## Data transferring technologies

### Wired and wireless methods

#### Wired methods

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| ADSL |  Cheaper because it can use ordinary telephone lines Can use the traditional phone line at the same time Transfer rates are faster than a conventional modem The connection is ‘always on’ |
| Fibre optic |  Expensive to install as it is a speedy method of transmission which uses light beams to carry data Connections are not available in many areas Very fast secure data transmission – high bandwidth Can transmit data over exceptionally long distances without much data loss More manageable than normal cable |

#### Wireless methods

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| Bluetooth |  Wireless transmission using radio waves Devices find and communicate with each other if they are in range Suitable for small devices such as a mouse because the hardware is small Much lower power requirement than Wi-Fi Obstacles can hinder transmission Has a range of up to 10 m Maximum transfer rate of about 24 Mbps |
| 304px-Wi-Fi_LogoWi-Fi |  Has a range up to 100 m Maximum transfer rate of about 54 Mbps Normal transfer rate of 721 Kbps  Uses a wireless network interface card (NIC) As the number of stations that can join the network increase, the performance decreases Normally requires an access point |

#### Mobile data transmission

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| 3G |  Wireless transmission using radio waves Devices find and communicate with each other if they are in range Suitable for small devices such as a mouse because the hardware is small Much lower power requirement than Wi-Fi Obstacles can hinder transmission Has a range of up to 10 m Maximum transfer rate is about 2 Mbps |
| 4G |  Successor to 3Ghttp://images.clipart.com/thb/thb9/PH/images/45382416.thb.jpg?1001643523 Uses Open Wireless Architecture – supports multiple wireless air interfaces High speed transferability – from 100 Mbps to 1 Gbps Security measures Greater information exchange capabilities |

Remote methods

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| Email |  You need an email client such as Outlook The client allows you to create a message, save it, add attachments, send it, etc. You need an email client which keeps your email account The sender creates an email, the client passes the message to the server which in turn can send it on to the receiver’s server from which the client can retrieve the message |
| Internet / cloud |  A cloud system is essentially a collection of different architectures that hold data and software either by choice or for a business and which can deliver data and software resources to any system that pays for its service (sometimes it is free) It does this through a web-based interface Resources are given as services through the Internet |
| Peer-to-peer file sharing |  Need to have a network of people who also want to share files Each computer requires special software – this software points to a network tracker which gives your computer information about the computers connected to it An account is then created in which you can specify which files you want to share Each computer is both the client and the server of the other computer This means that if one system breaks, the others can keep functioning File sharing can often break software copyright laws |