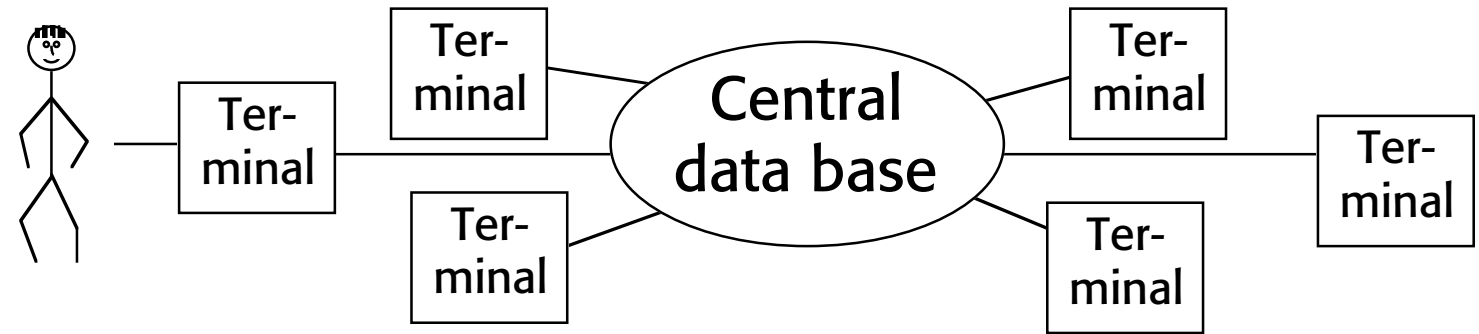
A
C
C
E
S
S

M
E
T
H
O
D
S

Hyperlink style
(WWW)
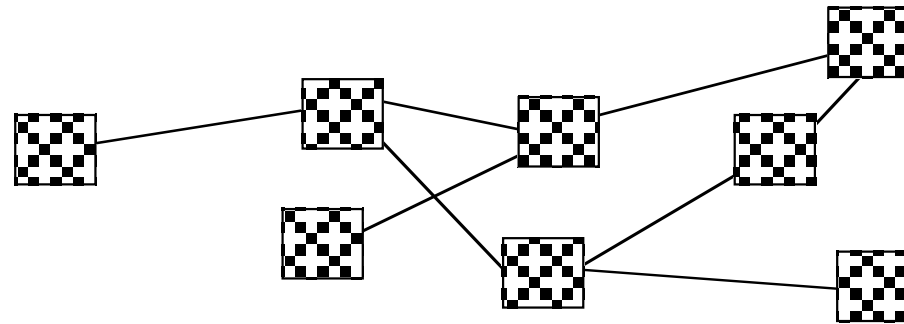
Inverted word
index style

Index

Arbete
Anläggning
Bil
Bostad
Buss
Byggnad
By
Hus
Karta
Län
Mur
Nackstöd
Papper
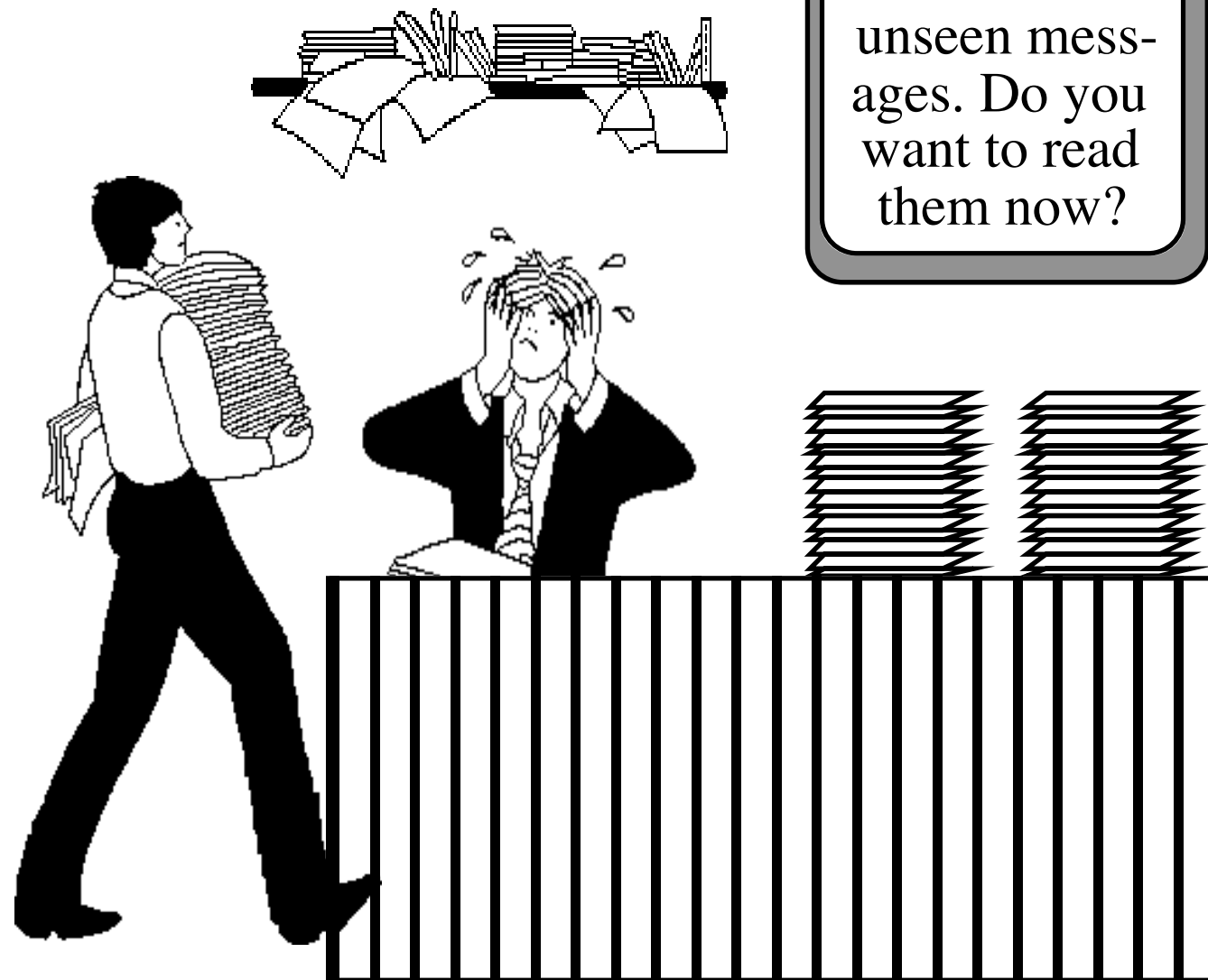Resurs
Tåg
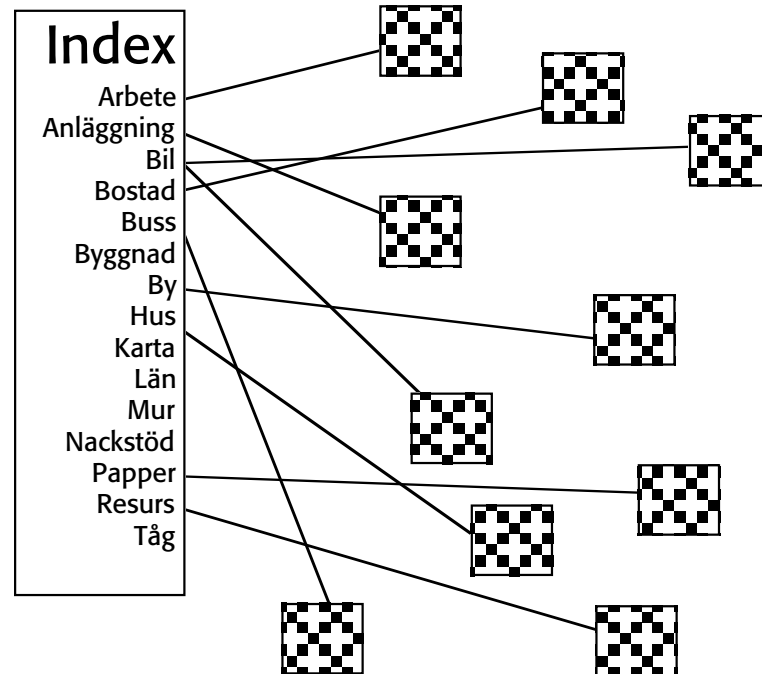
Intelligent answering, recommendation systems,
multiple-field forms

Filtering and struc- turing

Actions when receiving a message:

- Write a reply to the sender of the message;

- Write a reply to the sender and all other recipients of the message; (if the message has only one recipient, then these two functions are identical)

- Forward the message to one or more new recipients, with or without an added comment.

- Archive the message—systems often allow messages to be stored in folders (see Section 6.6).
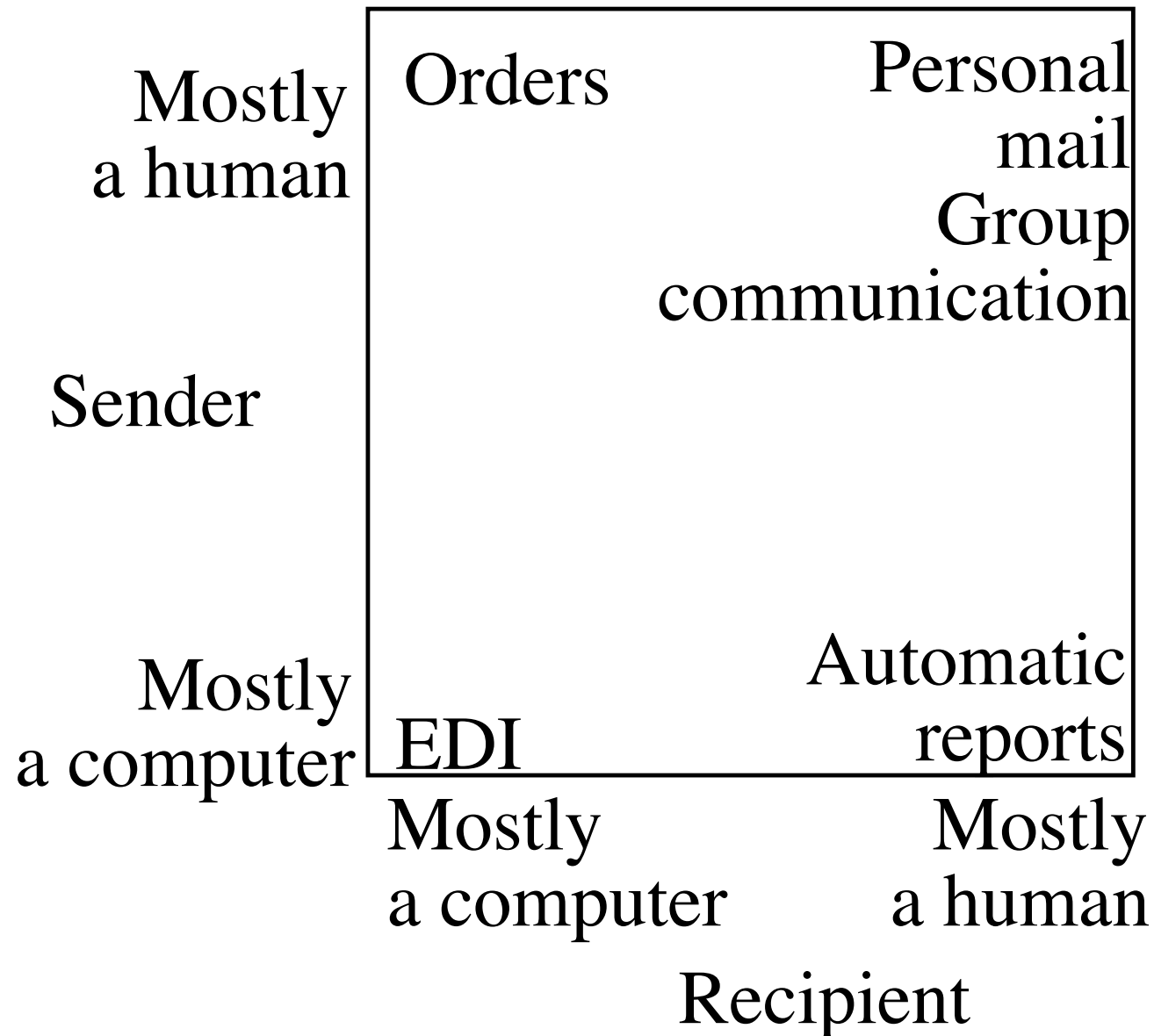
- Remove the letter from their own mailbox.

Purging of personal mailboxes

1. All messages are manually deleted by the user. Usually, when users receive a message, they can give a command to save it or delete it immediately.

2. Messages are purged automatically after a specified time. Users can mark certain messages to protect them from being deleted.

Special functionalities

- Alert functionality

- Automatically generated replies

- Same time communication: "talk", "chat", IRC

- Voice, picture, video, multimedia body parts

- File transfer body parts

- Active messages

- Voice mail versus text mail systems

- Work flow applications

- Partially formatted messages

  - can be sorted, processed, interpreted, handled

- Mail servers

Mail to/from human/computer

Mostly
a human

Orders

Personal
mail
Group
communication

Sender

Mostly
a computer

EDI

Automatic
reports

Mostly
a computer

Mostly
a human

Recipient

Undesirable non-delivery notificvations

```
Date: Sat, 22 Jan 94 14:29:32 +0100
From: Mail Delivery Subsystem <MAILER-DAEMON@vall.dsv.su.se>
To: jpalme@ester.dsv.su.se
Cc: Postmaster@vall.dsv.su.se
Subject: Returned mail: User unknown


   ----- Transcript of session follows -----
While talking to byrd.mu.wvnet.edu:
>>> RCPT To:<listerv@byrd.mu.wvnet.edu>
<<< 550 <listerv@byrd.mu.wvnet.edu>... Addressee unknown
550 <listerv@byrd.mu.wvnet.edu>... User unknown


   ----- Message header follows -----
Received: from ester.dsv.su.se by vall.dsv.su.se (5.61-bind
1.4+ida/4.0)
        id AA19781; Sat, 22 Jan 94 14:29:32 +0100
Received: by ester.dsv.su.se (4.1/SMI-4.1)
        id AA21595; Sat, 22 Jan 94 14:29:31 +0100
Date: Sat, 22 Jan 1994 14:29:30 +0100 (MET)
From: Jacob Palme DSV <jpalme@dsv.su.se>
```

Explanation of undesirable non-delivery notification