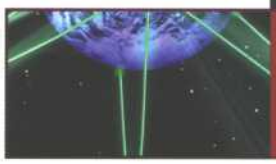
UNIT 12



The Internet

STARTER **1** Match each of the Internet services in Column A with the uses in Column B.

Column A		Column B	
1	IRC	a	logging on to your computer at a distance
2	MOOs	b	sending and receiving messages
3	email	c	downloading a file from a server
4	FTP	d	chatting to other users in real-time
5	WWW	e	accessing newsgroups
6	Telnet	f	browsing webpages
7	Usenet	g	taking part in simulations in a shared environment

READING **2** **Computer-Mediated Communication (CMC)** Work in groups of three, A, B, and C. Read one of these examples of CMC and complete this table.

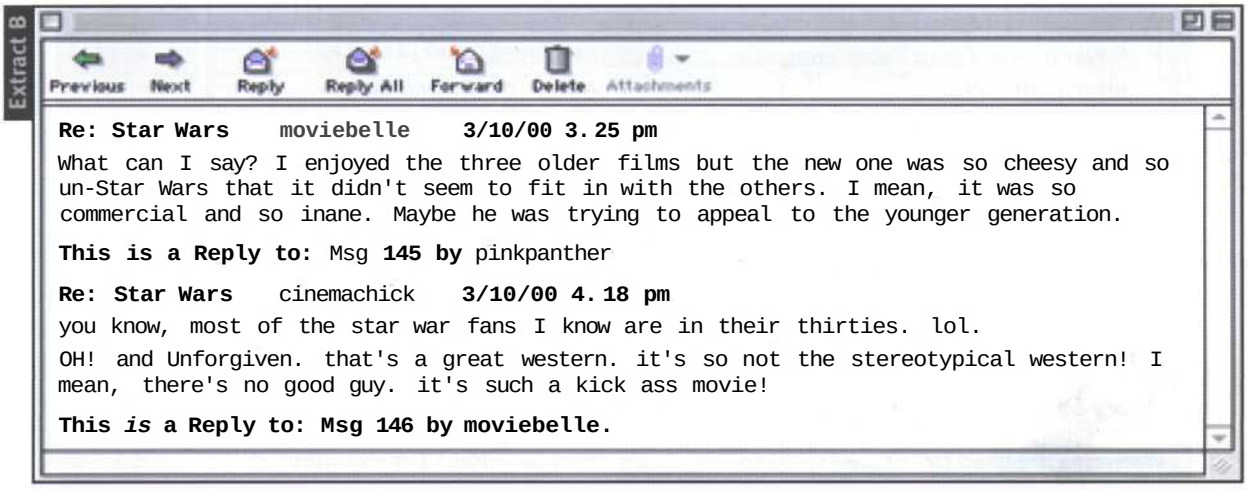
Extract	A	B	C
Type of CMC			
Number of participants			
Topics			
Synchronous or asynchronous			
Special features of this type of CMC			

Extract A

```
Inside the lounge of the House of Language.
There is a television in the corner.
You see the following exits: east and north
Hank, Spartacus, Diana, Tony (resting)

Hank says, 'have any of you guys tried batmud?: )'
Diana says, 'no'
Spartacus says, 'what is it?'
Hank says, 'it's a virtual reality game. you'll find it at: bat.org'
Diana groans.
Diana says, 'these things are addictive. You spend *hours*on them. '
Rupert appears with a flash of lightning.
Spartacus says, 'we have a new participant. welcome Rupert!'
Rupert says, 'Thanks. How do you get to the kitchen?'
Hank says, 'type 'go kitchen'. You can find the instructions on 'help topics'
Rupert says, 'Do you use Telnet?'
Diana says, 'use tf... it's much better. '
```

Extract B



Re: Star Wars moviebelle **3/10/00 3.25 pm**

What can I say? I enjoyed the three older films but the new one was so cheesy and so un-Star Wars that it didn't seem to fit in with the others. I mean, it was so commercial and so inane. Maybe he was trying to appeal to the younger generation.

This is a Reply to: Msg **145 by** pinkpanther

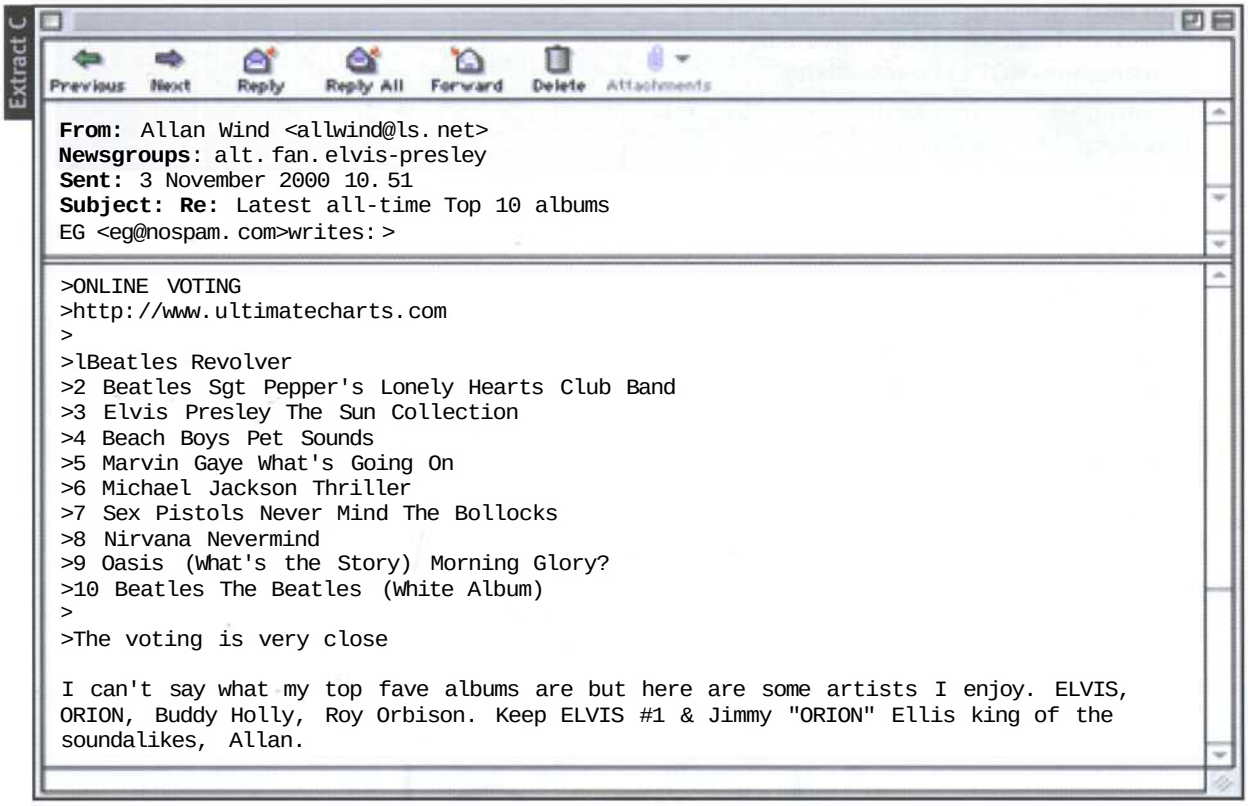
Re: Star Wars cinemachick **3/10/00 4.18 pm**

you know, most of the star war fans I know are in their thirties. lol.

OH! and Unforgiven. that's a great western. it's so not the stereotypical western! I mean, there's no good guy. it's such a kick ass movie!

This *is* a Reply to: Msg 146 by moviebelle.

Extract C



From: Allan Wind <allwind@ls.net>
Newsgroups: alt.fan.elvis-presley
Sent: 3 November 2000 10.51
Subject: Re: Latest all-time Top 10 albums
EG <eg@nospam.com>writes:>

>ONLINE VOTING
>http://www.ultimatecharts.com
>
>lBeatles Revolver
>2 Beatles Sgt Pepper's Lonely Hearts Club Band
>3 Elvis Presley The Sun Collection
>4 Beach Boys Pet Sounds
>5 Marvin Gaye What's Going On
>6 Michael Jackson Thriller
>7 Sex Pistols Never Mind The Bollocks
>8 Nirvana Nevermind
>9 Oasis (What's the Story) Morning Glory?
>10 Beatles The Beatles (White Album)
>
>The voting is very close

I can't say what my top fave albums are but here are some artists I enjoy. ELVIS, ORION, Buddy Holly, Roy Orbison. Keep ELVIS #1 & Jimmy "ORION" Ellis king of the soundalikes, Allan.

3 **Compare results orally with the others in your group. Complete a table for each of the other extracts using the information the others provide.**

LANGUAGE WORK Warnings

Where might you see these warnings?

1 Never give out your home address or phone number.
2 This appliance must be earthed.
3 Avoid turning off main power while computer is running.
4 It is an offence to make unauthorised access to computer material.
5 No smoking, eating or drinking at the computer.
6 A machine which has been exposed to a moist atmosphere should be given time to dry out before being put into use.

Warnings are used to ensure safety, to prevent damage to equipment and breaches of security, and to ensure the law is not broken. The simplest warnings are basic instructions NOT to do something:

Don't do X. Avoid Xing.
No Xing. Never do X.

Sometimes the warning is twinned with matching good practice:

Always do Y; never do X.
Do Y rather than doing X.

Warnings may be made stronger by using *must/must not* and in some cases *should/should not.* For example:

The wire linking a static earthing band to earth must contain a resistor of at least 1 megohm.

If there is any reason to fear the warning may not be understood, a reason for the warning may be added. For example:

Never remove ICs with a screwdriver. *The pins are very fragile.*

4 Rewrite each of these warnings according to the prompt. Add a reason to the warning where you think it appropriate.

1 Don't give open access to PCs.

Avoid...

2 **You must not use your own floppies on these machines.**

Never...

3 

... must not...

4

Avoid giving financial information in a chat room.

Don't ...

5

NEVER GIVE OUT YOUR PASSWORD.

Always...

6

Don't use out-of-date anti-virus software.

Use ...

7

Never use a computer that has been standing for a long time in a cold environment without waiting until it has reached normal room temperature.

Always...

8

Cards must not be removed from their anti-static packing until required.

Never ...

9

Use an IC extraction tool; don't use a screwdriver.

... rather than ...

10

Always ensure the power is switched off when working on a computer.

... must not...

5 Translate some of the rules for computer use in your own college or university into English. Compare your translations with others in your group and agree on the best English versions.

PROBLEM-SOLVING 6 **Choosing a free ISP** Read these hints on choosing *a* free ISP. Then decide which of the options available offer the best deal to these users. Be prepared to defend your choice.

1 a household with a young family
2 a small home-based business
3 someone who enjoys online gaming
4 someone who doesn't want a lot of spam in their email

Using a free ISP requires no new technology - all you need is a computer, a modem, a telephone line, and the appropriate software (which is available free of charge when you sign up with the service). Once installed on your PC you can access the Internet as normal, but your connection costs only the price of a local call, and you pay nothing else - not even for features such as an unlimited number of email addresses, unlimited Web space and original content.

Most of the services are very similar, but it is still worth looking around for a service that offers at least the following features:

CD-ROM or Online sign up

Many free ISPs require you to sign up for their service online (which obviously means you already need to have an Internet connection and some experience with setting up a dial-up networking connection). If you are a complete beginner, you'll need a free ISP which can provide its sign-up software on CD-ROM that will automatically configure your computer to access the Internet.

Local rate calls

Although using the ISP is free, you still have to pay for your online time. Nearly all ISPs however provide local call access numbers. Any free ISP that uses a national rate number or charges an initial set-up or administration fee should be avoided.

Email

Having several email accounts is very useful - you can separate business and personal email for example, or provide an address for each member of your family. Many free ISPs also offer only Web-based mail which is great if you need to get into your computer on the move as you can access it from any computer with Internet access. POP3 email however is faster and more efficient and can be downloaded to your PC to read offline - a combination of the two is ideal.

Free Web space

A decent amount of free Web space would be around 25-50Mb. This would be sufficient for most of your own personal website developments. Also check to see if there are any restrictions on your use of Web space, since some free ISPs will not let you use the space for commercial purposes.

Newsgroups

Newsgroups are huge discussion forums on the Internet that are an amazingly rich resource of information and a brilliant way to communicate with other Internet users. Unfortunately they are also the home to some of the most unsavoury content on the Internet (they are largely unmoderated) and as a result many free ISPs restrict access to some or all newsgroups.

Customer Support

Check support line charges; many free ISPs use their support lines as a source of revenue relying on your ignorance to make money from the call.

The target audience is generally Net novices and, as a result, support lines are pretty much jammed all day with queries and connection problems.

Most use premium rate telephone line charges. However, there are a few free ISPs who only charge local or national rates for their telephone helplines.

Reliable Service

Of course all the features in the world won't make a scrap of difference if the ISP is unreliable and you find it impossible to log on. Look out for recommendations from friends and shop around. Interestingly many of the more popular services have become saturated and seem to be in a constant 'upgrading the network' phase.

There is nothing to stop you having more than one free ISP account. Windows will even enable you to run a number of different free ISP connection set-ups on the same PC so you can easily have multiple accounts and just use the best one on the day.

Option A

Bigwig

- 7 POP3 email accounts each with up to 1,000 aliases
- Scans all emails for viruses before they reach you
- 15Mb free Web space
- Access to 25,000 newsgroups
- Technical support at 50p/minute
- Comprehensive online information and easy -to-follow help available

Option B

Arsenal

- 5 POP3 email accounts
- Access to most newsgroups
- 5Mb free Web space
- Technical support at 50p/minute

Option C

ConnectFree

- 5 POP3 email addresses each password-protected
- Full access to newsgroups
- Unlimited Web space
- Free online webpage design service
- Free access to online multi-player games

Option D

Bun

- Unlimited email addresses
- 25Mb Web space
- Online help section
- Free access to CyberPatrol for blocking or restricting access to inappropriate content on the Web

Option E

Free4all

- Unlimited POP3 email accounts
- Email virus protection and junk email filters
- 25Mb of free Web space with option to increase at £1 per Mb per month
- Powerful enough to create quite advanced, functional sites
- Technical support at local call rates

For further details of ISPs try:
www. net4nowt. com
www. ispa. org. uk
www. ispc. org

WRITING **7** Write an article for a newsgroup of your choice. Keep it short and choose a meaningful reference name. Pass it to another student for a reply.

8 If you have access to newsgroups, browse one of the groups dedicated to computing. They have the prefix *comp.* Write a reply to one of the articles posted there. You need not post your reply unless you are confident it will be helpful. Ask your fellow students to read it first.

SPECIALIST READING

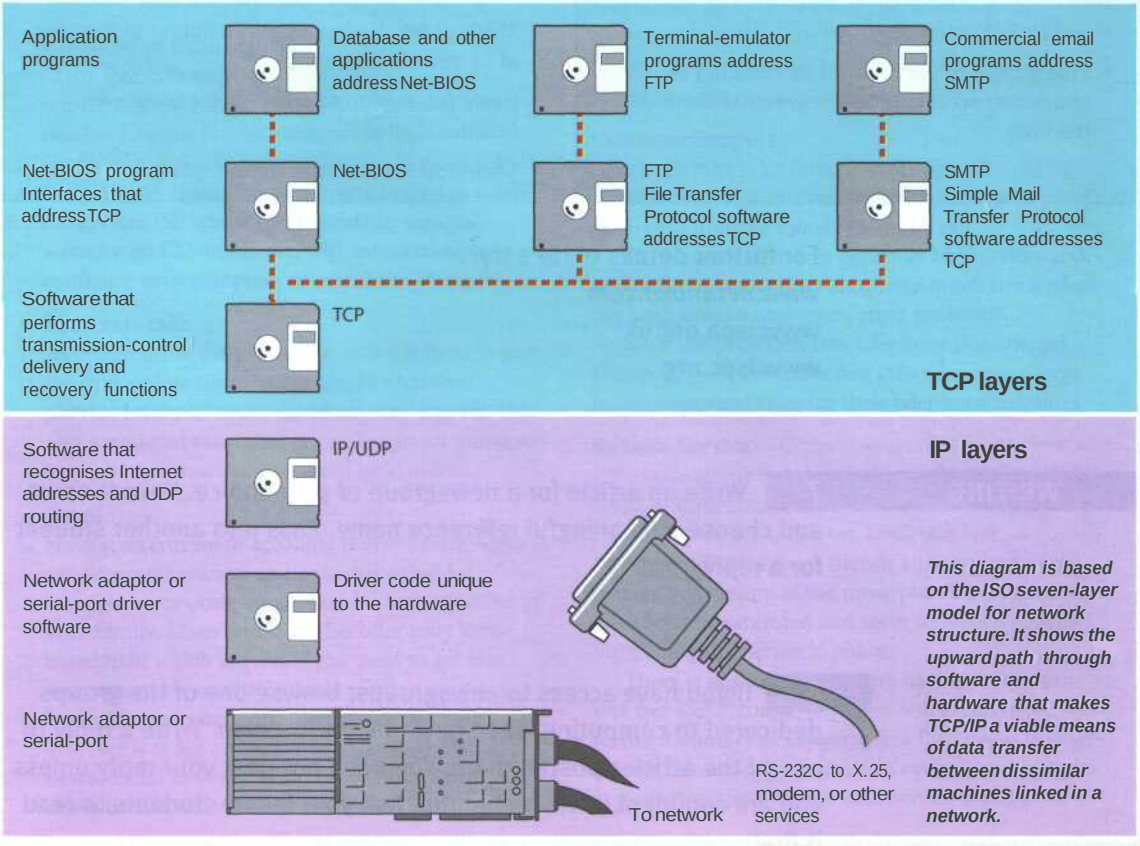
A **Find the answers to these questions in the following text.**

1 What purpose does the Internet address have apart from identifying a node?
2 What data-delivery systems are mentioned in the text?
3 What do IP modules need to know about each other to communicate?
4 How many Internet addresses does a gateway have?
5 What does UDP software do?
6 When does the TCP part of TCP/IP come into operation?
7 What processes are performed by TCP software to provide reliable stream service?
8 What standard protocols are mentioned which are used to deal with the data after TCP brings it into the computer?

How TCP/IP Links Dissimilar Machines

At the heart of the Internet Protocol (IP) portion of TCP/IP is a concept called the Internet address. This 32-bit coding system assigns a number to every node on the network. There are various types of addresses designed for networks of different sizes, but you can write every address with a series of numbers that identify the major network and the sub-networks to which a node is attached. Besides identifying a node, the address provides a path that gateways can use to route information from one machine to another.

Although data-delivery systems like Ethernet or X.25 bring their packets to any machine electrically attached to the cable, the IP modules



This diagram is based on the ISO seven-layer model for network structure. It shows the upward path through software and hardware that makes TCP/IP a viable means of data transfer between dissimilar machines linked in a network.

must know each other's Internet addresses if they are to communicate. A machine acting as a gateway connecting different TCP/IP networks will have a different Internet address on each network. Internal look-up tables and software based on another standard - called Resolution Protocol - are used to route the data through a gateway between networks.

Another piece of software works with the IP-layer programs to move information to the right application on the receiving system. This software follows a standard called the User Datagram Protocol (UDP). You can think of the UDP software as creating a data address in the TCP/IP message that states exactly what application the data block is supposed to contact at the address the IP software has described. The UDP software provides the final routing for the data within the receiving system.

The Transmission Control Protocol (TCP) part of TCP/IP comes into operation once the packet is delivered to the correct Internet address and application port. Software packages that follow the TCP standard run on each machine, establish a connection to each other, and manage the communication exchanges. A data-delivery system like Ethernet doesn't promise to deliver a packet successfully. Neither IP nor UDP knows anything about recovering packets that aren't successfully delivered, but TCP structures and buffers the data flow, looks for responses and takes action to replace missing data blocks. This concept of data management is called reliable stream service.

After TCP brings the data packet into a computer, other high-level programs handle it. Some are enshrined in official US government standards, like the File Transfer Protocol (FTP) and the Simple Mail Transfer Protocol (SMTP). If you use these standard protocols on different kinds of computers, you will at least have ways of easily transferring files and other kinds of data.

Conceptually, software that supports the TCP protocol stands alone. It can work with data received through a serial port, over a packet-switched network, or from a network system like Ethernet. TCP software doesn't need to use IP or UDP, it doesn't even have to know they exist. But in practice TCP is an integral part of the TCP/IP picture, and it is most frequently used with those two protocols.

[Adapted from 'How TCP/IP Links Dissimilar Machines', PC Magazine, September 1989]

B Re-read the text to **find the answers to these questions.**

1 Match the terms in Table A with the statements in Table B.

Table A

a Internet address
b Resolution Protocol
c Look-up table
d Gateway
e User Datagram Protocol
f Transmission Control Protocol

Table B

i Standard used for software that routes data through a gateway
ii Standard used by software that moves information to the correct application on the receiving system of a network
iii Standard used by software that manages communication exchanges between computers on the Internet
iv A 32-bit number identifying a node on an IP network
v Stored information used to route data through a gateway
vi A device for connecting dissimilar networks

2 Mark the following statements as True or False:

a Internet addresses are an integral part of the IP protocol.
b Internet addresses can be written as a series of numbers.
c UDP software provides the final routing for data within the receiving system.
d UDP recovers packets that aren't successfully delivered.
e TCP only works with packet-switched networks.
f TCP only works when it is combined with IP.