

WEB TALK

Email and Chat

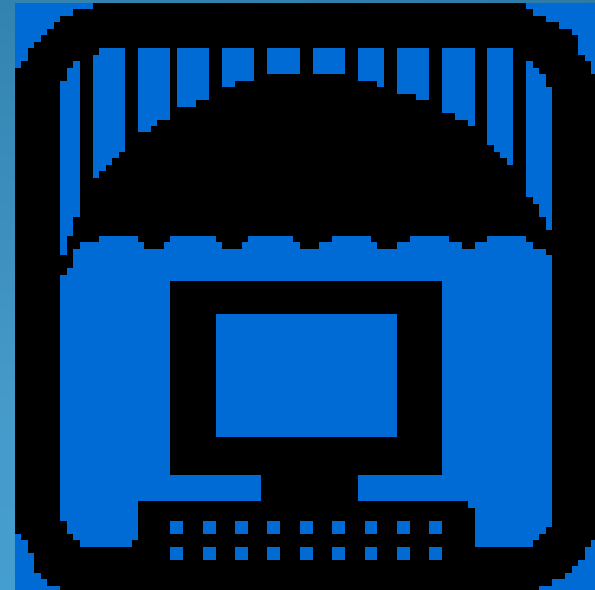
GROUP NAME:-

YASER PATEL

PATEL HANIF

PRAFUL

JESHAN

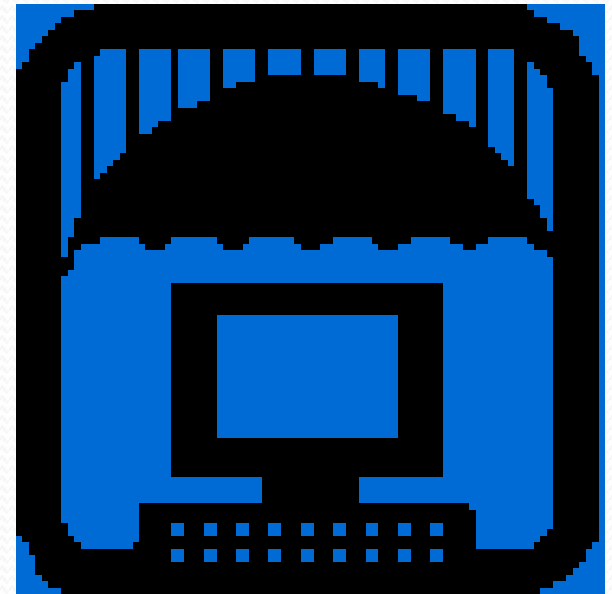


Advanced Network Services

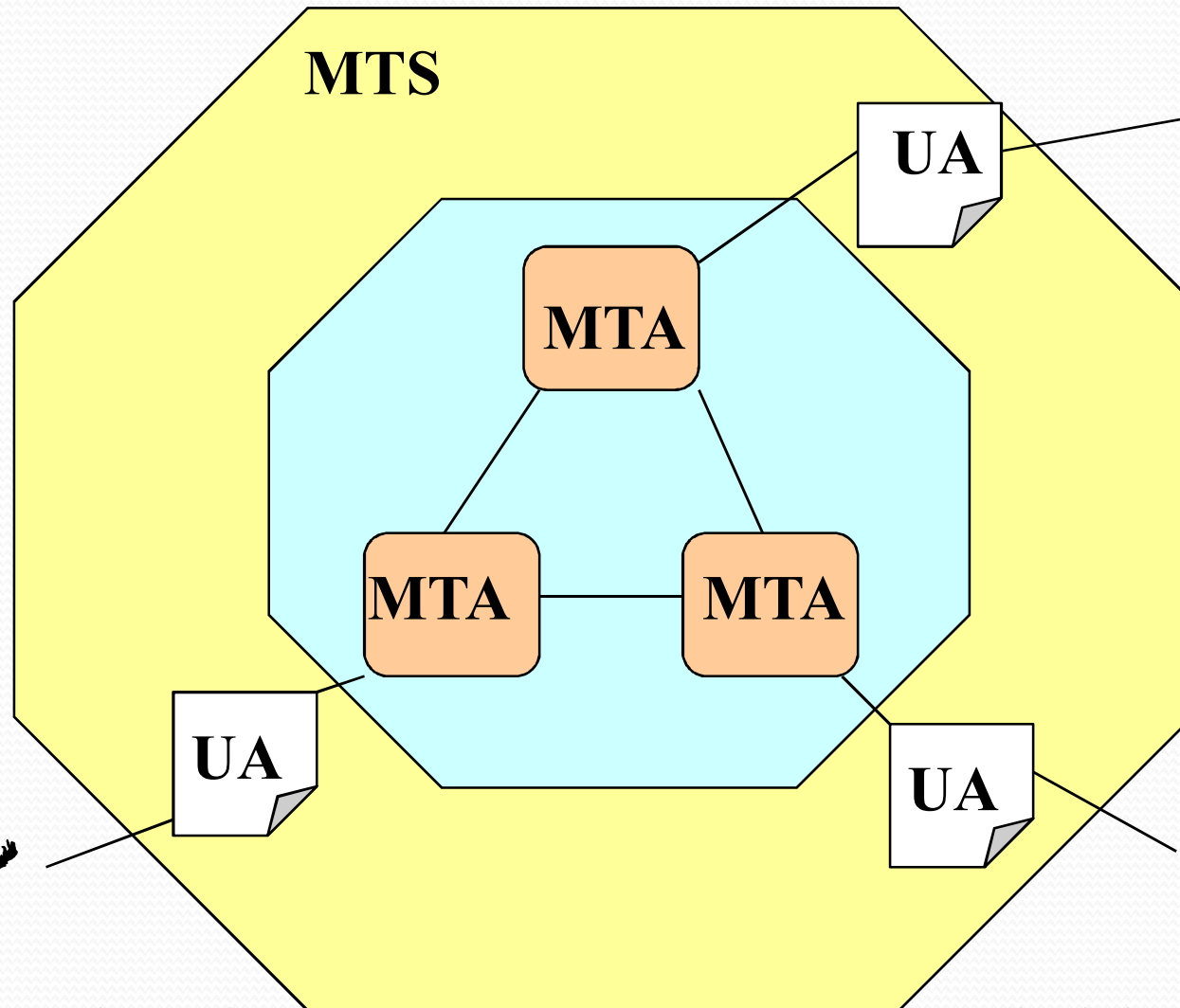
Topic 8 – Email and Chat

Many faces of Messaging

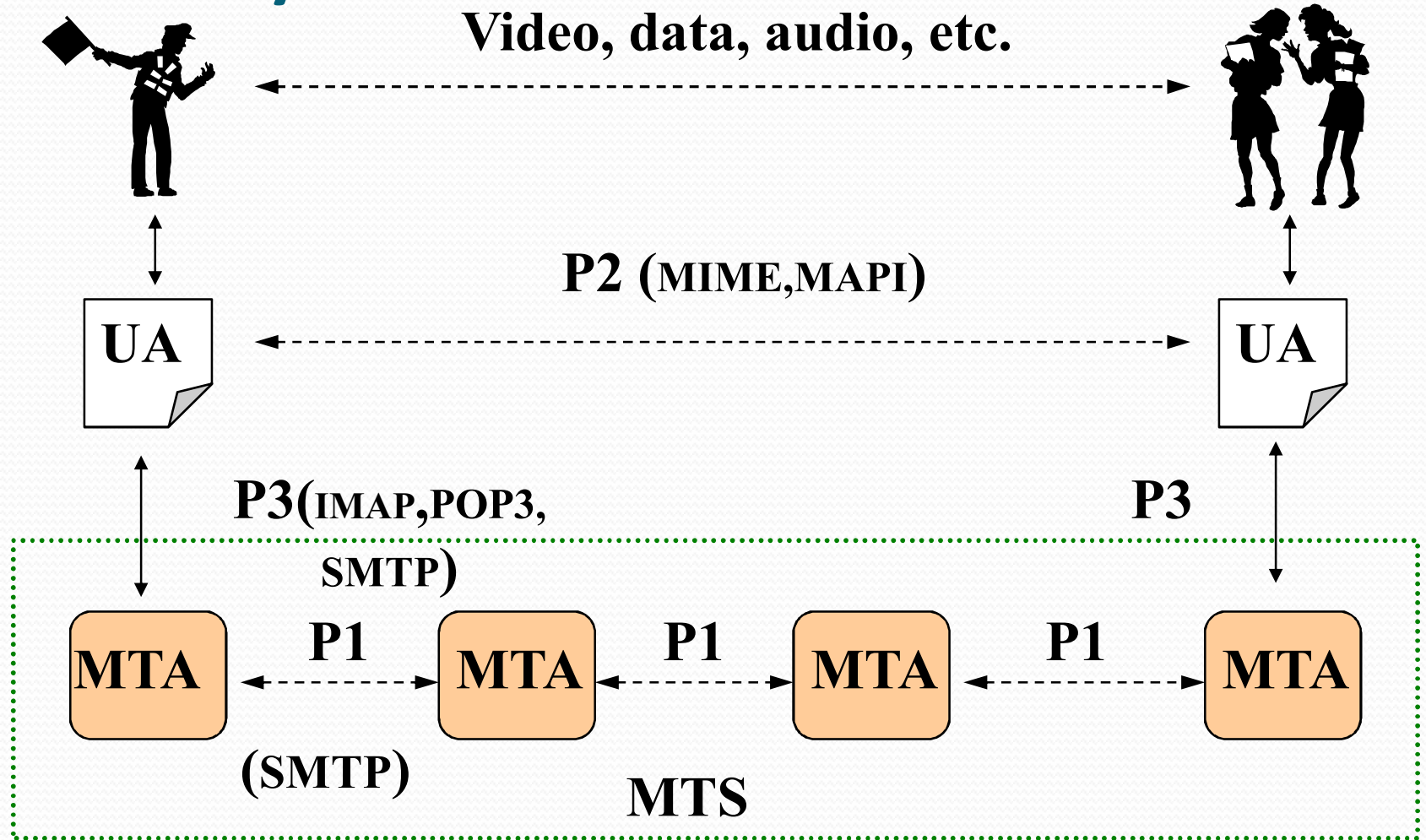
- Delivering Data
 - text
 - binary
 - graphic
 - digitized video
 - audio
- Between human users / computer systems
- Messaging types
 - Email
 - Direct email
 - Web based Email
 - Chat
 - IRC
 - Instant messaging
 - Web based chat
 - Short Message Service (SMS)



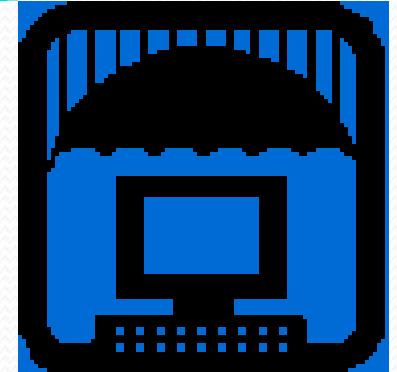
MHS (Message Handling Service) Components



MHS Layout



MHS Components



- User Agent (UA)
 - Program, with which human users read, create and manage e-mail
 - Reads and writes messages using a P₃ protocol
 - Encodes and decodes messages using a P₂ protocol
- Mail Transport Agent (MTA)
 - Transfers messages between computers
 - Store and forward (non-real-time)
 - Uses a P₁ protocol

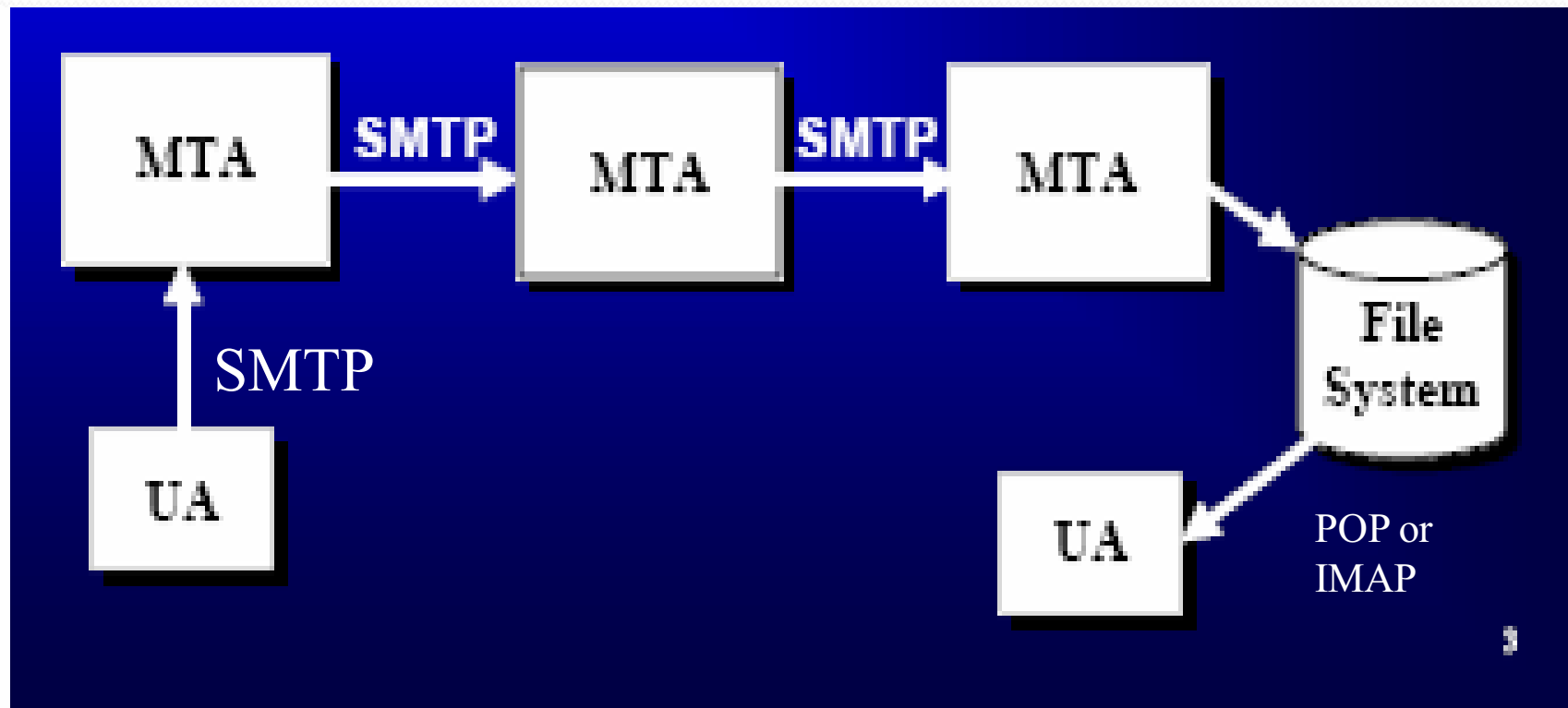


Practical implementation of MHS protocols

- P₁ – movement of messages
 - SMTP – Simple Mail Transfer Protocol
- P₂ – coding and decoding messages
 - MIME – Multipurpose Internet Mail Extension
 - MAPI - Messaging Application Programming Interface
- P₃ – reading and sending messages
 - SMTP to send
 - POP (Post Office Protocol) to read
 - IMAP (Internet Message Access Protocol) to read

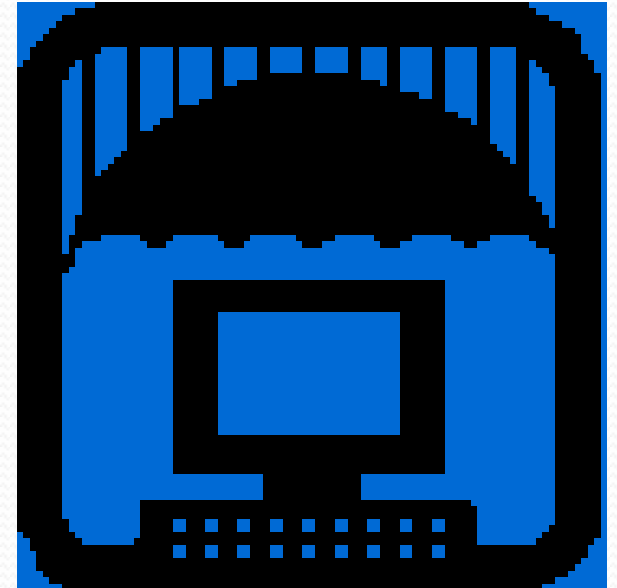


Email in a picture



Web mail

- Mail where the UA is in a browser
 - Where is the sending MTA?
 - All the rest is the same
- UA- local MTA communication
 - Not using SMTP, POP, IMAP
 - Internal to the Web provider
 - In the filesystem?
 - Proprietary protocols?



Format of messages

- RFC 822: STANDARD FOR THE FORMAT OF ARPA INTERNET TEXT MESSAGES
 - Published in 1982
- Defines a format for text messages that are sent using email
 - Contains headers like From, To, Subject, Date
 - Lines no longer than 1000 char
 - Message body - plain US-ASCII text (7 bits!)
 - Message header lines - plain US-ASCII text
 - Limit on message length



Email header

- The mail data consists of a header and a message body, separated by a blank line.
- the header includes colon terminated fields such as:
 - *To:*
 - *From:*
 - *Subject:*
 - *Date:*
 - *Received:*
 - *added to by intermediary MTAs. It is a form of “postmark”*
 - *Cc:*
 - *My own header:*



SMTP commands

- **\$ telnet students.ballarat.edu.au 25**
- **HELO** <anything you like>
- **MAIL From:**<something that looks like an email address - eg BillClient@usa.com>
- **RCPT To:**<<your normal email address>>
- **Data**
- **Subject: Test email**
- **Hello there**
- **.**
- **250 Ok: queued as F28Bo8603**
- **Quit**
- **221 Bye**



POP and IMAP

- Both are standards for receiving email from a remote machine
 - Read email from mail file created by MTA
- POP (Post Office Protocol)
 - You can get, list, and delete mail.
 - Email downloaded gets stored on the local machine
- IMAP – (Internet Message Access Protocol)
 - Quickly download header information and then read only the messages you want to read.
 - Email can be stored **online** in different folders
 - Offline mode available



POP-3 Commands

- **USER** - specify username
- **PASS** - specify password
- **STAT** - get mailbox status
- **LIST** - get a list of messages and sizes
- **RETR** - retrieve a message
- **DELE** - mark a message for deletion from the mailbox
- **NOOP** - send back positive reply
- **RSET** - reset. All deletion marks are unmarked
- **QUIT** - remove marked messages and close the (TCP) connection



S/MIME

(Secure/Multipurpose Internet Mail Extensions)

- Very similar to PGP
 - Likely to emerge as industry standard for commercial use (PGP for personal)
- Message signature
- Message encryption
- Based on RSA



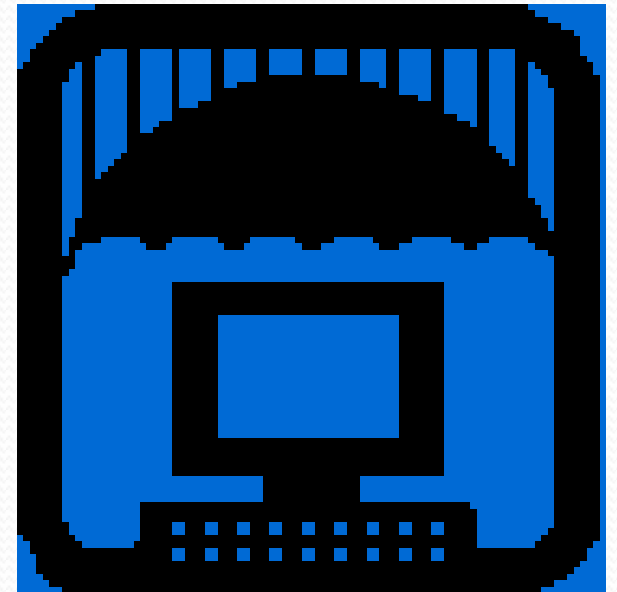
What does S/MIME give us?

- *Secrecy* – Only intended recipient can read the message. (A thick envelope and trustworthy couriers.)
- *Authentication* – Recipient knows the message came from the apparent sender. (An ink signature that you recognize.)
- *Integrity* – Recipient knows the message was not changed en route. (Un-erasable ink in a letter.)



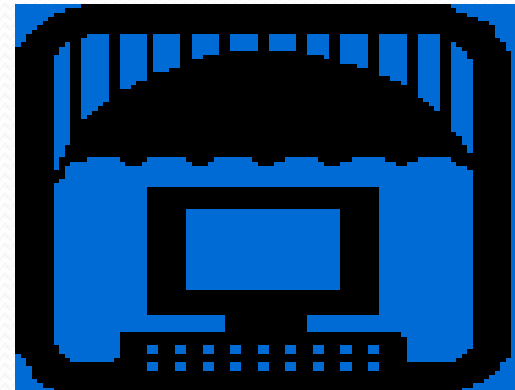
sendmail – Unix MTA

- Backbone of Internet email
 - Open Source full function MTA
 - On Adios disk
- Standard Linux service
 - *service sendmail start*
 - sendmail server – listens for connections
 - sendmail client – passes messages on



sendmail and DNS

- MTA uses DNS to check validity of sender, receiver etc
- Lab requires your own DNS server
 - Download and extract DNS files
 - Use *named -g -u named* to start server



sendmail security

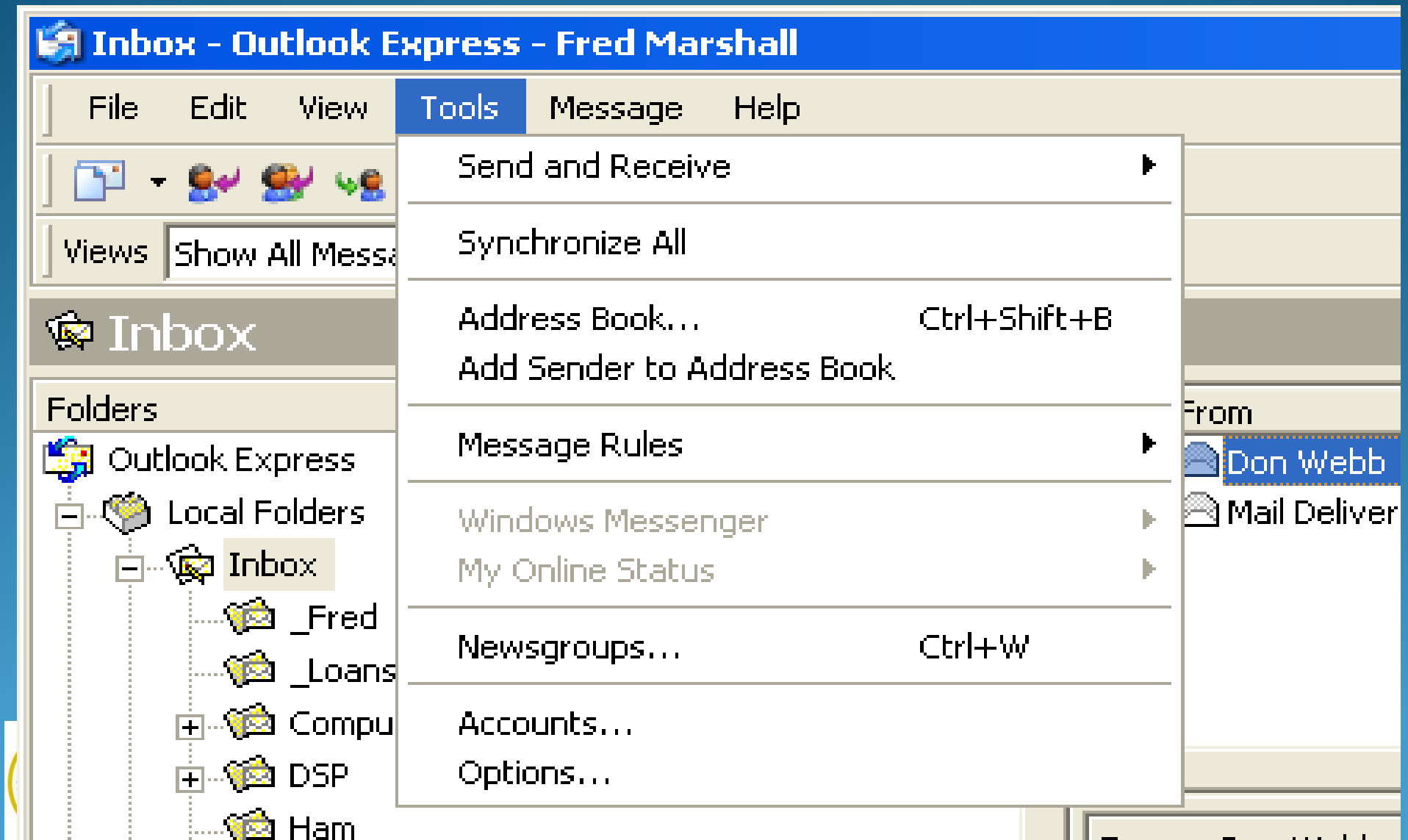
- Open relay
 - Allows any client to send email anywhere
 - Great for spammers!
 - By default disabled
- Remote access
 - Listening to a real IP/port
 - By default only *localhost*



Setting Up a New Outlook Express Account



New Account - Outlook Express



New Account - Outlook Express

The screenshot shows the Outlook Express 'Internet Accounts' dialog box. The 'Add' button is highlighted, and a context menu is open over it, showing options: Mail..., News..., and Directory Service... The 'Mail...' option is selected. The dialog box contains a table of existing accounts and a list of folders.

Account	Type	Connection
centurytel.nw.net	mail (default)	Any Available
pop.business.ear...	mail	Any Available
pop.registeredsit...	mail	Any Available

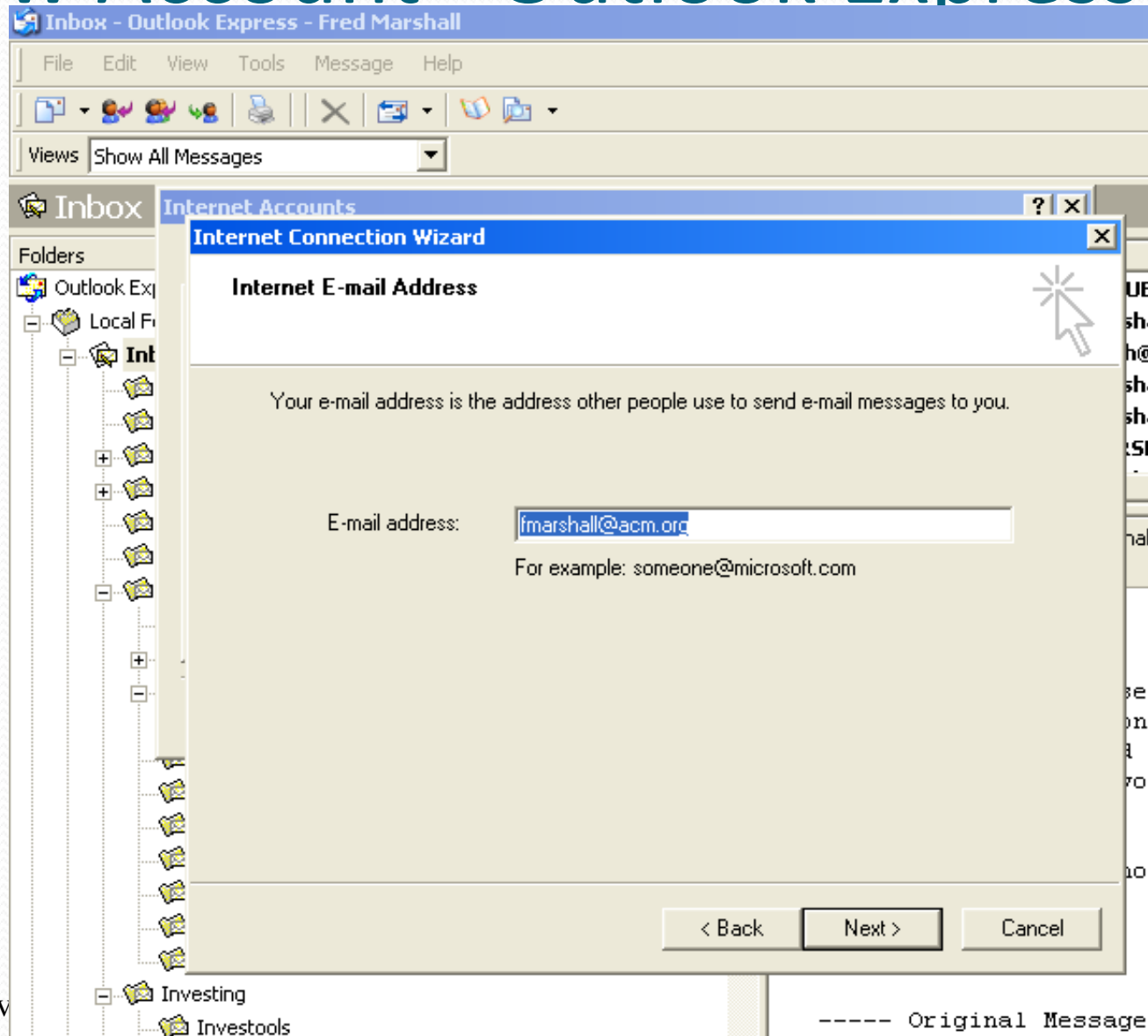
Buttons in the dialog box: Add, Remove, Properties, Set as Default, Import..., Export..., Set Order..., Close.

Context menu options: Mail..., News..., Directory Service...

Folder list: Outlook Express, Local Folders, Internet Folders, Gray & Osborne, Lee Engineering, Peninsula Professionals.

Background text (partially visible):
...during this week. If you still want to
...and a place.

New Account - Outlook Express



Adv

----- Original Message

New Account - Outlook Express

The screenshot shows the Outlook Express interface with the 'Internet Connection Wizard' dialog box open. The wizard is titled 'Internet Mail Logon' and prompts the user to enter account details. The 'Account name' field contains 'fmarshall' and the 'Remember password' checkbox is checked. The 'Log on using Secure Password Authentication (SPA)' checkbox is unchecked. The background shows the Outlook Express main window with the 'Inbox' folder selected in the left-hand pane.

Internet Connection Wizard

Internet Mail Logon

Type the account name and password your Internet service provider has given you.

Account name:

Password:

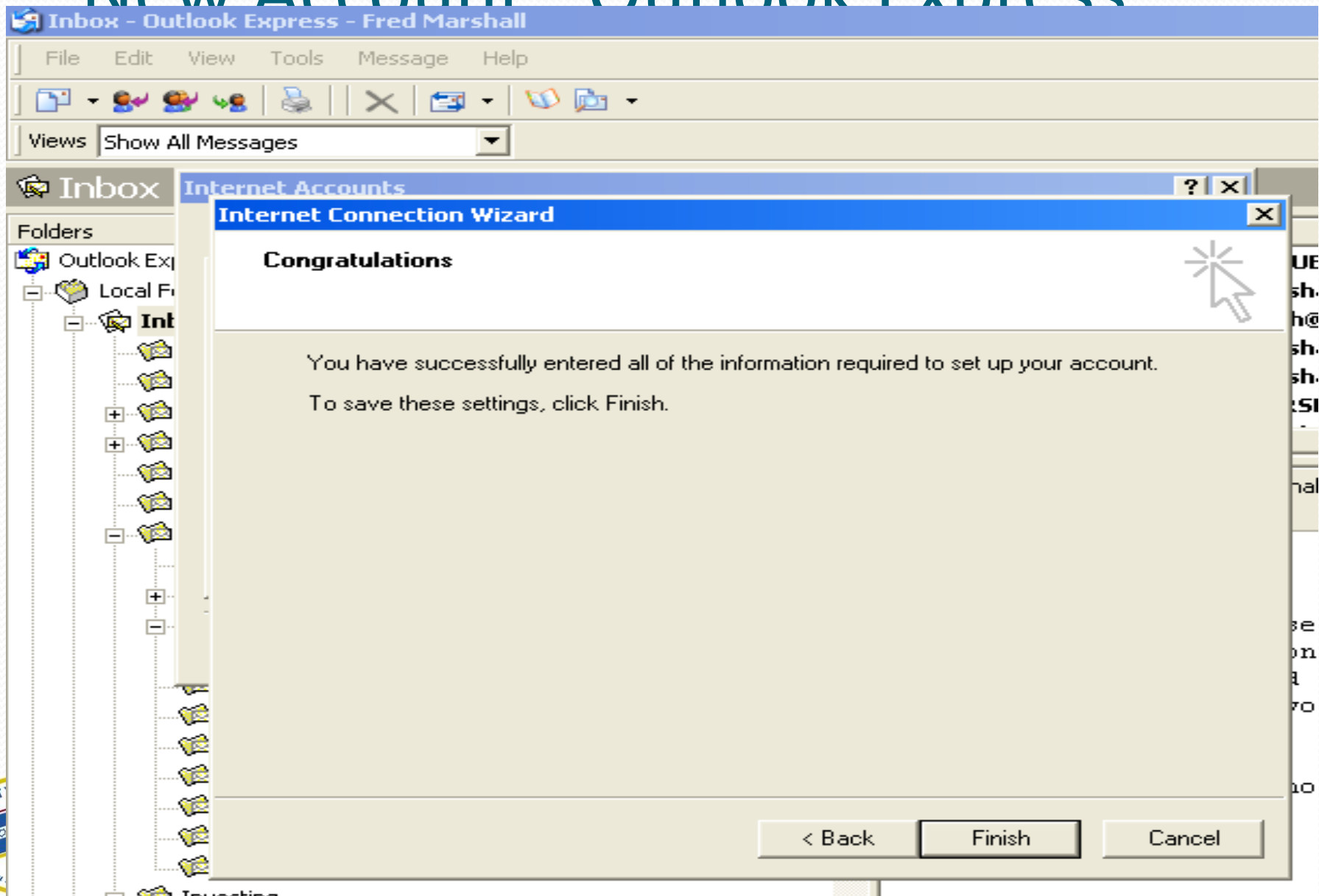
Remember password

If your Internet service provider requires you to use Secure Password Authentication (SPA) to access your mail account, select the 'Log On Using Secure Password Authentication (SPA)' check box.

Log on using Secure Password Authentication (SPA)

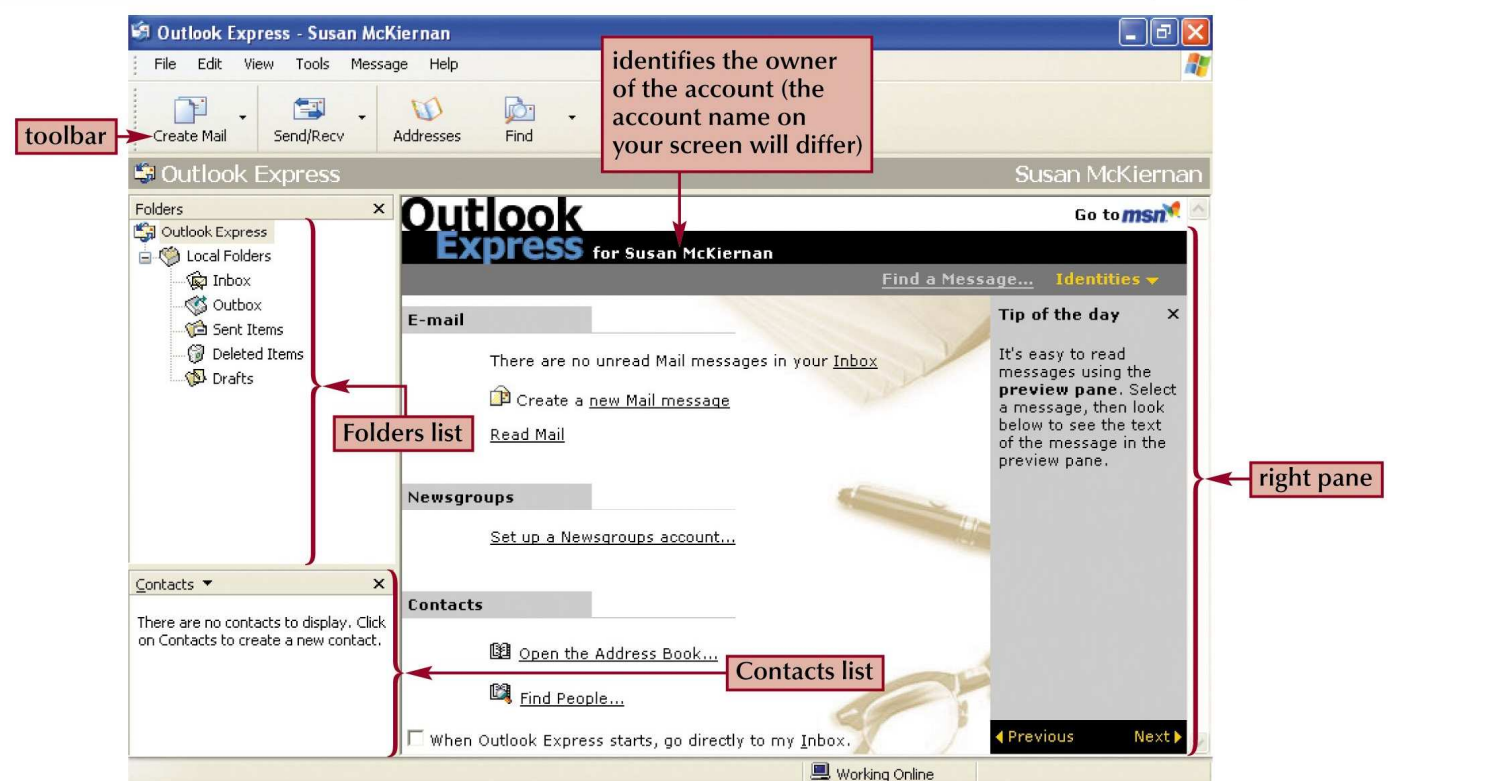
< Back Next > Cancel

New Account - Outlook Express



Microsoft Outlook Express

Outlook Express window **Figure 16**



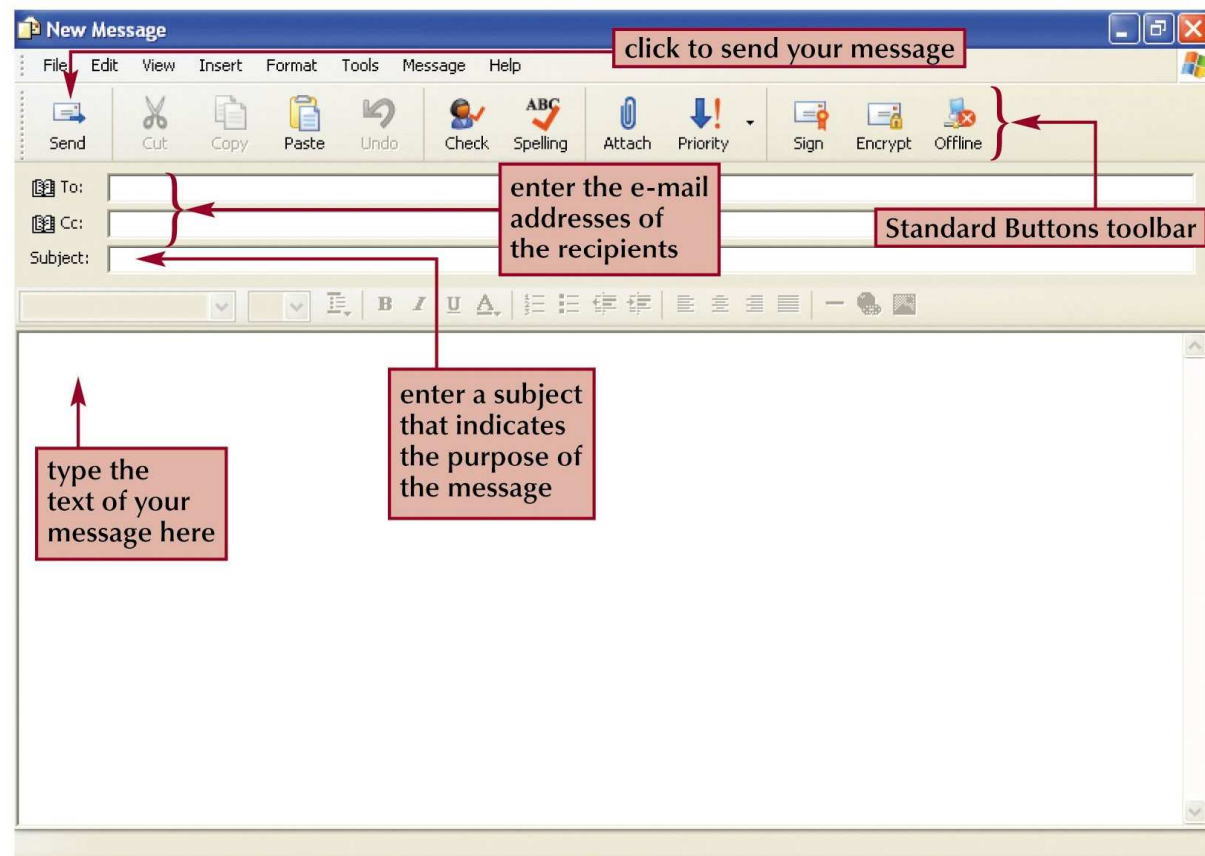
Send and receive e-mail

- To send an e-mail message:
 - Press the New Mail button on the Outlook Express toolbar
 - Type in the e-mail addresses of the recipient
 - Type your subject matter
 - Type your message and then click the Send button
- To retrieve mail that has been sent to you:
 - Click the Send/Recv button on the toolbar
 - Outlook Express will contact your e-mail server and download your e-mail messages
- To reply to a message:
 - Click the Reply button
 - The recipient address and the subject matter are automatically filled in
 - When you have completed typing your reply, click the Send button



The Outlook Express New Message dialog box

Figure 17 New Message window



Reply to an e-mail message

Replying to a message

Figure 20

sender's e-mail address automatically added

abbreviation Re: (regarding) added to subject

enter your reply here

contents of original message

Re: Test

File Edit View Insert Format Tools Message Help

Send Cut Copy Paste Undo Check Spelling Attach Priority Sign

To: Susan McKiernan

Cc:

Subject: Re: Test

Arial 10 B I U A

----- Original Message -----
From: Susan McKiernan
To: SusanMcKiernan@mckiernans-bnb.com
Sent: Thursday, June 05, 2006 10:14 AM
Subject: Test

This is just a practice test message

Susan McKiernan



Adding contacts to the Address Book

- You can use the Address Book to keep track of all the people and organizations with which you correspond electronically.
- You not only can store the e-mail addresses for your contacts, but also all other related information.
- Click the Addresses button on the toolbar to open the Address Book, and then select New Contact from the New button on the toolbar.



Adding contacts to the Address Book

Figure 21 Properties dialog box for contact Martha Kent

The screenshot shows the 'Martha Kent Properties' dialog box with the following fields and annotations:

- you can enter additional information if it is available**: Points to the 'Name' tab.
- first and last names entered**: Points to the 'First' (Martha) and 'Last' (Kent) fields.
- e-mail address for contact**: Points to the 'E-Mail Addresses' list containing 'marthakent@capital-ads.com (Default E-Mail)'. The 'Add' button is also visible.
- name that appears in the To or Cc box when you type the nickname**: Points to the 'Nickname' field containing 'Martha'.

Other visible fields include: Middle, Title, Display (Martha Kent), and Nickname. The 'Send E-Mail using plain text only' checkbox is unchecked. 'OK' and 'Cancel' buttons are at the bottom.



Advantages of Outlook Express and other email programs

- There are several advantages of Outlook Express and other email management software such as [Windows Mail Vista](#), [Windows Live Mail](#), Outlook, Thunderbird, Zimbra etc.
- **Availability of email even without an internet connection:** If you've been using web based email accounts such as Hotmail, Gmail or Yahoo! Mail, you know that an active internet connection is required to login to your online account and access messages. With Outlook Express, the program will automatically connect to your account, [download email](#) and store them on your computer. Since now the messages are on your local machine they are available to you even without an internet connection.



Advantages of Outlook Express and other email programs

- **Save time by downloading email from various accounts:** This point applies to those who have multiple email accounts. You don't need to waste time in checking each email account separately. Multiple accounts can be set up in Outlook Express which means email from all these accounts will be downloaded together at one place - your computer. You can also use filters and Outlook Express message rules to segregate email messages as they arrive at your system. For example, all incoming Gmail messages can be diverted to one folder while those from Hotmail to another. You can similarly isolate emails based on sender, file size, whether they have attachments etc.
- **A copy of your emails in on your computer:** Probably the *most important advantage of using Outlook Express* and other email management software is the ability to store a copy of all your email on your computer. So even if you accidentally delete an important message from your server or if (God forbid) your account is hacked or is inaccessible, you know you can retrieve the messages from your system. Also, to play it really safe, you can take regular backups of Outlook Express.



CHATTING



What Is Chat?

- Real time communication over the Internet.
 - *Synchronous*
 - Email is *asynchronous*
- Types of chat
 - **Private Chat**
 - **Public Chats**
- Approaches of chat
 - Internet Relay Chat (IRC)
 - Instant Messaging Software
 - Web-Based Chat



Internet Relay Chat

- Based on UNIX *Talk*
- IRC uses a client-server network model: IRC servers are connected through the internet to form an IRC network.
- Individual chat participants use IRC client software and connect to the servers in the network.
- IRC uses a simple text-based protocol



Instant Messaging Software

- Instant messaging software lets two users chat in real time over the Internet.
 - Usually between people who know each other
- Tools that let you identify your friends and alert you when your friends are online.
- Various protocols



Instant Messaging Software

- Instant messaging software programs:
 - Proprietary protocols
 - ICQ
 - AOL Instant Messenger
 - Windows Messenger
 - Yahoo! Messenger
 - Multi protocol
 - Pidgin (formerly GAIM)
 - Trillian



Web-based Chat

- Web-based chat is even more convenient than Windows-based chat programs. Users do not need to install any program. They reach a chat site, log in and begin to chat.
- There are two forms of web-based chat rooms: html version and Java Applet version. The html chat rooms are programmed in html (hypertext mark-up language) and the Java Applet chat rooms are programmed in Java language.



Web-Based Chat Sites

- Most Web-based chat sites prohibit spam messages, the use of automated programs, profane and vulgar language, and threats to individuals.
- Most sites require you to register before using their chat rooms.
- Although Web sites that provide chat rooms have rules of appropriate conduct, you might encounter conversations taking place that are offensive to you.



Voice Chat

- Voice Chat is the chat using voice.
- Once you connect to a voice chat server, you can talk to other people in the same chat room or listen to their talking.
- The sound quality depends on several factors such as: speed of the Internet connection, Internet traffic and number of participants in the same chat room.
- Voice chat rooms may have a limit of numbers of participants.



THANK YOU

