

DSL – The wait is over, well for some of us at least!

By Sarah Jane Free – Project Manager – Comms-Online

DSL has finally arrived in Ireland. After a long and frustrating wait DSL broadband connectivity is available to the Irish business and residential market. DSL is a relatively new technology in Ireland and its aim is to provide business and residential customers with "always on" high speed Internet access. DSL will offer rapid downloads of audio, visual and graphic files, offering customers a cost effective alternative to ISDN and / or leased lines. It must be noted that with an "always on" Internet connection you are in a situation where you have a continuously open pipe to the internet and it is for this reason that security must be taken into serious consideration - a firewall is a very advisable option. The DSL service in Ireland will be provided via the existing analogue network – i.e. your telephone line at home or business.

A form of DSL was first developed in 1987 by Bellcore (Bell communications research), XDSL was the original technology used by Bellcore to deliver 500 TV channels to consumers via video on demand or VOD, however demand in the market for this service was slow and XDSL faded into the background. With the mass introduction of the Internet in the 1990's consumers' demands for information and speedy data transfer increased dramatically. Over the last five years the Internet has swept throughout Ireland with more and more households and businesses connecting. To date 44 per cent of the Irish market has connectivity to the Internet from home! Demand for faster data transfer is on the



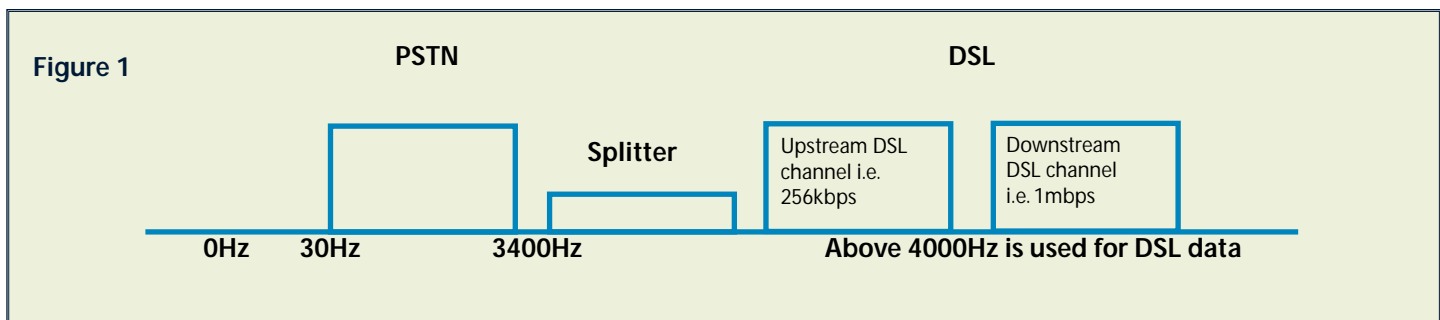
rise and as competition and deregulation increase this is closer to becoming a reality for consumers both in business and for residential users. A solution was needed where a cost effective and rapid data transfer service is offered as one. Here in Ireland DSL is currently that solution.

How does DSL work? DSL technology takes your existing PSTN line and effectively splits it in two giving you two channels that will then be used for voice and data traffic.

These channels will work in parallel so voice traffic will be unaffected by the introduction of DSL. The first DSL product to be launched to the Irish market from Eircom is their i-stream service which is an ADSL service / (Asymmetrical Digital Subscriber

Line). This product offers you two channels - one for upstream data transfer and another for downstream data transfer. These two channels will be asymmetrical, meaning that the channels will be of different proportions. For example with eircom's enhanced package you will receive an upstream transfer speed of 256kbps and a downstream transfer speed of 1mbps. This product will benefit homes and businesses looking to replace their dial-up ISDN connection with an "always-on" DSL broadband connection where dialling up is no longer required. With DSL you have a continuous channel to the Internet where you just have to "log on" to gain access. Other products to be launched in the Irish market over the coming year are SDSL or Symmetric Digital Subscriber line where the line is divided equally for both upstream and downstream data transfer. This product may be of benefit to businesses that operate over a LAN or that share a VPN and will be a cost effective alternative to leased line connectivity.

The basic technology behind DSL is the use of the untapped frequency range present in the ordinary phone line. Typically the PSTN network only taps into the hertz range 300 – 3400. Voice traffic that is carried along the PSTN network is filtered and all of the ranges outside 300 – 3400Hz are in essence chopped off. DSL will use this untapped frequency, therefore allowing DSL and PSTN to operate in parallel as they are effectively operating on different frequency ranges. Figure 1 below illustrates this technology.



There are certain circumstances however that are out of the customer's control where DSL will not be an option, for instance if you are more than 2.5 to 3km away from an exchange. Also if repeaters are used on the lines then DSL will not be an option. Repeater are used to amplify signals on PSTN lines that cover large distances - these repeaters are not compatible with DSL.

There are also certain pre-qualification factors that need to be addressed before a customer can be approved for DSL. For instance, the condition of the line that you wish to use for DSL must be tested and either passed or failed. A line may fail if it is very old and not of a high enough quality to support

DSL. A line may also fail if the exchange that the line is connected to cannot support DSL. These factors are out of the customer's control and will have an impact on the availability of DSL to the Irish market.

As DSL has only recently been rolled out in the Irish arena the service is not currently available to everyone and it will be many months before the rollout is complete. The first areas to be rolled out are parts of Dublin where Eircom is offering this service. Eircom will also offer ADSL services throughout Ireland in the coming months. Following on from Dublin will be Cork, Limerick, Northwest, Galway and Kerry. EsatBT also launched a DSL service in

Limerick in April with the Roches Street exchange being the first to offer DSL. EsatBT will continue to rollout this service on an exchange by exchange basis throughout the country over the coming months and by December 2002 plans to have unbundled 40 exchanges which can potentially serve 400,000 lines.

In summary DSL has arrived on Irish shores. We've waited a while and for most of us the wait continues. However it appears to be a service worth waiting for and in time we will all hopefully have the opportunity to benefit.

E-mail:- dsl@comms-online.com to receive an ISDN vs DSL calculator.

Number Portability

by Sarah Jane Free - Project Manager - Comms-Online

Number portability has played a vital role in the competitive nature of the Irish telecommunications market and offers an ease of movement between different telecoms operators never on offer before. Number portability offers consumers a freedom of choice and the flexibility to pick and choose between carriers. Consumers can now "sign up" for certain telecoms services and have the option of moving to an alternative service provider if they believe a better or more cost effective service is being offered.

Number portability can currently be divided into three main categories namely operator portability, location portability and service portability. Operator portability basically means that a customer can change operator (or service provider) and keep their same directory number. There are three types of operator portability: geographic, non-geographic and mobile.

Location portability means that if a customer moves to another premises, they will have the option of keeping their main number i.e. their listed directory number which for most if not all businesses is a must, as a change in a company's main telephone number would be a huge headache, a headache not just on the practical side but on an economic side too.

And finally service portability where a customer changes from one operator's service to another while holding onto the same directory listed number. However there are limitations where service number portability is involved. With regards to this type of portability the Office of the Director of Telecommunications Regulation (ODTR) has stated that they will prohibit the portability between services which are fundamentally different or have distinctive pricing arrangements.

Number porting has not always been an option in Ireland, and the ODTR has played a very important role in the deregulation of number portability in the Irish market place. In January 1999 the ODTR launched a consultation process in relation to number portability and following this consultation this was one of the points that was decided upon.

Non geographic number portability was to be introduced in the



Irish market by the January 2000. This meant that all operators offering services under this category had to offer an import and export facility from the outset, offering existing consumers the opportunity to change from one operator to another. Customer initiated geographic number portability was to be made available by all operators by 30th of November 2000, however unfortunately some of the leading operators are still not in a position to offer number portability.