

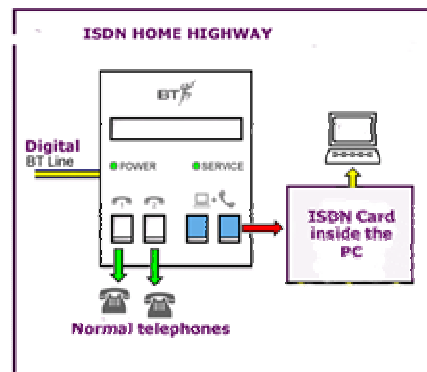
In order for you to connect to the internet, you need several components to do so –

1. Computer
2. Internet Software
3. Modem
4. Communications Line
5. ISP

Here are 3 ways of receiving internet broadband access.

### ISDN -

ISDN stands for **I**ntegrated **S**ervices **D**igital **N**etwork. It is a type of digital data and internet service. ISDN is a digital service; your computer connects to the ISDN line and transmits without having to convert it into sound first.



There are two types of rate service

- Basic
- Primary

The terminal adaptor allows you to connect to two telephones each with there own number (as shown above). This provides three fully duplex channels. The first channel is used for control purposes and the other two are to carry out either voice or data. The rate at which data travels on these two channels is 64kilobits per second. The two channels can be used in parallel to provide a data transmission of 128Kilobites per second. The terminal adaptor connect to two telephones each with there own number. A router can be then connected directly to an ISDN line providing the internet service on a LAN network. When you connect to the Internet, the router will automatically dial the server provider to establish the connection.

There are different ways of using of using ISDN. While on one channel, you can talk and the second channel used for data transmission or you can use both channel to obtain a high speed of 128Kilobite per second.

Uses for ISDN at Home!

With ISDN you can connect the home office from home. You can research via WWW and download various types of music. Use email to keep in touch, online gaming and holiday booking

Uses for ISDN at Work!

Online research via WWW as well as email to keep in touch with co-workers. Electronic diaries to keep information, remote working, faxing and video conferencing.

#### Advantages of ISDN

- Less errors in the digital service
- Connection will be fast
- Higher bandwidth therefore faster downloading speeds
- You can talk on the phone and surf the net at the same time
- Video Conferencing
- Not noisy compared to the analogue connection

#### Disadvantages of ISDN

- The installation costs are expensive
- If there is a problem in the system, there would have to be an engineer present to fix it.
- It cost for you to convert the ISDN system back to an analogue system.
- Some websites may have a different in speed of response
- No difference to the browsing experience on the web

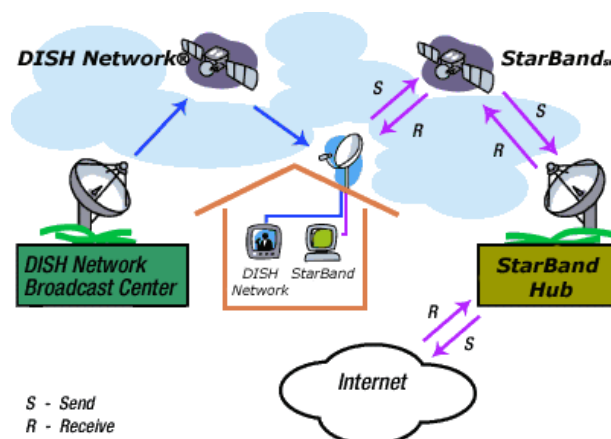
**SATELLITE** – Satellite internet doesn't use a telephone lines or cable systems however it uses a satellite dish for two-way uploading and downloading data communication system. Satellite systems are 10 times faster then a modem system using one tenth of the 500kbps downloading speed.

Satellite internet consists of

- A two foot by three foot dish
- Two modems
- Coaxial cables between dish and modem

It is important that there is a clear view to the south because orbiting satellites are over the equator. The internet uses an Internet Protocol (IP) multicasting technology which basically means up to 5000 channels of communication can be simultaneously served by a single satellite. This sends data from one point to many points by sending data at a compressed format which reduces the size of data and bandwidth.

Companies which provide this service include - StarBand, Pegasus Express, Teledesic and Tachyon. Here is a diagram of StarBand and how they operate:



#### Advantages

- It is several times faster than dialup
- Its always on
- Always available providing you have a clear view of the southern side

### Disadvantages

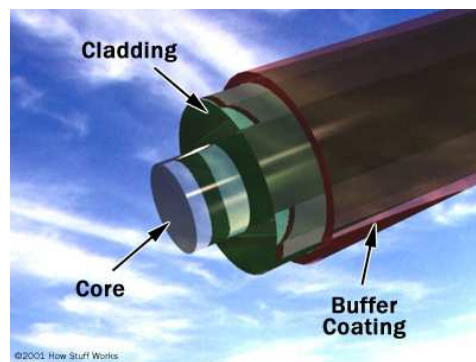
- Special equipment required
- Expensive to get started
- Slower than cable broadband
- Communication problems may occur e.g. weather and trees

### Optical

Optical communication uses light emitting diodes and lasers to transmit data. The light generated is directly controlled by electrical signals and so the light output can exactly match the pulses of a digital electrical signal. A wide spectrum of infra-red light maybe channelled through a fibre optic cable.

So what are fibre optic cables?

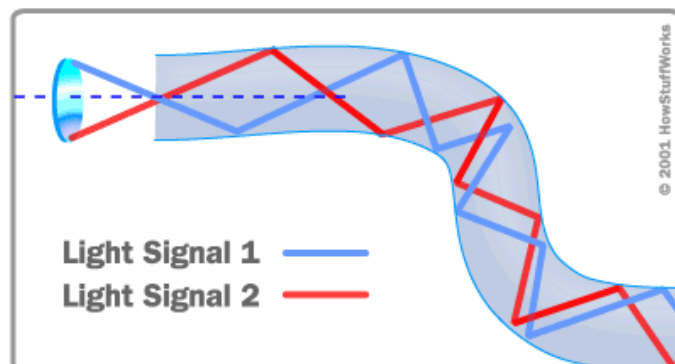
They are long thin strands of pure glass that are used to transmit signals over long distances.



The Core – The thin glass centre where data travels

Cladding – Outer optical material that reflects the light back into the core

Buffer Coat – Plastic coating protecting the cable.



The light in the cable travels through the core by constant bouncing from the cladding (mirror walls) a process called **total internal reflection**. However some of the light signal degrades mostly because of glass impurities in the fibre.

For you to have broadband access with fibre-optics you need –

- A Transmitter – receives and directs the optical device to turn light off or on generating a light signal
- Optical Fibres – This conducts the light signal over a distance
- Optical regenerator – This boosts light signals in case of the signal degrading
- Optical Receiver – Takes in the incoming digital light signals, decodes them and sends the electrical signal to the other users' computer.

Advantages

- Less expensive
- Thinner cable
- Higher carrying capacity
- Less signal degradation
- Low power
- Non Flammable
- Lightweight

Above are different ways of receiving broadband internet access and are several ways that society has benefited from internet access. Here I will discuss 4 ways in which the internet has had an impact on society.

### **E-Commerce**

E-commerce refers to the buying and selling of goods and service on the internet. By selling goods online, companies will save money on staff, buying land, buying the shop etc. For people who have difficulty in transportation or unable to visit the local supermarket, e-commerce is the solution. However there are some advantages and disadvantages of E-commerce. You can order from your home and receive your items within hours. Also it can be cheaper to do this and you can order 24/7. On the other hand, if buying clothes you are unable to try them on or check if the material is the right material for you. You don't get to see what you are actually buying which includes browsing in the sales for offers. There is a lot of credit card fraud and having to enter your bank details onto the website. People are more afraid of this if anything which explains why more people aren't using internet facilities. In addition, people are suffering from lack of exercise and social interaction which could contribute to a lot of problems. Some of the workers could feel isolated as they aren't interacting with the community.

Also internet banking is a part of E-commerce. This includes cheques being rapidly processed; salaries paid straight into your bank account; ATM machines working day and night and internet banking 24 hours of the day.

### **Video Conferencing**

Video conferencing is a conference between two or more recipients at different sites by using video or audio signals. Video conferencing is excellent for communicating with people across the world and being able to talk and see the recipient. In order for you to talk to the recipient they must have a good internet connection and have compatible software to yours. There are many advantages and disadvantages to video conferencing. Firstly, this is a cheaper way to talk to people as you are only paying to connect to the internet not for a phone call. As well you don't have to travel to see the person. On the other hand video conferencing means that both

people have to have the equipment to communicate. You and the person aren't actually face to face which could be misleading.

### **Email**

An email is mail composed and transmitted on a computer system or network. Using email you can email the person anywhere providing you know their email address. Mail can be copied to the central computer onto a disk and printed if necessary. In addition, both recipients need the connection of internet, software and a modem. Email has had an impact on society as a lot of people can use the service to communicate with each other whether in work or students in school. Some of the advantages are:

- Doesn't depend on the recipient being available to receive the email
- The mail can be send to a number of recipients at one time
- Other formats of data can be send other than text
- Speed of delivery is almost instant
- Can produce carbon copies
- Use of an address book to look up recipients
- Safe as requires your password to access.
- You can access your email account as long as you have an internet connection.

Some of the disadvantages are

- You need the equipment with a modem to access the internet.
- Spam email can be sent to you account
- Viruses can prevent you opening attachments up from the internet

### **Faxing**

Faxing is a telecopying device that electronically transmits written or graphical material over a telephone lines to produce a hard copy at the remote location. Fax provides immediate transmission of text or picture. Fax has made an important impact on society as business may need hard copies of documents therefore fax is a good way of sending these documents.

- o Pictures as well as text can be sent
- o The fax will continue redialling if the line is engaged
- o Almost immediate
- o Cost less than a stamp
- o Confirmation once sent
- o Only a fax and a phone line required

The disadvantages however are –

- o Security as a fax can be read by any one at the receiving end.
- o Sensitive faxes can be sent to the wrong number

### **Bibliography**

Internet Sources

[www.teach-ict.com](http://www.teach-ict.com)

[www.howstuffworks.com](http://www.howstuffworks.com)

Books

Information and Communication Technology - module 2515 by Steve McWeeney

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The main reason for my choice in a career in pharmacy is that I enjoy the continuous learning curve which benefits patients' welfare. This includes helping patients with the prescriptions of drugs and advising them on health aspects according to the drug which they purchase. This field requires communicating with patients' and having a wide knowledge of varieties of medicines. I find this interesting as the development of medicines is continually increasing so helping with health issues on a daily basis. I particularly enjoy chemistry as it requires a lot of problem solving skills and various experiments like making aspirins and calculating yield. I have enjoyed biology as it was partly about human body and different cell organelle functions which I found fascinating to learn about.

Deciding to study pharmacy has been helped by attending an open evening at Manchester University in 2003. This gave me an insight into what the pharmacy course entailed and realistic view of what skills are required to be successful in the pharmacy profession.

I had on a work experience placement Burnage Health Care Centre in 2003 for 1 week. I observed chiropody, orthoptic testing and district nursing home visit sessions. I shadowed a general practitioner in his surgery who gave me a lot of advice on different career fields although was unable to be placed with the pharmacist.

I have completed voluntary work at Moorfield House Elderly Care Home for 1 week spending time with the residence and assisting the careers. I spent time feeding, dressing and residents. I benefited from this because I was helping the people in the home whilst appreciating the need for care and empathy needed while looking after ill and elderly residents.

I have attended five components of a Prepare to Care course provided by the NHS. I studied diabetes, endocrinology, cardio vascular disease, dementia, multiple sclerosis, virus and bacteria, infections and infection control. This was a very interesting experience as it allowed me to study the human body aiding in my knowledge.

At college I attend pre-medical course which involves gaining a greater insight into different healthcare professions. I have been trained in BSL life support and have completed PBL cases and looked into medical topics such as anemia and sickle cell anemia. I have presented a presentation in pre-medical about the Lord of the Rings aiding in my presentation and communication skills.

Currently, I am in part-time work in the local store of Tesco. This requires me to participate in teamwork by my work colleagues. This has allowed me to improve in my communication skills by talking to customers and problem-solving in situations that occur.

I attended Irlam and Cadishead High School where I was a senior prefect in my last year. This post carried a lot of responsibility and initiative being in a team of other prefects and communicating with teachers. I have represented the school in various situations such as parent's evenings.

My main hobby is karate and been a member for 5 years receiving several awards obtaining a brown belt. I enjoy swimming and tennis in my free time with friends and family which require teamwork and enthusiasm. I have interests in dancing and achieved certificates for producing a dance piece production working in a team of 3 other friends.

I am looking forward to the social and academic challenges of university. I am a conscientious, determined and an enthusiastic person who will relish the opportunity to study pharmacy if I am given the opportunity.

