Wi-Fi-Net Technical Terms

2G - Second-generation wireless network. 2G systems are Digital cellular telephone networks such as GSM.

2.5G - Commonly used to describe enhancements to 2G networks, such as GPRS, which offer data services in addition to the existing voice services

3G - Short for third-generation wireless, 3G refers to next-generation networks for personal and business wireless connectivity, especially mobile communications.

ADSL – Asynchronous Digital Subscriber Line. Used to explain the techniques employed to pass high speed digital data through conventional telephone line. An asynchronous connection has a higher download speed than upload speed.

Anti-Virus – a dedicated software programme designed to scan all incoming and outgoing internet and email traffic to detect and eliminate viruses from infecting your computer network.

Backhaul – the connection used between the distributed wireless mesh and the generally this will comprise of ADSL and/or bi-directional satellite.

Bi-directional – a satellite link that passes digital data in both directions. Many satellite links only allow data to be transferred "down" to the end user and they use telephone line connectivity to transfer data from the end user to another or "up" to the internet.

Bit Rate - the number of binary digits, or bits, transmitted per second (bps). Communications channels using telephone channel modems are established at set bit rates, commonly 300, 1200, 2400, 4800, 9600, and 14400.

Bluetooth – using Bluetooth to provide localised wireless distribution of advertising content. Transmissions can be received by individuals in that location who wish to receive them using mobile phones, PDA’s or laptops.

Broadband - refers to data transmission where multiple pieces of data are sent simultaneously to increase the effective rate of transmission, regardless of actual data rate. Speeds of 500kbps or more are considered to be broadband.

Byte - a digital "word" comprising of 8 bits.

Central access point – Mesh box using Wi-Fi (802.11b/g) technology. Average range 400 – 500m radial coverage from the access point.

Contention ratio – describes the maximum number of users sharing the bandwidth of a given backhaul connection.

Data capping – is the limit imposed by the ISP on how many kilobytes or megabytes of data you are allowed to download and upload over a stated period (i.e. per month) If the stated limits are exceeded your connection could be disabled or you could be obliged to increase the service level you are currently subscribing to.

Domotics - is the application of computer and/or robotic technology to household appliances.

End-user Access Point – extra equipment required is 1x PCI (desktop) or PCMCIA (laptop) 802.11b/g card. An external aerial may be required depending on line of sight and distance from the end-user and the access point.

Firewall – a dedicated piece of hardware or a software programme that is designed to protect your network or computer from malicious attacks.

Free space Optics (FSO) - Like fibre, FSO uses lasers to transmit data, but instead of enclosing the data stream in a glass fibre, it is transmitted through the air.

Gateway – a generic term used to describe a piece of equipment that is the gateway to Internet access point, for other sub-nets and all the machines connected to it.

Hotspot – is the term used to describe a location where wireless internet access is available, normally at a cost. Examples of operational hotspots include coffee shops, fast food restaurant chains, airports, railway stations, some hotels and public houses.

IEEE - is an international non-profit, professional organization for the advancement of technology related to electricity. It has the most members of any technical professional organization in the world,

Internet Protocol (IP) - is a data-oriented protocol used for communicating data across a packet-switched inter-network.

ISP – Internet Service Provider, the company that you subscribe to for your internet connection. They can provide you with email addresses, web site hosting and different service levels.

Kilobyte - 1000 bytes (which equals 8000 bits)

Kbps and Mbps – Kilobits per second and Megabits per second are used to describe the data transfer rate over a given connection.

Mesh Box – a multi function wireless based product that can behave as a gateway or a router. Several Mesh Boxes will Mesh together and increase the area to which the backhaul is being made available.

Powerline - a digital IP based data connection and transmission system that uses a building's electrical network as its' highway'.

SDSL – Synchronous Digital Subscriber Line. A synchronous connection that has the same download speed and upload speed.

TCP/IP (Transmission Control Protocol/Internet Protocol) - is the basic communication language or protocol of the Internet. It can also be used as a communications protocol in a private network

Video on demand (VOD) - allows users to select and watch video content over a network as part of an interactive television system, but streaming video servers can also serve a wider community via a WAN (wide area network)

Voice over Internet Protocol (VoIP) - is the routing of voice conversations over the Internet or through any other IP-based network, and not using the traditional PSTN systems.

WEP – Wired Equivalent Privacy. The protocol used to encrypt data being transmitted wirelessly to protect the data from unauthorised access.

Wi-Fi – part of the wireless spectrum which is license exempt and has been made available by OFCOM for use in short range, low power data wireless networks. All certified equipment carries the Wi-Fi logo on it's packaging.

WIMAX - is a term to describe standard, interoperable implementations of IEEE 802.16 wireless networks, in a rather similar way to Wi-Fi being interoperable implementations of the IEEE 802.11 Wireless LAN standard. However, WiMAX is very different from Wi-Fi in the way it works.

WISP – Wireless Internet Service Provider.

802.11 – the networking standards ratified by the IEEE (Institute of Electronic and Electric Engineers) and implemented by all manufacturers of Wi-Fi equipment.