Internet Fundamentals

Virtual Community

Introduction to Internet

Outline

- Mailing list
- Instant Messaging (IM)
- Bulletin Boards
- Internet Relay Chat (IRC)
- Web-based Chat
- Multi-User Dungeon (MUD)
- Internet Telephony
- How do they work?

What is mailing list?

- Uses a mail address for disseminating newsletters.
- More importantly, for disseminating discussions.
- A centrally maintained mailing list is desirable.
- This is typically implemented by a mail reflector.
- Those people on the mailing list are called the subscribers.
- We can easily create FREE mailing lists for :
  - Sharing files.
  - Keeping in touch with family or friends.
  - Discussion groups

Mailing list illustration
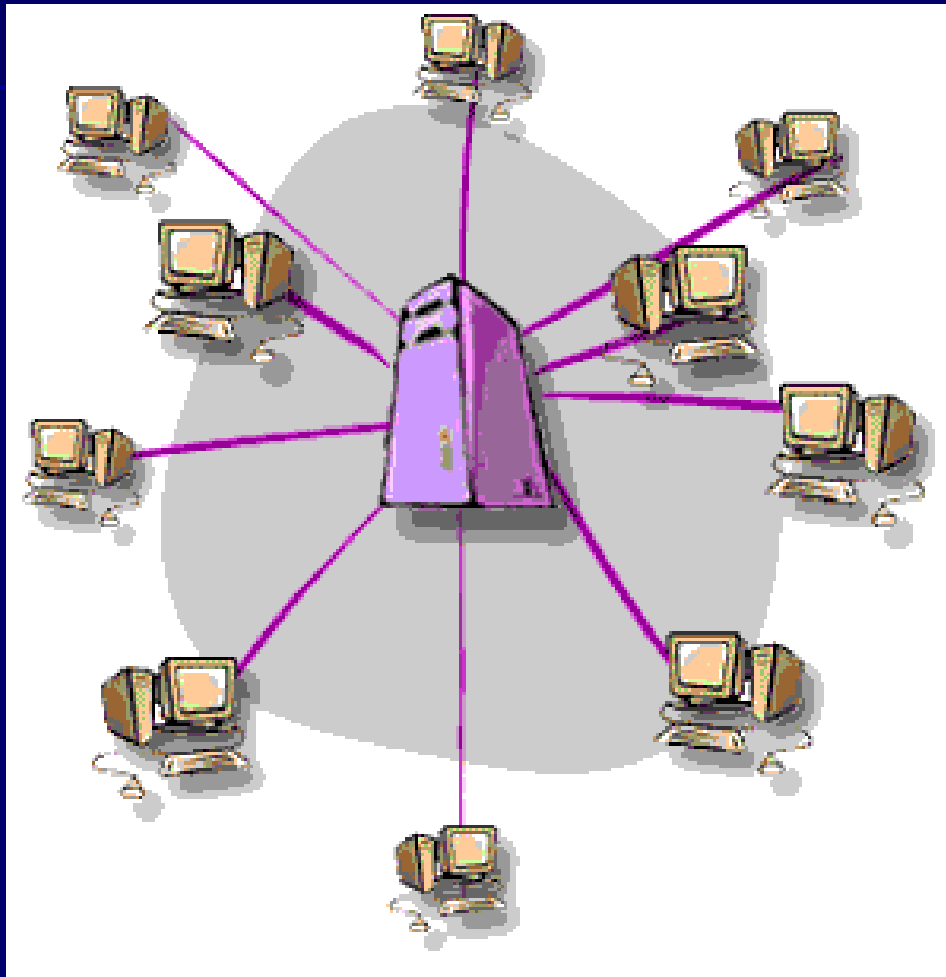
Any questions?

- Reference: www.learnthenet.com

Mail Reflector

- An e-mail reflector is a program that performs the forwarding broadcaster of e-mail on the name of a discussion list.

- How it works?
  - One member of the discussion list sent an email to the list.
  - The email reflector receives the message and automatically forwards a copy of the email to each person on the discussion list.

Subscription method (I)

- Historically, the Internet uses special addresses for administrating subscription requests.
- Such an address has the same name as the mailing reflector, but with the suffix -request added.
- For example,
- marsman-request@cse.cuhk.edu.hk
- The list maintainer must read the requests and edit the mailing list manually.

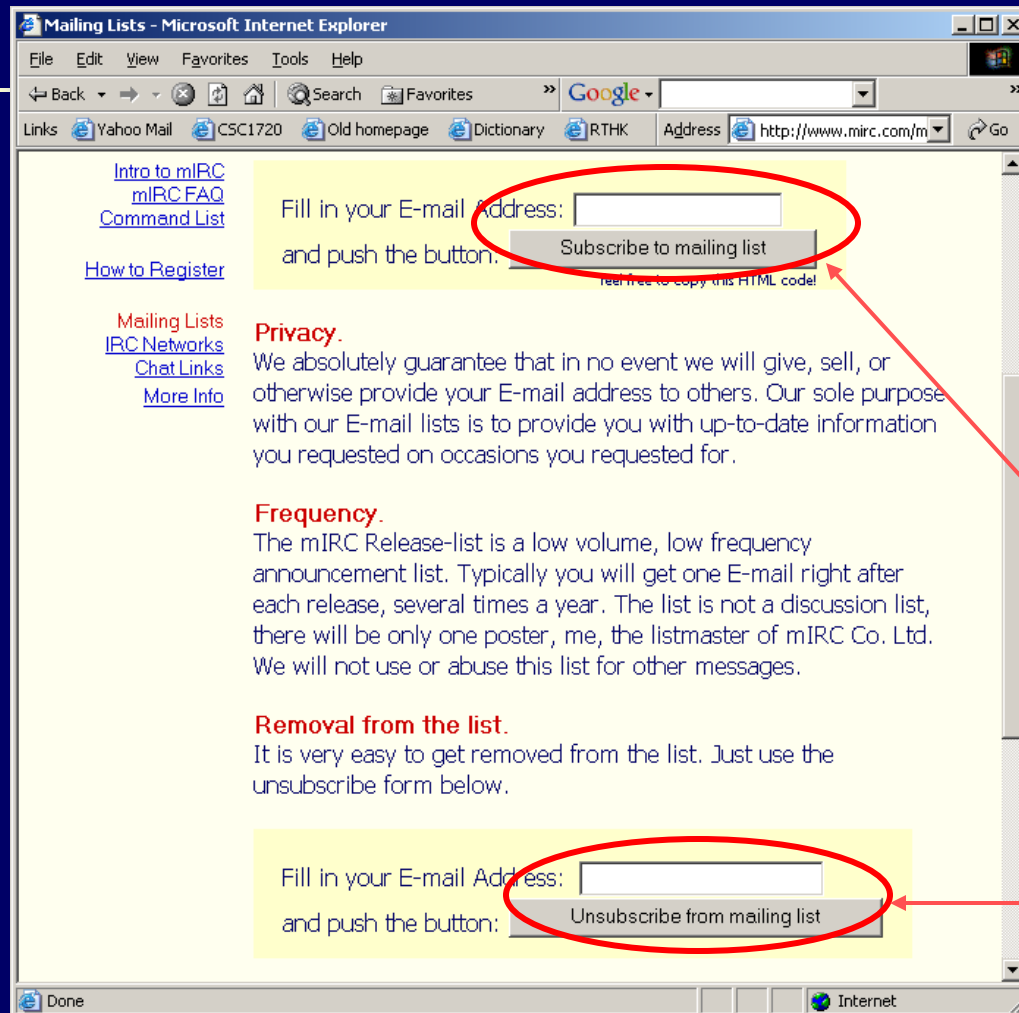# Subscription method (II)

- **Originally from BITNET.**
- **Maintain mailing list without human intervention.**
- **To subscribe, send a specially formatted message to a special address. For example:**

To:	listserv@cse.cuhk.edu.hk
Subject:	(no subject)
Mail-body:	subscribe marsman Ray Cheung

- **QUESTION - How can listserv know your address?**
- **To unsubscribe:**
  - **With listserv, unsubscribe is done by sending a mail with the following content:**
  - **signoff marsman**

Subscription method (III)

- Fill in your e-mail address via the WebPages.

Subscribe

Unsubscribe

How does it work? Subscribe a list

List member

List owner

Create a list

Subscribe to list

list@mailinglist.com

Subscribe to list

Subscribe to list

List member

List member

How does it work?
Post email to a list

List owner

List member

Post email

Receive email

list@mailinglist.com

Receive email

Receive email

List member

Receive email

List member
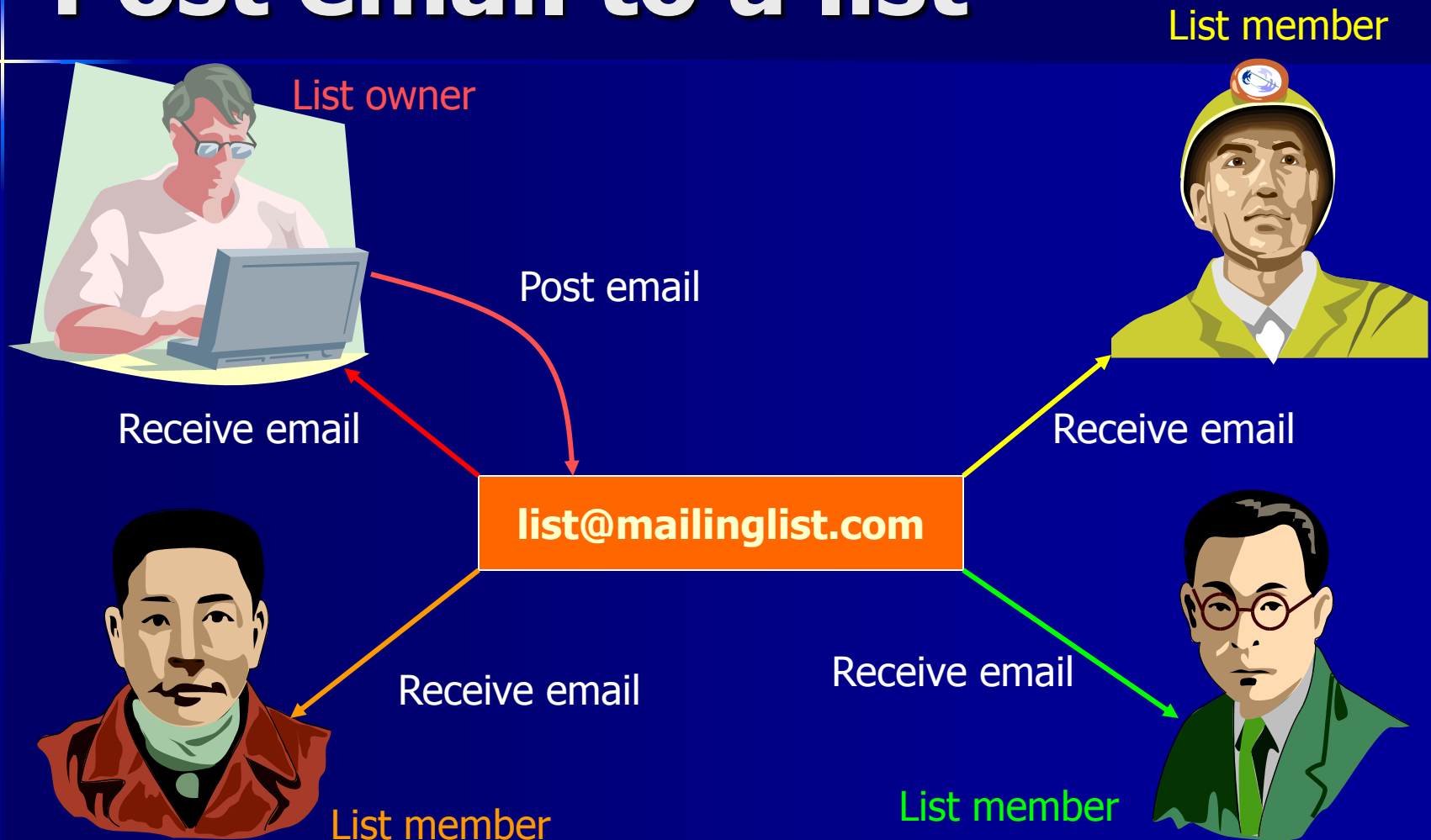
How does it work? Unsubscribe a list

List owner

List member

unsubscribe

STOP

Post email

Receive email

Acknowledgement

list@mailinglist.com

Receive email

Receive email

List member

List member
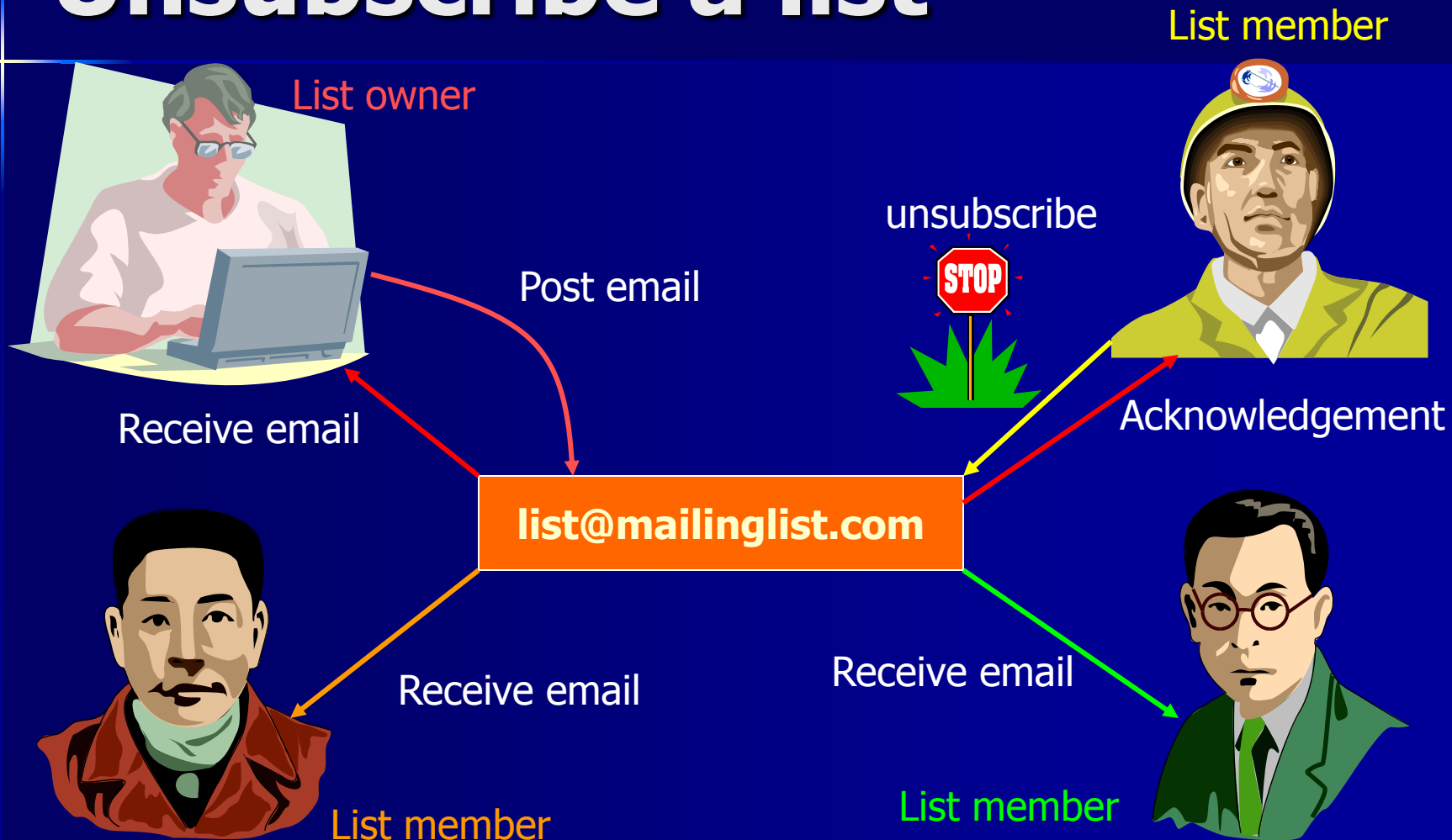
Mailing list - Summary

List type	Subscription Address	Subscription Message	Termination Message	Posting Address
Listserv	listserv@hostname	subscribe *list your name*	signoff *list*	*list@hostname*
Majordomo	majordomo@hostname	subscribe *list your name*	unsubscribe *list*	*list@hostname*
Internet	*list-request@hostname*	Anything	Anything	*list@hostname*
Almanac	almanac@hostname	subscribe *list*	unsubscribe *list*	*list@hostname*

Mailing list – Listserv / Majordomo

L-Soft

Communicating with millions

PRODUCTS   DOWNLOAD   CORPORATE   CUSTOMERS   NEWS   INFO   SEARCH   CONTACT

OVERVIEW   LISTSERV   LISTSERV Maestro   LSMTP   ListPlex   EASE   MANUALS   SUPPO

"IT WORKS, AND IT SCALES"

WHY LISTSERV?	PRICING
FACTS & FEATURES	FREE DOWNLOAD
PRODUCT LINE	STATISTICS
TESTIMONIALS	WEB DEMO

LISTSERV®

LISTSERV is the de facto e-mail list management software. It is a system that allows users to create and maintain e-mail lists on their corporate networks or on the Internet. LISTSERV supports all types of e-mail lists: newsletters, moderated and unmoderated discussion groups and direct marketing campaigns. List sizes can range from a few participants in a discussion group to several million in a newsletter. Every list and its archives can be maintained through a simple web interface, which can be fully customized to match your website profile. LISTSERV is renowned for its flexibility, scalability, performance and time-tested robustness. In fact, LISTSERV was developed and has been continually improved since 1986, which speaks for our commitment to its quality and longevity both today and in the future.

LISTSERV TODAY

Number of public lists	55,384
Number of local lists	160,688
Total number of lists	216,072
Total membership (public+local)	126,169,001
Total messages delivered today	31,664,632
Total delivered using LSMTP®	13,353,024 (42.2% of total)

Last update: Thu, 31 Jan 2002

GCA Great Circle Associates

Majordomo

From the Majordomo FAQ maintained by David Barr:

majordomo - n: a person who speaks, makes arrangements, or takes charge for another. From latin "major domus" - "master of the house".

Majordomo is a program which automates the management of Internet mailing lists. Commands are sent to Majordomo via electronic mail to handle all aspects of list maintainance. Once a list is set up, virtually all operations can be performed remotely by email, requiring no intervention upon the postmaster of the list site. (For a web-based interface to Majordomo, see the MajorCool add-on package).

Majordomo controls a list of addresses for some mail transport system (like sendmail or smail) to handle. Majordomo itself performs no mail delivery (though it has scripts to format and archive messages).

Here's a short list of some of the features of Majordomo:

- Supports various types of lists, including moderated
- All list management activities are handled by email, so list owners don't need access to Majordomo server machine
- Supports archival and remote retrieval of messages
- Supports digests
- Modular design - use only the features you need
- Written in Perl - easily customizable and expandable
- Includes support for FTPMAIL
- Supports confirmation of subscriptions, to protect against forged subscription requests
- List filters, based on header or body regular expressions

Done   Internet

Internet

Subscription Message


```
X xterm                                                            _ □ X
- [3/+] Majordomo@listserv.cuhk.edu.hk (23) Welcome to ilc-news    -- (96%)
From owner-ilc-news@listserv.cuhk.edu.hk  Tue Jan  8 13:55:28 2002
From: Majordomo@listserv.cuhk.edu.hk
Reply-To: Majordomo@listserv.cuhk.edu.hk
To: cccheung@cse.cuhk.edu.hk
Subject: Welcome to ilc-news
Date: Tue, 8 Jan 2002 13:55:26 +0800 (CST)
Message-Id: <200201080555.g085tQh17550@resonance.csc.cuhk.edu.hk>


--

Welcome to the ilc-news mailing list!

Please save this message for future reference.  Thank you.

If you ever want to remove yourself from this mailing list,
you can send mail to <Majordomo@listserv.cuhk.edu.hk> with the following
command in the body of your email message:

    unsubscribe ilc-news

or from another account, besides cccheung@cse.cuhk.edu.hk:

    unsubscribe ilc-news cccheung@cse.cuhk.edu.hk

If you ever need to get in contact with the owner of the list,
(if you have trouble unsubscribing, or have questions about the
list itself) send email to <owner-ilc-news@listserv.cuhk.edu.hk> .
This is the general rule for most mailing lists when you need
to contact a human.
i:Exit  ^B:PrevPg  ^F:NextPg  v:View Attachm.  d:Del  ,a:Reply  ,j:Next  ?:Help
```

How to unsubscribe?
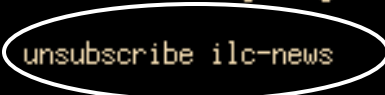
Search mailing list – Catalist, Liszt

CUHK Mailing list

Subscribe /
Unsubscribe

How to apply?

http://www.cuhk.edu.hk/itsc/network/app/maillist/index.html

Mailing list Netiquette

- Keep in short.
- Your topic is relevant to the list.
- Never send personal messages to the whole list, but to individuals.
- Clearly separate facts and opinions.
- Avoid insulting anyone.
- Include your full name & email address in the signature.
- Don't include email attachments.
- Don't use auto-reply.

Mailing list digests

- A very busy mailing list will provide a digest available for members to request instead of the regular list.

- A digest is the compilation of all the messages that are received to that particular group a day or a week.

- If you do not want to bother with a bunch of email messages on a real-time basis, otherwise, please select individual ones.

Comparison between Mailing list & Newsgroup

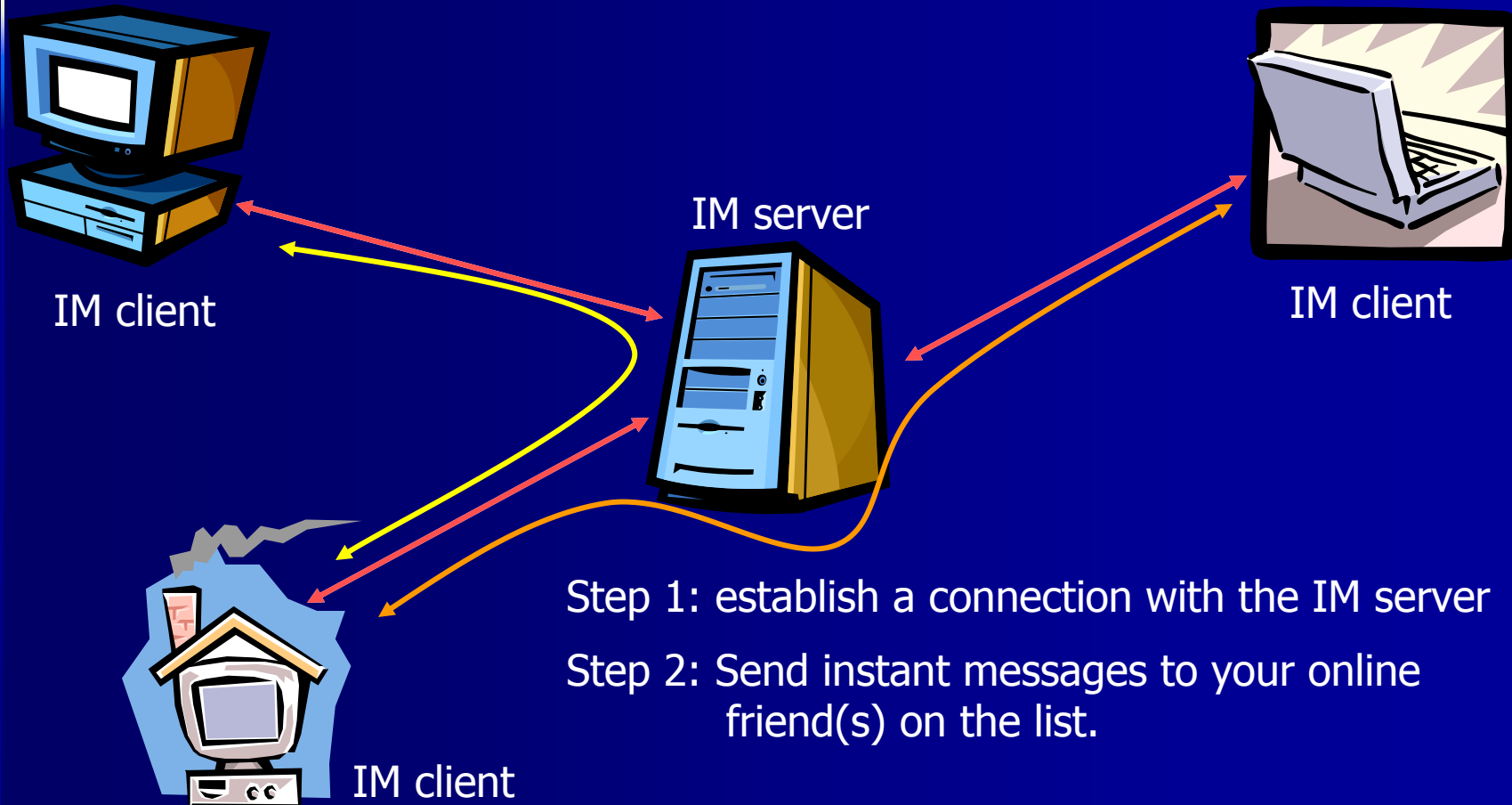|	Mailing List	Newsgroup
Coverage	Limited to those on a mailing list	Unlimited coverage
Organization	Intermingle into the mail box	Well organized into different newgroups, e.g. rec.music.folks, cuhk.forum, cuhk.cse.csc1720
Volume	Varies, but all stored in user's storage space	Huge, but do not require storage of individual user
Commitment	Committed, until un-subscription	Participating into a news group at user's discretion
Distribution speed	Virtually instantaneous	Slow

Instant Messaging (IM)

- Instant Messaging (IM) has gained popularity because
  - Rapid response of email is not fast enough.
  - No way to know the receiver is online or not.
  - Many steps to send email back and forth with the same person.
- We have to maintain a list of people that you want to contact with
  - Buddy list / Contact list

Instant Messaging

- A variety of special features
  - Instant Message – sending messages back and forth with an online friend
  - Chat – creating your own chatroom with your friend(s)
  - Web links – sharing your favorite links with your friends
  - Files – sending file to your friend directly
  - Talk – Using Internet to talk to your friend.
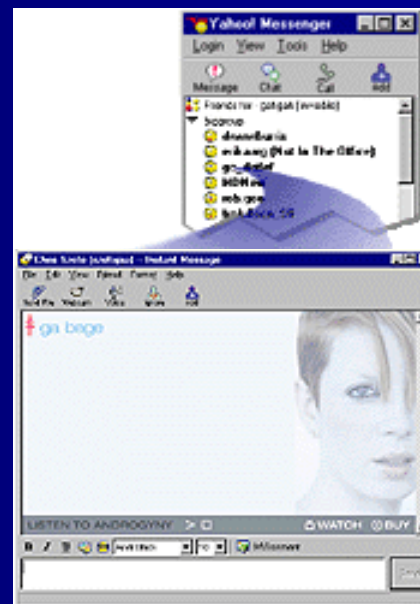 - Real-time information – retrieving real-time stock or other quotes.

How does it work?

IM server

IM client

IM client

IM client

Step 1: establish a connection with the IM server

Step 2: Send instant messages to your online friend(s) on the list.
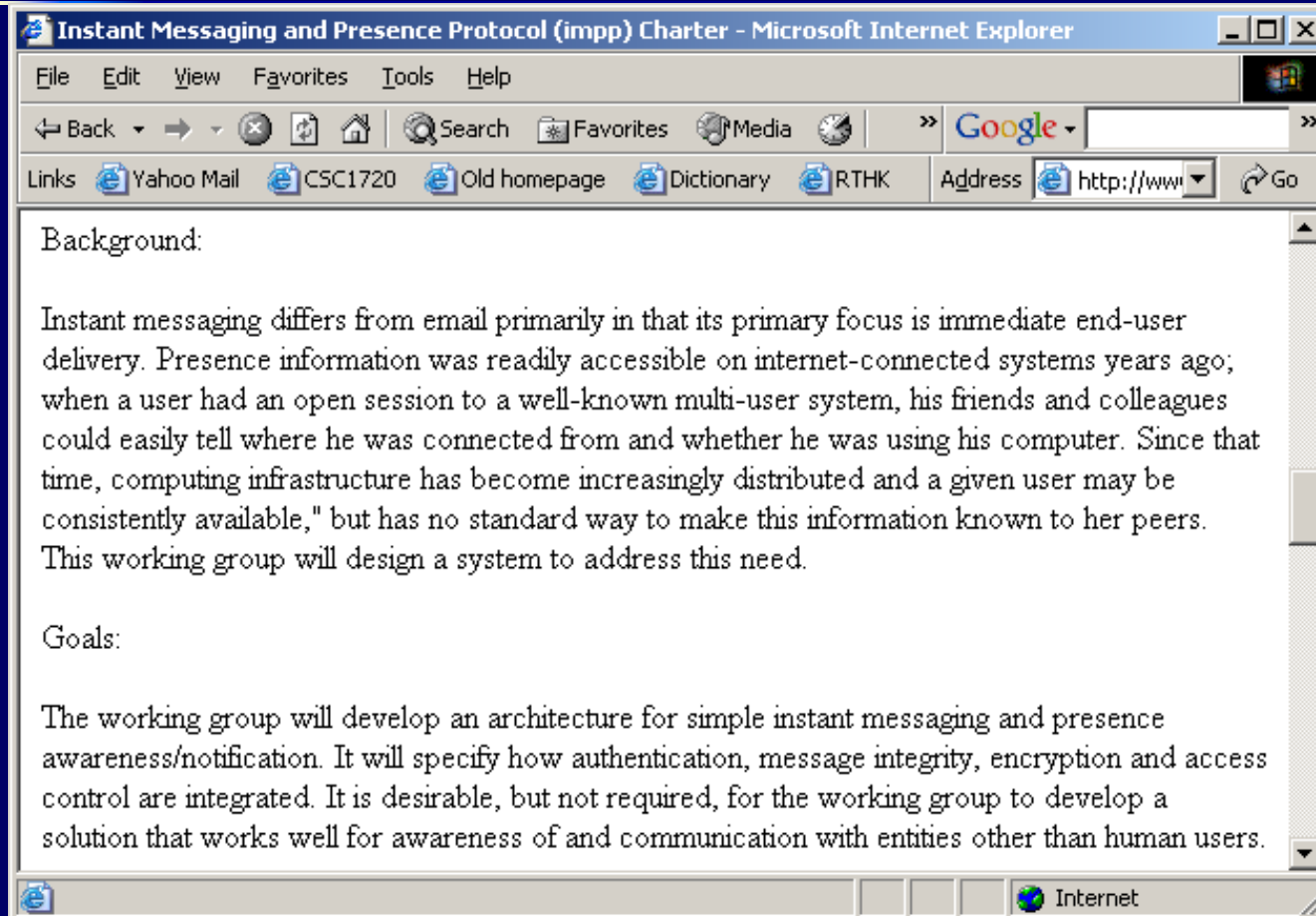
Instant Messaging - Figures

Trillian – multi-chat client

- Support for IRC, AIM, ICQ, MSN, Yahoo Messenger.

Instant Messaging and Presence Protocol (IMPP)

Instant Messaging and Presence Protocol (impp) Charter - Microsoft Internet Explorer

File   Edit   View   Favorites   Tools   Help

⇐ Back   →   ⊗ 🔄 🏠   Search Favorites Media   » Google ▾

Links Yahoo Mail   CSC1720   Old homepage   Dictionary   RTHK   Address http://www ▾   Go

Background:

Instant messaging differs from email primarily in that its primary focus is immediate end-user delivery. Presence information was readily accessible on internet-connected systems years ago; when a user had an open session to a well-known multi-user system, his friends and colleagues could easily tell where he was connected from and whether he was using his computer. Since that time, computing infrastructure has become increasingly distributed and a given user may be consistently available," but has no standard way to make this information known to her peers. This working group will design a system to address this need.

Goals:

The working group will develop an architecture for simple instant messaging and presence awareness/notification. It will specify how authentication, message integrity, encryption and access control are integrated. It is desirable, but not required, for the working group to develop a solution that works well for awareness of and communication with entities other than human users.

Internet

<u>Maintained by IETF</u>

So have you tried IM?

Bulletin Boards (BBS)
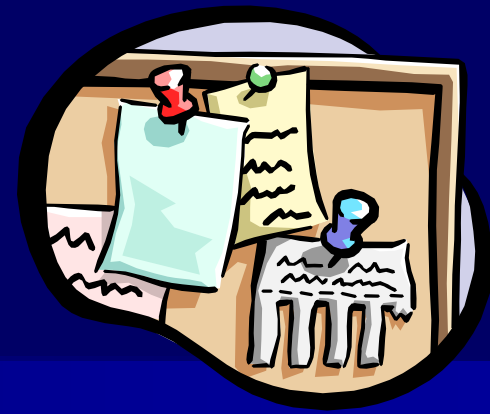
- A bulletin board is a web site.
- There is a computer hosting the bulletin board.
- You can use menus to navigate the board's contents.
- You can post /follow-up /view /modify articles (or insert pictures) on the board.
- Threading control.

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Bulletin Boards (BBS)

BBS

Internet Relay Chat (IRC)

- IRC is the original chat medium on the Internet. IRC is worldwide.

- More than 100,000 people are chatting online at any given hour.

- IRC is
  - Multi-user
  - Multi-channel chat system

- Each user has a nickname and they can talk to other users either in private or on a chatroom.

How to use IRC?

- Client & Server model
- IRC clients are available for different platforms, PC, Macintosh, or UNIX.
- Macintosh IRC client
  - Ircle
- Windows based IRC client
  - mIRC
  - Easy to use, highly configurable

IRC Clients

- You can use different Operating System to connect to the IRC network.

Reference

How does it work?

Clients

Clients

IRC server
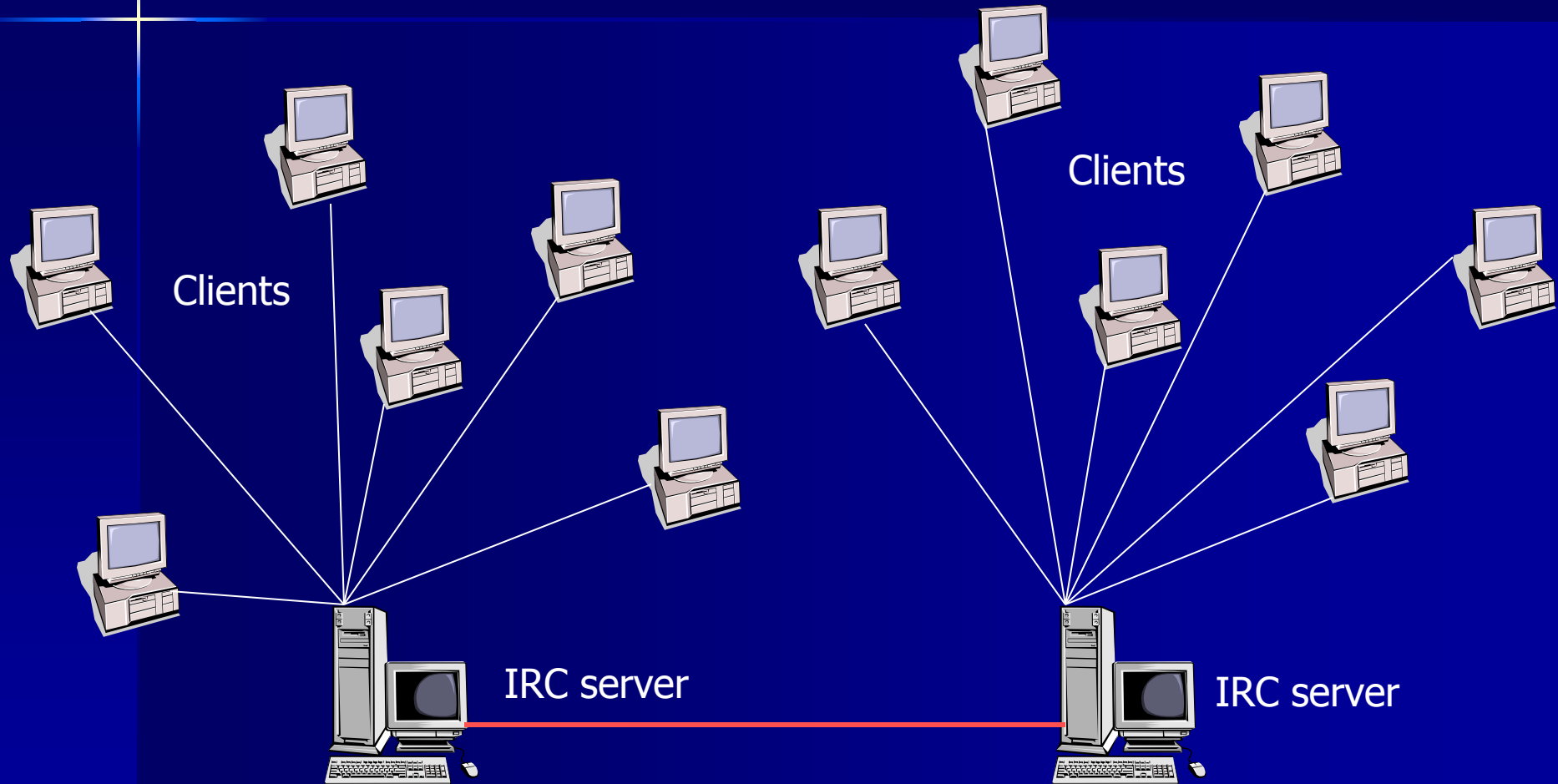
IRC server

How Do we connect?

- IRC network is a collection of servers linked together.
- To use IRC, we should connect to one of the IRC server.
- All servers on a network have the access to the same information.
- Depends on your geographical location to choose your IRC server in the IRC network.

IRC commands

- If you are connected, you need to join a channel (chat room).
- A Channel is a place that group conversation occurs.
- All IRC commands are preceded by the forward slash "/".
  - JOIN – to join a channel
  - QUIT – exit your IRC session
  - NICK – change your nickname
- IRC Etiquette – keep in mind.

IRC - Figure
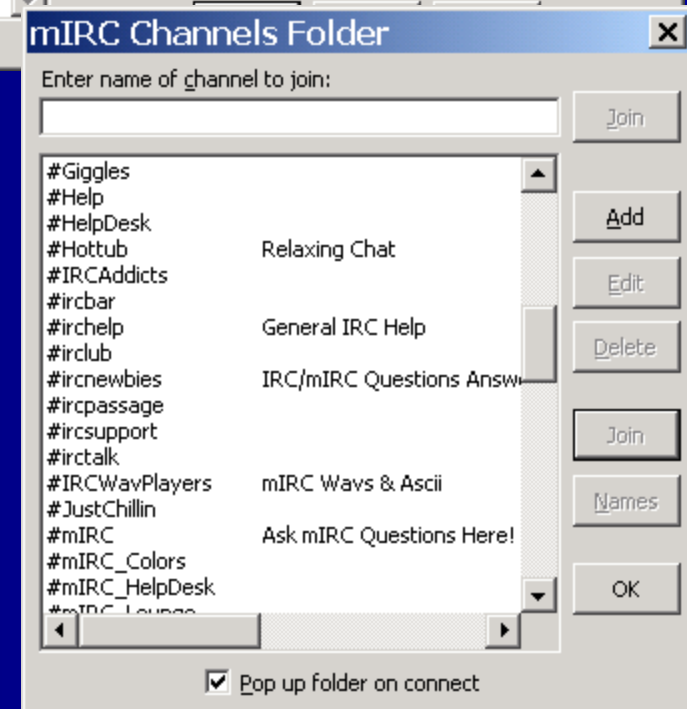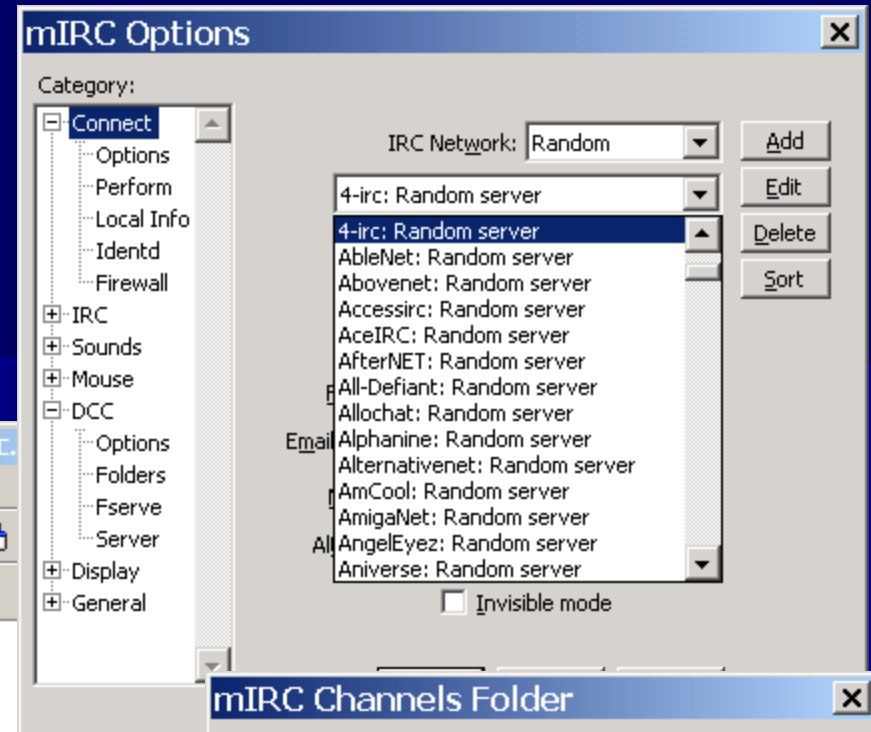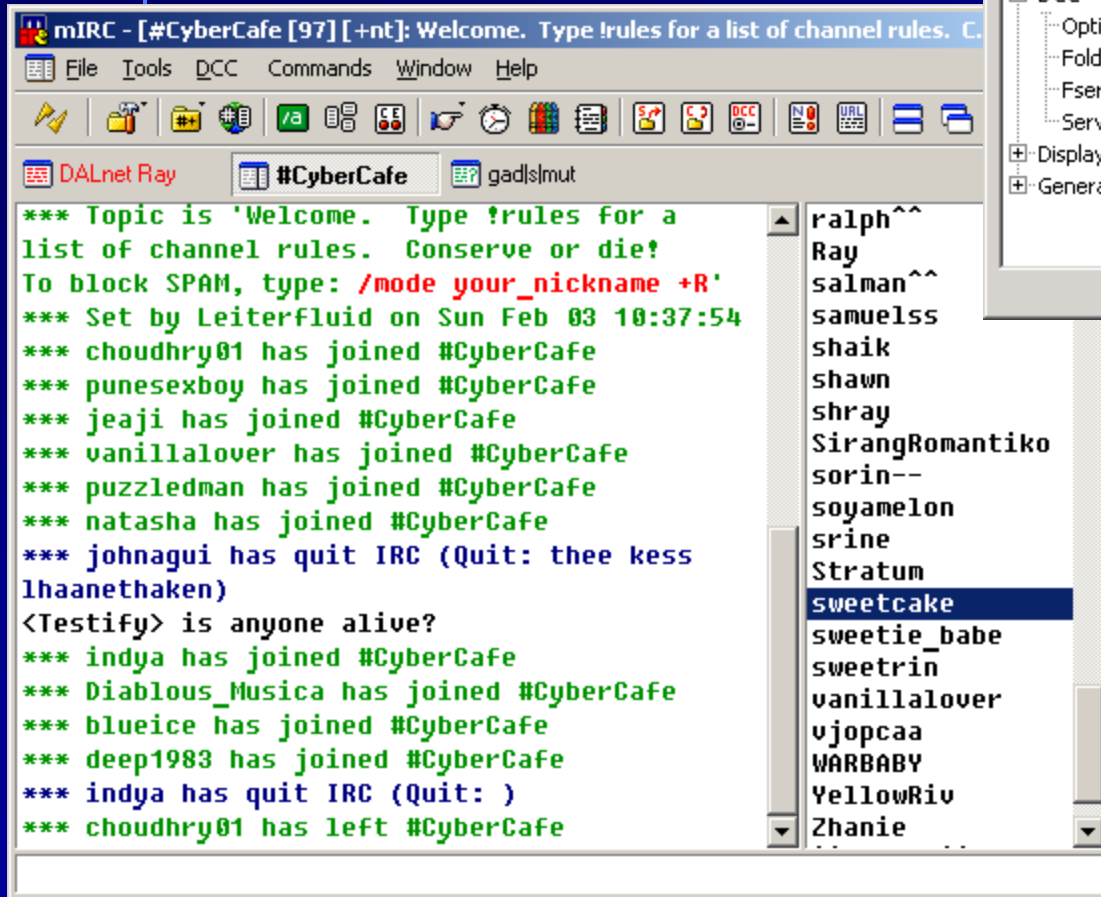
Chat Online?
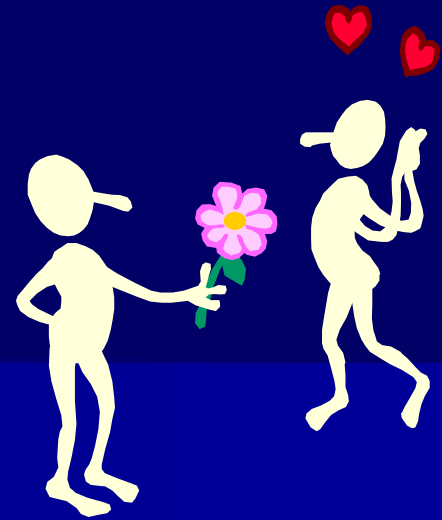
- Required
  - An Internet connection
  - The proper software
  - Lots of patience
  - A common language
  - Basic literacy skills
  - A good disposition
  - A high tolerance for meeting different kind of people imaginable.

MUD – Multi-User Dungeon

- MUD is also called "Multi-User Domain"
- It is a computer program which allows users to login and explore.
- Each user takes control of a special character. (You can walk around, chat, …)
- MUD is Real-time chat forum and has multiple locations
  - e.g. combat, traps, puzzles, magic
- Implicitly reserved for game-oriented.
- Some other social MUD are called "MU*"

Top MUD sites

gast@Wunderland - Kmud 1.0

Mud   View   Options   Profile   Plugins   Help

Aliases...
Triggers...
Logging...
Toolbar...
Save Current Profile

| Lebenspunkte | : | | | (50) |
| Magiepunkte | : | | | (50) |

Erfahrungspunkte	:	0	Version	: 20
Abenteuerpunkte	:	0 (722)	Rasse	: Mensch
Spielerstufe	:	1	Charakter	: neutral
Gildenstufe	:	1	Gilde	: keine
			Groesse	: 175 cm

Das sind Deine Attribute   Maximum

Intelligenz	1	24	Alter	: 00:28 Stunden
Kraft	1	26	diesen Monat: 00:28 Stunden
Geschicklichkeit	1	25	Leiden	: keine
Ausdauer	1	25	Vergiftung	: keine
			Fluchtricht.	: keine

Gewichtsauslastung ---------- Tragkapazitaet -----------
Saettigung an Essen ------ Trinken ------ Alkohol ------
Das Wunderland, das Wunderland, es ist Dir gaenzlich unbekannt.

> schau
Der Mond und das von den Haeusern herueberscheinende Licht erhellen die
Wiese. Schemenhaft erkennst Du im Westen einen Wohnwagen und im Sueden einen
Huegel. Im Osten scheint ein breiterer Weg zu liegen.
Ein Obstbaum.
Es gibt drei sichtbare Ausgaenge: osten, sueden und westen.
Totoschka.
Ein Briefkasten.
> [Allgemein:DaFire] och menno

Ready.   00:33:00

Top MUD Sites - mud list, top muds, mud sites, discussion forums, articles, game reviews - Microsoft Internet Explorer

File   Edit   View   Favorites   Tools   Help

Back | Search | Favorites | Media | Google

Links   Yahoo Mail   CSC1720   Old homepage   Dictionary   RTHK

Address http://www.topmudsites.com/

TOP MUD SITES
YOUR ONE-STOP MUD RESOURCE

Latest Player Reviews
The Eternal City
The Pattern's End
The Turning Point
Ashavar's Legacy
Ancient Anguish
Accursed Lands

Search for a MUD
Ranking List   [   ] Go
Database   [   ] Go
Click here for advanced search

Newest MUDs Added
Mayhem MUD
Godwars: Lands of Obscurity
ResortMUD 2: The Last Resort
SaevenX - The Dark Sky Proje...
Lakes of Darkness
RavenGuard

Recent Forum Discussions
Are there any mudders with Asperger... - 1 replies
Permadeath - 5 replies
Very small mu*s? - 3 replies
Smaug problem on startup - 1 replies
Fread error in limbo - 2 replies
Ranged Weapons - 6 replies

MUD Rankings
Display Ranks   Choose Ranks
Display Categories   Choose Category

Main
Home
Forums
Articles
Reviews
Rules
Advertise with Us
Shocking Freebies
Feedback

Top MUD Sites
Add your Site
Edit your Site
Sites 1-20
Sites 21-40
Sites 41-60
Sites 61-80
Sites 81-100

MUD Database

RANK	Top MUD Sites
1	**Realms of Despair** info — One of the most popular, long running stable muds on the 'net. Regularly peaks at over 500 players, and is the development ground for the SMAUG codebase.
2	**The Eternal City** info — "If you're looking for a game you can really sink your teeth into, with a world in which you can become a true character, this is it." - Michael Wolf, PCGamer
3	**Merentha** info — Merentha regularly has over 100 players on during the day. We offer dozens of races and classes, hundreds of spells, player owned and run councils, guilds and kingdoms. Players can own houses, pets, mounts, air balloons, sea ships.
4	**Threshold RPG** info — Role playing is not an option, it is a requirement! Immerse yourself in this richly developed world with player run clans, guilds, legal system, economy, religions, and more. With a UUnet T1 and superb hardware, you also need not worry about stability.
5	**Inferno** info — A world of high medieval fantasy where light and darkness vie for supremacy beneath the vigilant watch of the Empire. 3 cities. 15 races. 37 guilds. Ongoing plot lines and 8 weekly GM-run quests, their courses determined by you. What "RPG" used to mean.

http://www.topmudsites.com/

Kmud Mapp

File   Edit   View   Tools   Options

Categorize: Zone/Room

Locations
- Forest
  - Forest Entrace
- Lord Castle
  - Portal
  - Sunbrights Room
- Main Area
  - Dragon Tower
  - Dungeon Tower
  - Lord Tower
  - Portal Room
  - Tower of Light

The main area

Forest

Lord Castle

The Keep
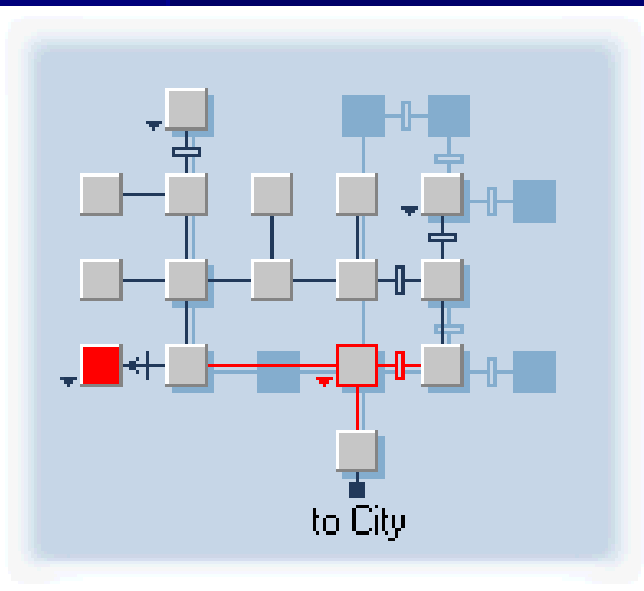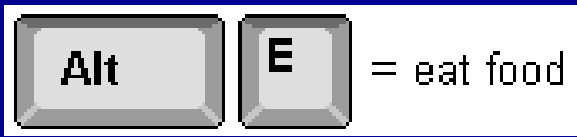
MUD figures

- You can walk, chat, attack, defense, …

hp: 439 mana 94 mv 236

look

<258hp 94m 208mv>
You OBLITERATE a butterfly
You OBLITERATE a butterfly
A butterfly is DEAD!!
You receive 32755 exps.

Alt E = eat food

nw	▲	ne
◄		►
sw	▼	se

| inventory |
| hp: 12 |
| AutoLoot |

Name ▽	Damage	Hit	Dam
longsword, black	3d6	+2	+0
scimitar, golden	3d5	+0	+0
sword, 2-handed	5d4	+0	+4
dirk, battlemaster	8d1	+5	+1

to City

People ▶
● 🦅 Darker
● MM Chiara

Chiara chats to you, 'Yeah,
You chat to Chiara, 'ok, I ju
Chiara chats to you, 'OK…a
You chat to Chiara, 'yep!'

Web-Based Chat

- With the development of Java-based servers, browser plug-ins and HTML-based chat.
- Simply means – Chatting on the web
- Easy to use – chat everywhere
- You should first create an account
- Login and then join the chat session.

Web-based Chat - Figures

Yahoo! Group?

YAHOO! Groups

- Share files, photos, mailing list, …

Yahoo! Groups - Microsoft Internet Explorer

File   Edit   View   Favorites   Tools   »   Address   http://groups.yahoo.com/   ▼   Go

← Back   →   Search   Favorites   »   Links   CSC1720 Introduction to Internet   RTHK - TV

Welcome, Guest   Register - Sign In

Yahoo! Groups

Sign In	What is a Group?	ditor's Picks
New users	One mail ddress? ebsite hat llows ou o...	It's time to treat yourself.
Click here to register	?Share photos & files, plan events, send a newsletter	**Dessert-Lovers** Come on, you deserve it!
Registered users	?Stay in touch with friends and family	Members: **433**
Sign in!	?Discuss sports, health, current events, and more	Category:
	?Start a new Group!?	Desserts_and_Sweets

Join a Group

[   ]   Search

Business & Finance   **Hobbies & Crafts**
Employment, Investments, Industry...   Antiques, Collecting, Models...

AnHerbGarden Grow fresh herbs for your culinary masterpieces.
Members: **280**
Category: **Herbs**

Internet

Internet Phone Calls

- Making telephone calls by using the Internet.
- Your voice is digitalized and broken down into IP packets for routing.
- 2 ways for communication
  - Making calls via your PC (PC phone call)
  - Internet Telephony (Voice over IP)
    - Make a phone call same as you pick up the telephone, except your call is routed over the Internet rather than the original telephone system.
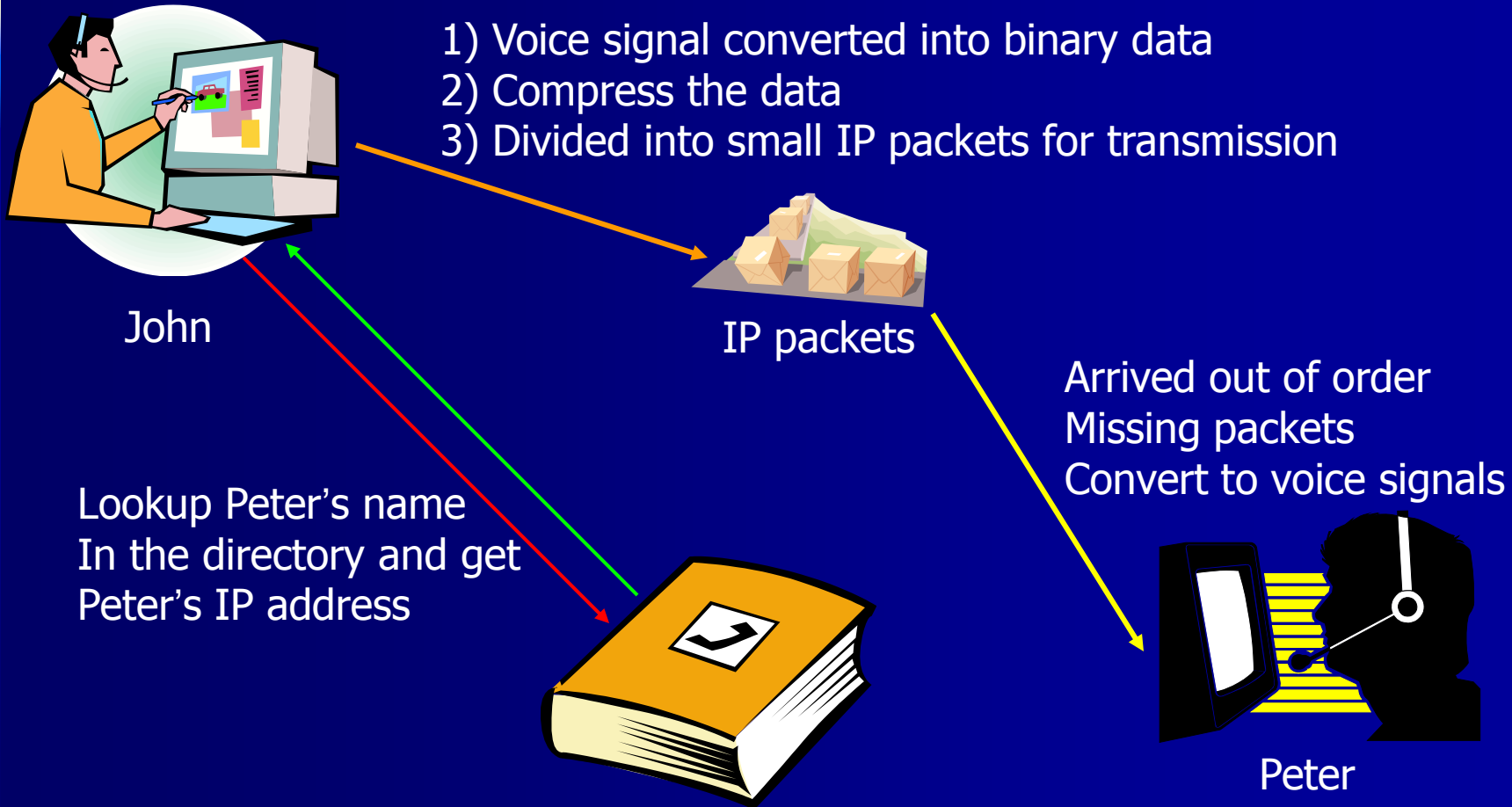   - Cut the price for Long distance calls.

PC phone calls

- Connect to the Internet.
- Start the special phone software which allows you to connect to a special directory.
- The directory stores a list of people who have the particular phone software, and their IP addresses.
- You can lookup someone's name of the directory in order to retrieve his/her IP address.
- The communication channel will be digitalized.
  - The software breaks up the voice into special packets which will be sent over the Internet by using TCP/IP protocol.

Microsoft NetMeeting

- Support video and audio conferencing.
- View the Internet Directory, and review a list of people currently running NetMeeting.
- Use NetMeeting's address book to place calls.

How does it work?

1) Voice signal converted into binary data
2) Compress the data
3) Divided into small IP packets for transmission

John

IP packets

Arrived out of order
Missing packets
Convert to voice signals

Lookup Peter's name
In the directory and get
Peter's IP address

Peter

Internet Telephony

- Use normal telephone (but not a computer) to make a phone call using IP telephony.
  - You might have to dial a special code first.
- The first part use the normal Public Switched Telephone Network (PSTN).
- The call is sent to a special IP voice gateway which converts voice signal to digital data, compress it, digitize voice signal to IP packets.
- The IP packets are sent to another IP voice gateway which is closed to the phone call destination.
- The quality is slightly worst then normal phone call.

PSTN connection

- Wireless Services
- Analogue Vs Digital

PSTN (Carriers, PTTs, …)

Phone

Phone

Phone

Phone

Private Network (can be Virtual)
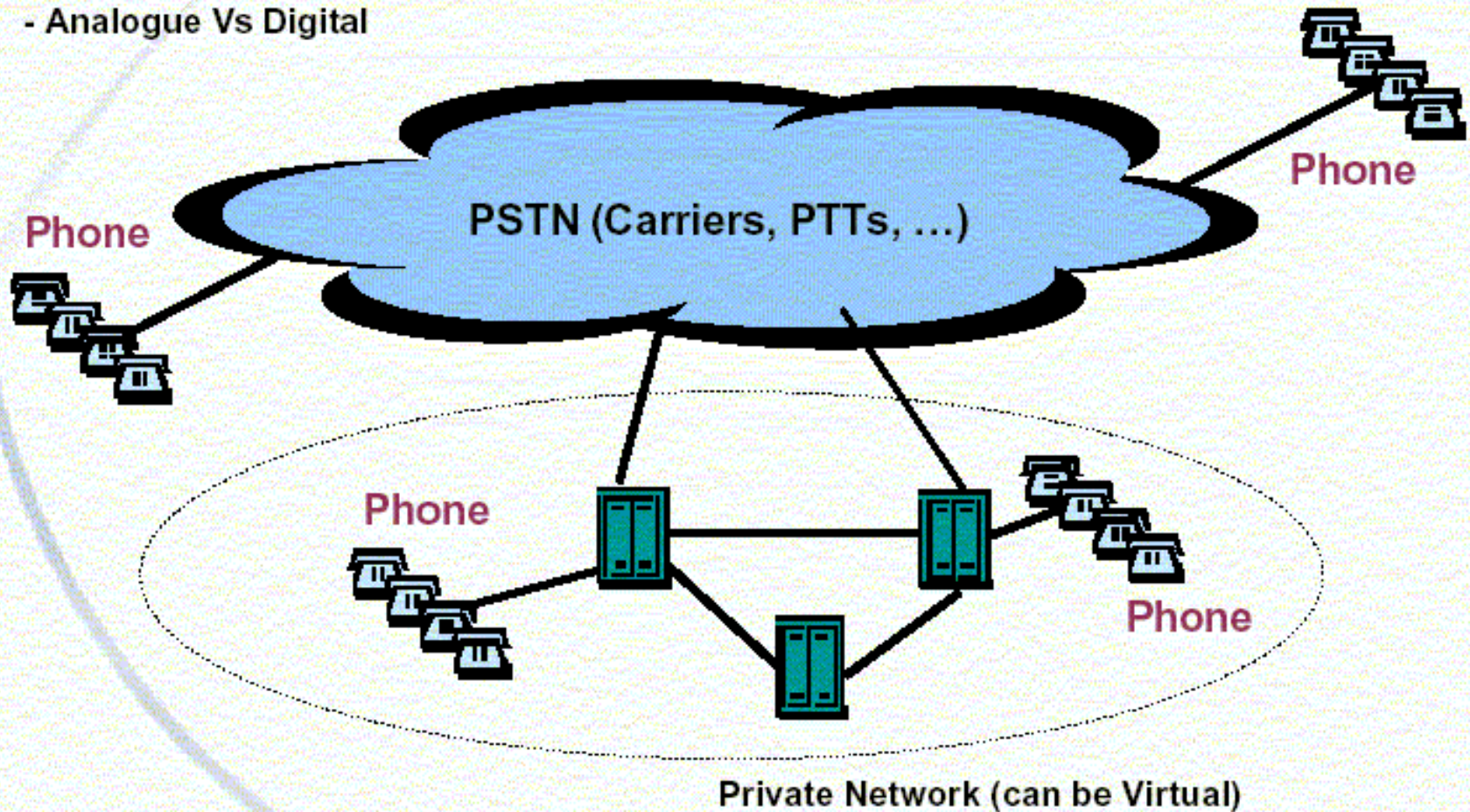
Internet Telephony - How does it work?

John

Internet

Mary

IP voice gateway

IP packets

IP packets

IP voice gateway
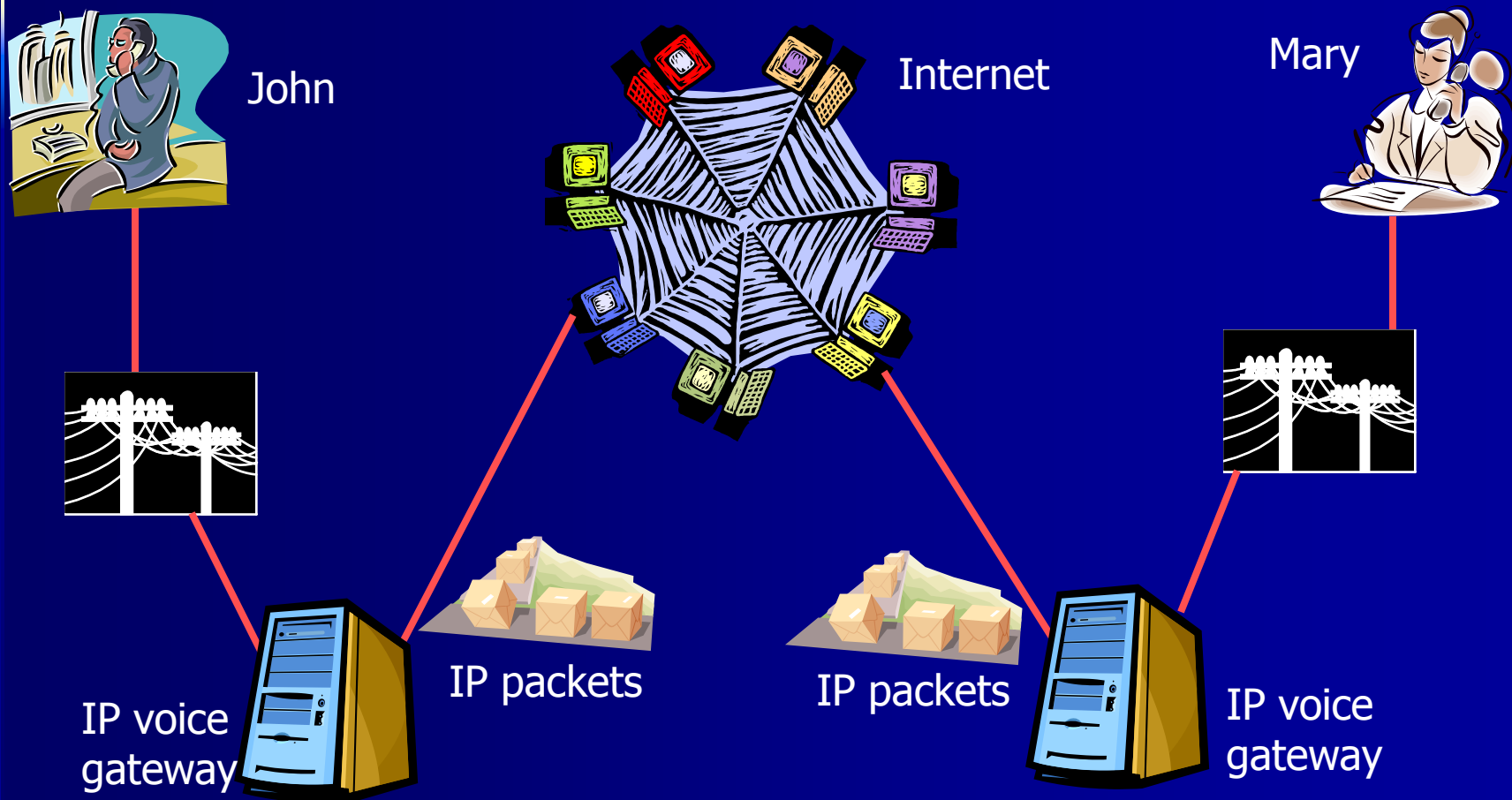
Internet Phone - Figures

Voice over IP (VoIP)

- Voice over IP application combines the legacy voice networks and packet networks by allowing both voice and signaling information to be transported over the packet network, the Internet.
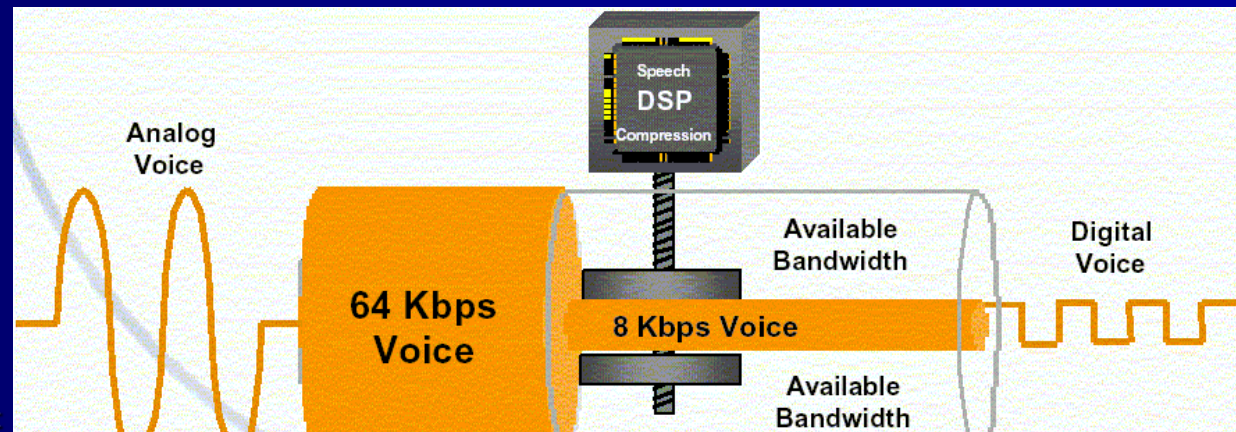
VoIP Devices

Cisco ATA 186

Cisco Voice Gateways
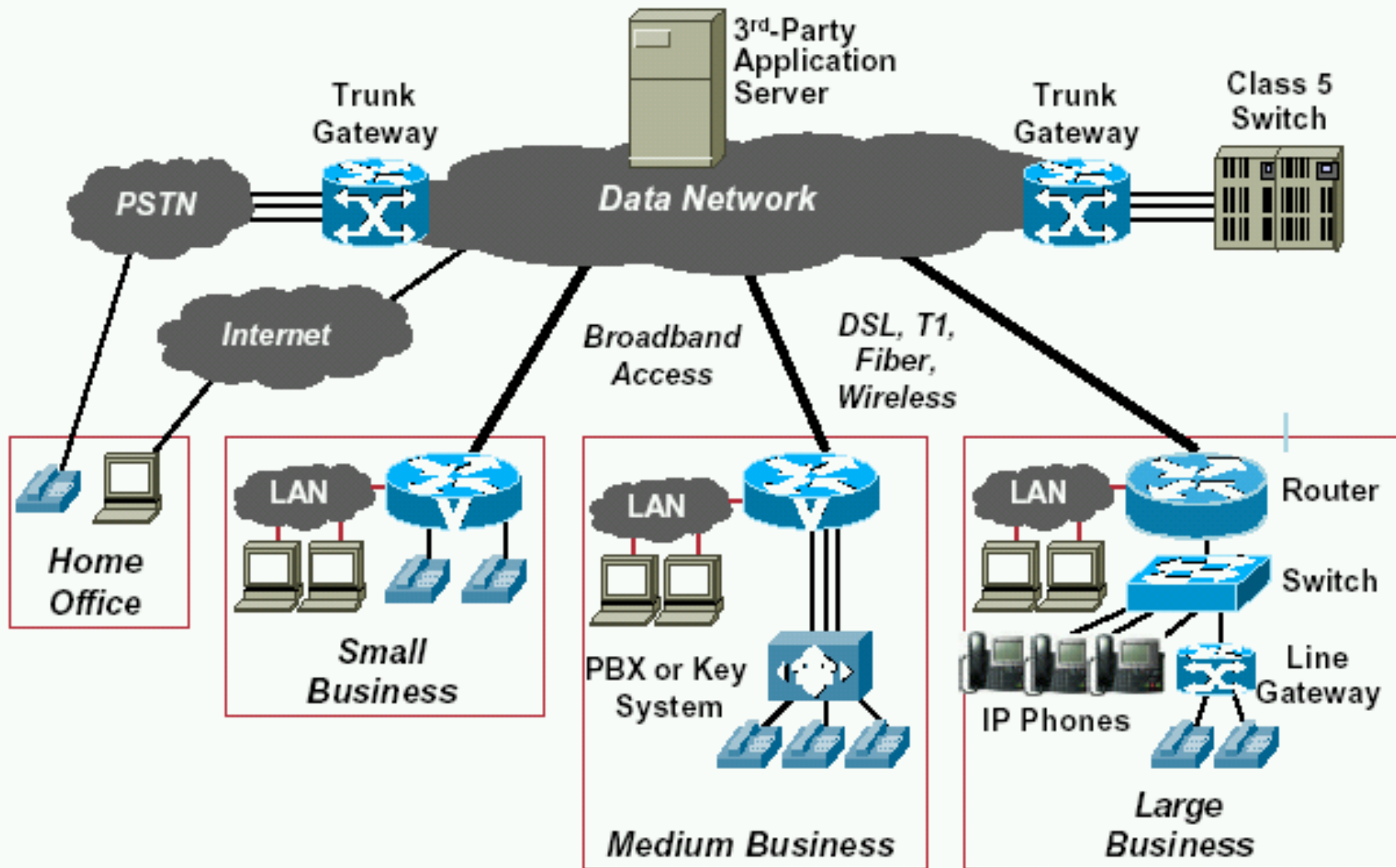
Cisco PIX Firewall

Cisco 7940 & 7960 IP Phones

Cisco Softswitch and Signaling Gateways

Cisco SIP Proxy Server

Unified Network Telephone + Internet

Why is VoIP so attractive?

- <u>Quote from Nortel Networks</u>
- **Save money:** You can use your existing WAN to transport internal voice traffic. Where traditional voice lines are expensive - international calls, for example - the cost savings can be immense.
- **Simplify:** Where voice and data run on the same network, you can expect significant operational improvements. It's far easier to change IP terminals, for example.
- **Add value:** The most interesting benefits will come from innovative applications and e-business integration, increasing productivity, customer loyalty and competitiveness.

Assignment
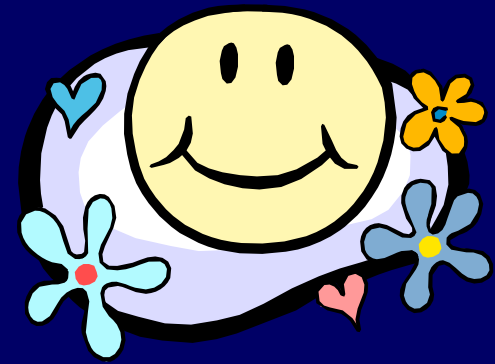
- Newsgroup, Mailing list
- Instant Messaging (IM)
- Bulletin Boards (BBS)
- Internet Relay Chat (IRC)
- Multi-User Dungeon (MUD)
- Web Based Chat

Can you compare them based on "Easy to use", "Convenience", "etc…"?