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Protocol – Set of Rules

Ethernet – Cabling standard for Home&Office

Peer to Peer: All Connections Same

No Server – PCs called Nodes

Client to Server: Most Connections Different

PCs, Server, Pherperials

LAN – Local Area Network (Fiber Optics)

Rooms, Buildings, Campus

WAN – Wide Area Network (**Crosses Street**)

County, State, Country, World

Network Components:

Phone Modem using conventional **copper** lines on poles or underground

Modem = Mo (Modulate) & dem (Demodulate) and is a Analog to Digital Device

All other connection systems use Network Interface Card (**NIC**) & special wiring

Hub Connects PC to network pc1, pc2, pc3, pc4, BWs sum to Total BWs
pc1+pc2+pc3+pc4=Total BW

Bridge Connects LAN1 to LAN2 Does not analyze & No re-routing * **Same** Protocols

Router Analyzes Messages Pac1, Pac2, Re-Routes & Best Route – Determines Best

Gateway Connects LAN1 to LAN2 Connects Intranet to Internet * **Different** Protocols

Switch Connects PC to network pc1, pc2, pc3, pc4, all PCs same as Total BWs
pc1=TotalBW, pc2=TotalBW, etc...

Advantages or Benefits of Networks:

Communication with others & Sharing Resources with others

Topology : Geometric arrangement of a computer system. Common topologies: **Bus**, **Star**, and **Ring**:

Bus: cheap & easy to install

Star: cheap & easy to install (HUB?)

Ring: expensive & more difficult to install but much faster and can span large distances

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Network Servers: Server is a PC providing special service dedicated for normally (1) jobs

Network Server TCP/IP – Transfer Control Protocol / Internet Protocol
Traffic and Security

File Server FTP – File Transfer Protocol (Downloading and Uploading)
Storage and Backup

Web Server HTTP – Hypertext Transfer Protocol
Browser and Internet and Storage

Mail Server SMTP – SimpleMailTransferProtocol * POP – Post Office Protocol
Internal – POP External – SMTP

Database Server: Complex Protocol * Structured Query Language * Internet Bootstrap Protocol
Complex functions that allow the server to: fetch, as well as others, etc...

One of the most popular Protocol for LANs is called Ethernet (coaxial cable)

Another popular LAN protocol for PCs is *IBM token-ring network*. (Circular)

Dis-Advantages of Networks:

Dependency All in One if it fails all fail

Loss of Autonomy some fear networks

Expensive to install and maintain

Loss of Privacy an administrator knows all

Security is a concern all access data

Viruses & Worms cripple networks quickly

Media for Networks: POTS – Plain Old Telephone Service

DialUp: telephone lines

ISDN: phone packets

DSL / ADSL: phone packets

Coaxial Cable: coaxial cable

Direct (Wireless) no cable or wiring

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Email Fundamentals: (Microsoft Outlook & QualComm Eudora)

Email is fast, permanent, easily attached, copy many persons, temporary storage of Electronic Messages.

Email Address: User Name@Domain Name.Extension Internal(POP/LAN) External(SMTP/WAN)

Mailbox/Mailbox: Post Office Protocol - **POP** Server/Server: Simple Mail Transfer Protocol - **SMTP**

Top Level Categories or Extensions: .gov, .mil .com, .edu .net, .org Countries & Misc's

Remember @ is used in Email. Domain Name is Words Internet Protocol (IP) is Numbers

Email Username & Password: username @ provider.ext #####5

Email Page Appearance: (Toolbars, Panes, Current Views, are only a few of the options.)

Toolbars: Outlook Bar, Folder List, Menu, Standard, Advanced, Web, Status, Preview Pane

Send/Receive -Reply/ReplyAll/Forward -Attachments:Text/Image -Store/Delete -Folder/External

Send: Create or Compose an Email message using a standard Email message format:

To: From: CC: BCC: Subject: Body: Attachment:

Single Email Address, Multiple Email Addresses (; or ,), AddressBook (Contacts/Distribution List)

Receive: Various ways to receive Email messages especially in MS Outlook (View > Current View)

Status: New, Read, Reply, Fwded, Undeliverable, Attachment, Flagged, Hi/Lo Priority

Reply/ReplyAll/Forward: Automatically Switches To: & From: and includes RE: in Subject Line

Normally a message is to be included with a R/RA/F and should follow standard format.

Attachments: Textual documents created previous to Email & Graphics/ClipArt/Images of all sorts.

Attachments are very susceptible to viruses & hoaxes. Do not open if sender is not know!!!

Store/Delete: Email messages tend to pile up therefore it is best to store in folders or completely delete.

It is a good habit to frequently review and delete messages especially from deleted items.

Folder/External Storage: Most messages are stored on Mail Server but some messages stored on HD.

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Viewing & Managing Email Messages: (Right Click Message to Store or Delete)

Boxes or Folders: Inbox, Outbox, Sent Items, Draft Items, Deleted Items, Recycle Bin

Sent Emails are stored in **Outbox** until Exit or S/R hit. Also, are automatically saved by MS Outlook.

MS Outlook Functions: (Outlook Today, Calendar, Contacts, Tasks, Notes, Journal)

All functions have View > Current View Option for various appearances...

Outlook Today: Allows a quick overview of the week such as: appts, mtgs, tasks, Email boxes, etc...

Outlook Today is the only function that does not have a Current View Option.

Calendar: Allows for scheduling of appts, mtgs, tasks, etc... Calendars “remind” & can be shared.

Double Click Appt Line for Form: Details, Recurring, Invite Attendees, etc...

Contacts: Allows for detailed information about friends, relatives, customers, colleagues, etc...

Contacts make up the personal addressbook. Distribution list is a subset of addressbook.

To add a new contact use Actions or Click on Contacts then Right Click on a,b,c, etc...

Tasks: Allows for detailed information to be stored about tasks, start&finish date, progress... To-Do!

Right Click at task line to complete detailed form on tasks and progress.

Notes: Allows for brief and descriptive comment on whatever is needed.

Right Click anywhere in the Note area to enter Note. Click anywhere to close note tablet.

Journal: Day by day activities recorded or record of activities within work, home, tracking, etc...

Sorting & Finding Messages: (Advanced Find: RClicking **Function/Folder Bar** above message.)

Sorting is done by clicking on From, Subject, Received... Click on Find & Enter Criteria...

Email Options: (Allows for advanced features to be activated with messages. **RC at bottom**)

Importance, Sensitivity, Tracking, Delivery dated, Request Reply, Signature, Stationery, etc...

(To add a **signature** then use Tools > Options > Mail Format...)

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ListServ (Mailing List / Newsletter) ListServ = List Server

Subscribing to a ListServ:

To: Address of List Server **Subject:** Blank

Body: Subscribe Name of List Your Email Address

Moderated Lists Filtered Emails (Human) Less Email

Unmoderated Lists Auto Emails (No Human) All Email

Mailing Lists are Databases containing many Email Addresses & information on addressee

UseNet (Newsgroups / Bulletin Board)

Similar: to ListServ / dedicated to one topic Differs: Choice of Messages

Normally need special software (Newsgroup Reader) which is part of Email program

Ten Main UseNet Topics: Alt, Biz, News, Rec, Comp, Sci, Soc, Talk, Hum, Misc

Need an account to use BB (Network News Transfer Protocol) NNTP

Threaded = Topic Expanded Thread = Re: to initial posted message

The Internet & WWW:

Uniform Resource Locator (URL) **HyperText Marked Language (HTML)**

Web Server (http) HyperText Transfer Protocol

Hyperlink: words and/or images that connect to internal web pages and/or external web sites.

Web Page Elements:

Banner Ad = pays for page

URL = **http://www.netscape.com**

Field = Box to enter info

Button = Graphic Interactive Icon

Hyperlink = Text or Graphic

Status Bar = Progress

Picture = Graphics or Photos

Domain Name or Internet Protocol (number)

Browser: Microsoft Internet Explorer Netscape Navigator/Communicator

Software application which communicated with any type of server on internet

Path: **http:// www.malone.edu / tlove / default.html**

Web Site Types:

Inform Public Entertain Public Sell to Public Survey Public

Product Awareness Educ Population Gather Info Solicit Support

Online Databases (Search Engine Databases constantly updating information)

Contain frequently updated info for web pages

Learn the Internet & WWW for Novices

<http://www.learnthenet.com/english/index.html>

A comprehensive view of the Internet & WWW

<http://www.sofweb.vic.edu.au/internet/intro.htm>

Information on & Learning about Email

Web Site 101 * Email Tutorial

http://www.website101.com/email_e-mail/

Gary Public Library Email Information

<http://www.gary.lib.in.us/email.htm>

Learn the Net– Email Tutorial

<http://www.learnthenet.com/english/section/email.html>

Digital Web Magazine – Email Information

http://www.digital-web.com/tutorials/tutorial_1999-12.shtml

Information on & Learning about Chat

The WURD – Tutorial on Chat

<http://www.wurd.com/eng/ABCs/tutorial/chat.htm>

Using EarthLinks AOL Instant Messenger

http://support.earthlink.net/support/TUTORIALS/CHAT/chat_usingaim.jsp

Learn the Net – Conference: Meeting, Chat, Phone

<http://www.learnthenet.com/english/section/conference.html>

Learning the Basics of Netscape Instant Messenger

<http://wp.netscape.com/support/books/netcenter/044000132.htm>
