

Internet Telephony

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In early 1997 the Australian Internet service provider, OzEmail, launched a new product, OzEmail Phone, which it claimed was the first commercial service in the world providing Internet telephony from a standard telephone. It is noteworthy because the product made Internet telephony a realistic competitor in the long distance call market by allowing customers to make telephone calls using the Internet with a touch tone telephone at a substantially reduced rate compared with existing fixed line and mobile services

This short article looks at the technology, the response of carriers and regulators to Internet telephony and some of the issues challenging the success of Internet telephony in Australia.

The Technology

The technology to make real time telephone calls over the Internet has been available for some time, but both parties have needed personal computers. OzEmail Phone allows a caller to make a standard telephone call to a datacentre using a touch tone telephone. There, the caller's voice is digitised before the signal is sent to a local carrier in the destination country using the Internet. When it is received the local carrier connects the call to the destination telephone.

Acceptance of Internet telephony as an alternative to PSIN (Public Switched Telephone Network) has been slowed by compatibility and quality problems including response times, drop out and echoes and until now the need for microphones and speakers. While the impact on telephony carriers may not have been felt as yet, technological developments and improving quality are a cause for concern as Internet telephony has the potential to drive down prices in the long distance market.

The Competitive Response

Such carriers have responded by embracing rather than ignoring the new technology. Telecom Finland offers a service using VocalTec's Internet phone software. Telecom New Zealand has also announced a pilot project trialing Internet telephony using VocalTec servers and expects to offer Internet telephony on dedicated links by mid 1997.

In the US, telecommunications operator RSL Communications has joined with Israeli company Delta Three to offer an Internet telephony service between the US and Colombia. Sprint has also entered the market in a measured way beginning with conferencing applications and a product called Give Me a Call which allows companies to speak to visitors who are visiting their homepages

According to some commentators, other carriers in the United States are hoping that legislative changes regulating the software will be enacted, slowing the acceptance of the Internet telephony technology¹. A group of US carriers (via the America's Carrier's Telecommunication Association or ACTA) have submitted a petition to the US communications regulator, the Federal Communications Commission (FCC), asking that providers of Internet telephony software be deemed to be telecommunications carriers and therefore subject to FCC regulation. This would require Internet telephony providers to file tariffs and pay access charges to local carriers. We understand that the FCC is still considering the petition; however the FCC Chairman, Reed Hundt, has stated that, "...I am strongly inclined to believe that the right answer at this time is not to place restrictions on software providers, or to subject Internet telephony to the same rules that apply to conventional circuit-switched voice carriers. On the Internet, voice traffic is just a particular kind of data, and imposing traditional regulatory divisions on that data is both counter-productive and futile"

Australian Telecommunications Regulation

In Australia, the provision of telecommunications services and facilities is regulated by the *Telecommunications Act 1991 (Cth)* (Telco Act 1991). The Telco Act 1991 provides for an interim position for a fully competitive telecommunications industry by establishing a fixed network duopoly and mobile triopoly and allowing full third party resale of services. Any person may provide telecommunications services pursuant to a class licence, however, only a limited number of persons (the licenced carriers) have the right to install and maintain telecommunications networks.

From 1 July 1997 when the *Telecommunications Act 1997 (Cth)* comes into effect, a new regulatory regime will provide open competition in the markets for the provision of both telecommunications services and infrastructure. Service providers will have rights to access and interconnect to carrier networks on reasonable terms and conditions.

As providers of a telecommunications service, Internet service providers must currently operate in accordance with the limited provisions of service provider class licences issued under the Telco Act 1991. This light handed regulatory regime will continue after 1 July 1997 when, provided such service providers do not own substantial infrastructure, similar rules will generally apply

¹ Bucholtz, Chris "Embracing Internet telephony", *Internettelephony*, retrieved online: www.internettelephony.com

Pricing pressures & timed local calls

Internet telephony, while less reliable, is significantly cheaper than PSTN telephony. There are a number of reasons why this is so. Internet telephony relies on packet-switching which enables the compression of data and avoids tying up lines for the duration of the call. Internet telephony providers can take advantage of the relative cheapness of using the leased capacity in the Internet backbone and as they are not carriers do not have to pay a share of universal service costs

The current "honeymoon" pricing period may soon end if plans by the carriers to charge on a timed basis for receipt of data calls is implemented. Under current legislation (the Telco Act 1991), carriers must offer untimed local voice calls made using the standard telephone service (PSTN services) to residential customers (and customers who are welfare or charitable bodies). Currently carriers offer an untimed local voice and data call option to both residential and business customers.

With the rapid growth in Internet use, Telstra has been pushing for the ability to charge both residential and business customers timed local calls when linking up to the Internet. In the Senate Inquiry into the post-1 July Telecommunications Bills Package held in early 1997, Telstra claimed that it was facing significant congestion on its network as a result of strong growth in the number of very long local calls which were attributable to Internet usage. Internet service providers vigorously opposed this move claiming that it would seriously damage Australia's adoption of the Internet. It would also adversely affect the viability of Internet telephony.

The *Telecommunications Act 1997 (Cth)*, as passed by the Senate in late March 1997, requires that from 1 July 1997 all service providers must offer an untimed local voice and data call option to residential customers (and customers who are welfare or charitable bodies), and an untimed local voice call option to all other customers (eg business). Therefore Telstra may charge businesses for local data calls on a timed basis, however, residential customers will continue to enjoy untimed local data calls.

There remains some uncertainty as to timed line tariffs for the receipt of calls (which would be charged to the Internet service providers and not the consumer). This leaves open the possibility that carriers will use double ended charging as a means of complying with the law, while still curbing the growth of Internet service providers and forcing traditional PSTN pricing of Internet telephony services. In an attempt to allay the fears of Internet service providers, the Office of the Minister for Communications and the Arts has stated that any attempts by carriers to impose a B-Party charging regime will be prevented, with the Government currently considering how it will give regulatory effect to this intention.