

Introduction to Broadband

Matthew Cook
<http://escarpment.net/>

Topics

- What is Broadband
- Different types of Broadband
- Availability
- The Missing Link
- Extra Considerations
- Case Studies

What is Broadband?

- Does not use the traditional phone line
- Instantly available (Always online)
- Faster than traditional dial-up
- Charged at a fixed rate
- Sometimes a one-off connection fee

- Problems with always online connection

What is Broadband?

- Traditional Modem technology is classified as Narrowband
- Cable or DSL technology is classified as Broadband
- Ethernet technology is classified as Baseband

What is Broadband...

- The meaning is often lost due to misunderstandings in the technology.
- However there are more important things to consider.

Different Types of Broadband

- Speed (the most important bit?)
- Types of Broadband
- Availability
- Presentation
- Connection to your computer

Speed

- Most consumer Broadband connections are 128Kb/sec and upwards.
- Speeds are increasing due to consumer demands
- How fast do you actually need
- Remember broadband is always on
- Remember the modem download days

Speed...

Upload/Download Question

- They are not the same in most cases
- Consider upload requirements

Service	Down load	Upload
150K	150Kbps	64Kbps
600K	600Kbps	128Kbps
1Mb	1024K	256Kbps

Types of Broadband

Cable

- Via dedicated modem or via setup box
- Provided by NTL et al
- Does not require BT phone line
- Cheap to add to your existing subs
- Offers 150Kb/sec to 1Mb/sec
- Invariable Customer Service issues

Types of Broadband...

DSL

- Lots of different technologies involved
- Special modem splits the digital and analogue signals back to the exchange
- Always on
- Lots more providers

Types of Broadband...

SDSL

- S stands for Symmetric
- Mainly for business applications
- More costly

Types of Broadband...

ADSL

- A stands for asymmetric
- Mainly for residential usage
- Far cheaper than symmetric broadband
- Need to consider upload requirements

Types of Broadband...

(or Internet Connectivity)

- ISDN
- BT Lan Extension
- Wired Connection
- Satellite
- Wireless (WiFi)

Availability

- Depends on service availability in the area you live.
- Also depends on residence type.
- BT ADSL information at:
<http://www.bt.com/broadband/>
- Often local campaigns
- Countrywide initiatives

The Missing Link

- After your broadband has been installed, it is only the start.
- How do you connect your broadband to your computer(s)
- Is your machine fast enough?

The Missing Link...

USB Connection

- Simple and offered with most modems
- Consumes CPU cycles
- Only useful as a temporary solution

- Need to use Operating System connection sharing for more machines.

The Missing Link...

Direct Ethernet Connection

- Simple and offered with most modems
- No extra CPU load
- Inexpensive

- Need to use Operating System connection sharing for more machines.

The Missing Link...

Small Router

- Connects between the modem and PC
- £30 - £80
- Usually has 4 port hub or switch
- NAT
- Firewall
- Port Forwarding

The Missing Link...

Wireless Router

- Similar principals to a small router
- £30 - £120
- Usually has a 4 port hub or switch
- 11Mb – 54Mb supported
- Be careful to secure your network

The Missing Link...

PC Based Router

- Use a spare PC
- Free opensource products
- Smoothwall
- IPCop
- E-Smith

Extra Considerations

- Web Space
- Static IP Addresses
- Virus Protection
- Firewall Software
- Spam Filtering

Case Studies

- Six case studies
- Kindly submitted by our very own committee
- Traditional Modems, DSL and Cable connections
- Different connection methods
- Different speeds, costs and service

Case Studies...

Chris Dawson

Modem or Broadband connection?

Broadband connection via broadband modem

What Internet service provider do you use + Rating?

Plusnet (Was NTLWorld – Cable) - Excellent

What speed (Download/Upload)?

512/256Kb/sec

What is the price per month?

£21.99 inc VAT

Do you get a static IP address?

Yes

How do you connect your computer to the Internet Connection?

ADSL Modem -> Ethernet Router -> Wireless Router

Case Studies...

Paul Mellor

Modem or Broadband connection?

Broadband connection

What Internet service provider do you use + Rating?

Plusnet – Excellent 9/10

What speed (Download/Upload)?

512/256Kb/sec

What is the price per month?

£21.99 inc VAT (50p a month discount per subscriber)

Do you get a static IP address?

Yes if you want one

How do you connect your computer to the Internet Connection?

ADSL Modem -> Ethernet Router

Case Studies...

John Vanags

Modem or Broadband connection?

Broadband connection via cable modem

What Internet service provider do you use + Rating?

NTLWorld - Good

What speed (Download/Upload)?

150/64Kb/sec

What is the price per month?

£17.99 inc VAT

Do you get a static IP address?

No

How do you connect your computer to the Internet Connection?

Direct USB Connection

Case Studies...

Julian Pickering

Modem or Broadband connection?

Modem

What Internet service provider do you use + Rating?

Enterprise - Could be better

What speed (Download/Upload)?

56kbaud (48000 connection) 2 - 4k a sec

What is the price per month?

£8 inc VAT

Do you get a static IP address?

No

How do you connect your computer to the Internet Connection?

Serial cable

Case Studies...

Jonathan Robinson

Modem or Broadband connection?

Broadband

What Internet service provider do you use + Rating?

DEMON - Good with Excellent SPAM filtering service

What speed (Download/Upload)?

500Kb/sec

What is the price per month?

£24.99 inc VAT

Do you get a static IP address?

Yes

How do you connect your computer to the Internet Connection?

Currently USB, but moving to Wireless Router

Case Studies...

Matthew Cook

Modem or Broadband connection?

Broadband connection via Settop box

What Internet service provider do you use + Rating?

NTLWorld – Excellent (Poor Customer Service)

What speed (Download/Upload)?

150/64Kb/sec

What is the price per month?

£17.99 inc VAT

Do you get a static IP address?

No

How do you connect your computer to the Internet Connection?

Settop Box -> Wireless Router

Questions and Answers

<http://escarpment.net/>
