

Internet Services and Applications (1/6)

1

- Internet's intent and purpose is to make services and applications available over the Internet
- The popularity of the Internet is due to the popularity of Internet applications, e.g.,
 - WWW, electronic file transfer, electronic mail, P2P networks, social networks, ...
- Internet applications are based on services provided in the application layer of the TCP/IP protocol stack

Internet Services and Applications (2/6)

2

For every Internet application there must be at least

- Two communicating computers - more specifically
- Two applications - even more specifically
- Two processes that form the instances of this application

Communication is carried out according to the client/server principle:

- The client requests services from the server who delivers the service or acknowledges it with an error message

The most important service offered in the Internet (1/4)

- **Directory services**

- provide information about technical resources or people who can be reached in the network
- Important examples: DNS, X.500, LDAP, ...

- ...

Message exchange and information services (1/1)

Most important example:

- **Email** – electronic mail

- Email client – provides the interface for users to read, create and send messages, ...
- Email server – handles communication with remote e-mail servers who are located at the site of the message addressee
- ...

Message exchange and information services (2/2)

■ Email (2/2)

- SMTP standard protocol for email applications
- POP3 und IMAP for checking emails
- Other data formats can be transmitted besides text with the help of the MIME standards,
- Emails can be transmitted securely with PGP
- Email was the first killer application in the Internet

Data transfer services

Most important example:

■ WWW - World Wide Web

- WWW is the killer application in the Internet today
- WWW-Client: (WWW-)**browser**
- The browser provides an intuitive, integrative multifunction tool for accessing the named Internet services