



**Annual Review of Internet Usage
2006**

INTRODUCTION	3
OVERALL INTERNET USAGE	3
Internet Penetration	4
Broadband.....	5
ADSL.....	5
SDSL	8
Mobile Internet Access.....	9
PRICING	10
Dial-up	11
Pay-as-you-go	11
Pre-paid Internet Access	11
ADSL	12
SDSL	12
Comparison with Other Jurisdictions	12
CONCLUSION.....	14

Internet Usage in Jersey – JCRA 2006 Trend Report

Introduction

In common with regulatory authorities in other jurisdictions the JCRA monitors usage of the Internet and the means by which users access the service.

Internet access is available in Jersey through a number of Internet Service Providers (ISPs) both on-Island and off-Island. Because of technical issues broadband is only available from on-island ISPs, while restrictions on interconnection to Local Rate (0844 and 0845) and Freephone (0800) Internet services, means not all dialup ISP's are accessible from Jersey.

Overall Internet Usage

During 2006 the number of ISP and Internet access accounts among all operators in Jersey grew by 14.5% overall. This is shown in Figure 1 which also shows the percentage growth of broadband connections as a factor of the overall total. The number of ISP accounts is somewhat distorted by the methodology of assessing usage of dialup adopted by ISPs, since many of their dialup customers may also have and use a broadband account. However, this is a measurable increase on 2005.

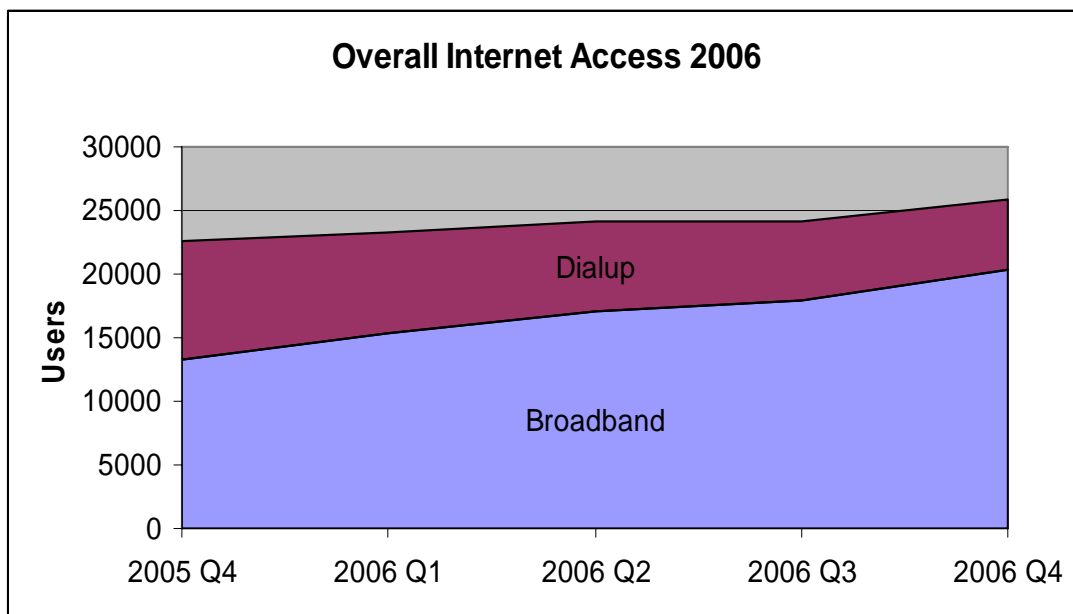


Fig 1

Dial-up accounts (Figure 2) declined by approximately 32% to 5516 which seems to show that users are substituting dialup with broadband. There is still some difficulty in determining the exact number of dialup accounts since there are many consumers who use accounts outside of Jersey, typically ISP services accessed by prefixes 0800 and 0844 or 0845, which are not within the JCRA statistical capture boundary. However, AOL estimates that there are still around 700 users are registered on their service but recognize that these users do not necessarily use AOL as their primary provider, but retain email accounts or use AOL dialup when travelling. There is a plateau between quarters 1 and 3 of 2006 which may indicate that the registered users of dialup have perhaps not been accurately assessed as mentioned above.

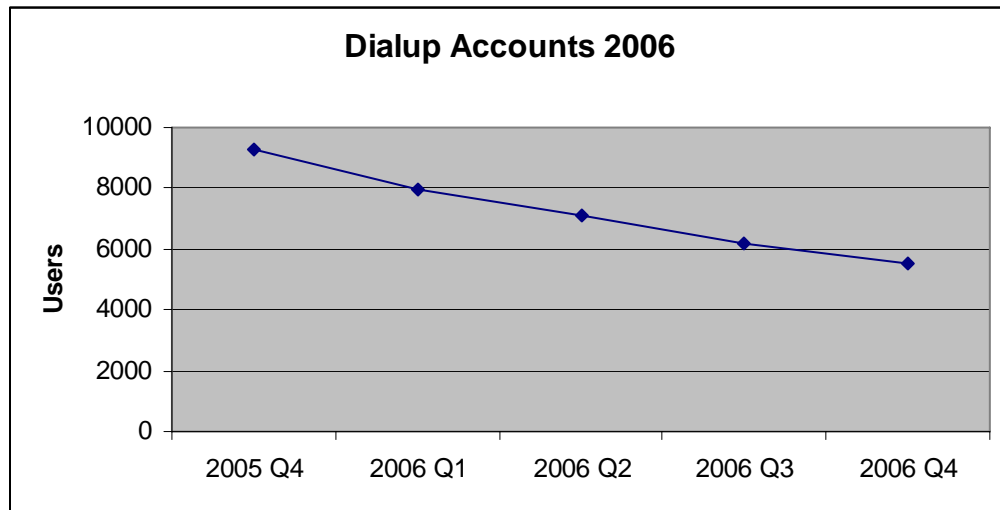


Fig 2.

Internet Penetration

Overall penetration of Internet usage is sometimes interpreted as the number of ISP registered accounts as a percentage of the population, and sometimes as a percentage of the number of households in the jurisdiction. According to the States of Jersey Statistical Review 2002 there are 35,562 households in the Island and the JCRA estimates 25,939 registered ISP accounts at the end of 2006, an increase of 3,435 on 2005. This would represent a penetration of about 73% which is above the UK at 57%¹. However, it is known that the housing stock has marginally increased since the 2001 census statistics were collected. Broadband penetration by household is 57% which is above the UK at 40%²

It would appear from that information that the overall penetration of access has increased by about 13% and is well above the EU(15)³ average of 55%.

¹ National Statistics <http://www.statistics.gov.uk>

² Ofcom Telecommunications Market Report 2006 <http://www.ofcom.org.uk>

³ Source: EU <http://epp.eurostat.cec.eu.int/> and OECD <http://www.oecd.org>

Overall market share by operator is shown in Figure 3

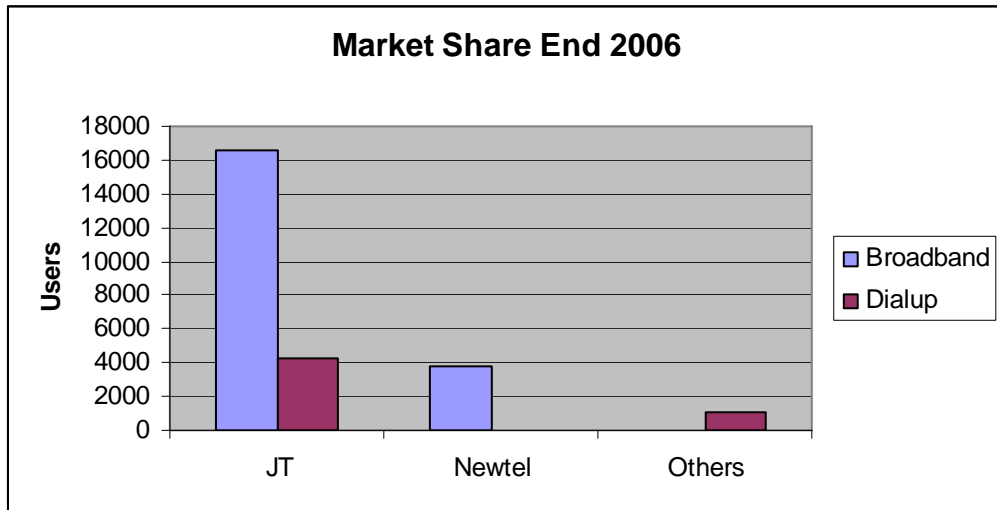


Fig 3

Broadband

In the last year or so the broadband service offered by JT as both a retail and wholesale product has changed substantially. In 2005 the basic rate for download was 512kb/s and upload 384kb/s. At the end of 2005 JT introduced a cheaper 'entry level' product at the lower rate and increased its basic offer to 1Mb/s download while maintaining the same upload rate, although it increased the contention ratio from 40:1 to 50:1 potentially reducing user experience at peak times.

At the end of 2006, JT again revamped its service, eliminating the 1Mb/s offer and quadrupling the maximum speed on its entry level product to 2Mb/s. This was accompanied by heavy promotion by both island DSL providers. At the same time a number of other broadband offers were eliminated from the available portfolios.

ADSL

Broadband growth has been steady throughout the year. Figure 4 shows the growth during the 12 month period. The number of broadband subscriptions across all available offers was 20,423 at the end of 2006.

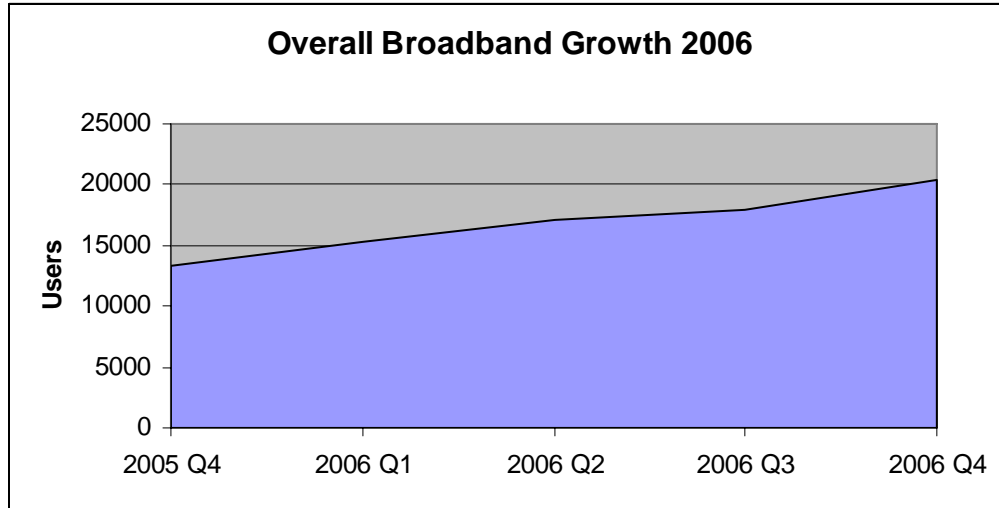


Fig 4

The growth of broadband has largely been at the expense of declining dialup access as users switched to the faster service. However, there appears to have been a slight increase in the overall number of Internet users and this may be accounted for by a slightly larger increase in broadband take up against dialup movers or as a statistical anomaly caused by, for example, users moving from off-island dialup providers that are not captured by JCRA statistics. Users who use the Internet for more than about 23 hours a month on average would have found a net cost benefit in switching to a broadband access service (see below). This would be especially so for those users who previously rented a separate fixed line for Internet modem access.

The trend in switchover from dialup to broadband is illustrated in Figures 6. Predicting the ultimate penetration of broadband access is difficult as technology and the services offered develop. For instance, a lower priced basic service was introduced at the end of 2005 which had the effect of increasing the number of users in the faster (1Mb) service as users seemed to wish to retain the new faster service rather than opt for a lower cost. This has been repeated in the last quarter of 2006, although there is now effectively no lower cost option.

Some users may not wish to switch to broadband, especially if they are low users or only use their access to recover email. For this group there is perhaps also little incentive to change since the additional cost provides little net benefit. Moreover, this is possibly also a group that would not necessarily subscribe in future to more advanced broadband services for financial or other reasons.

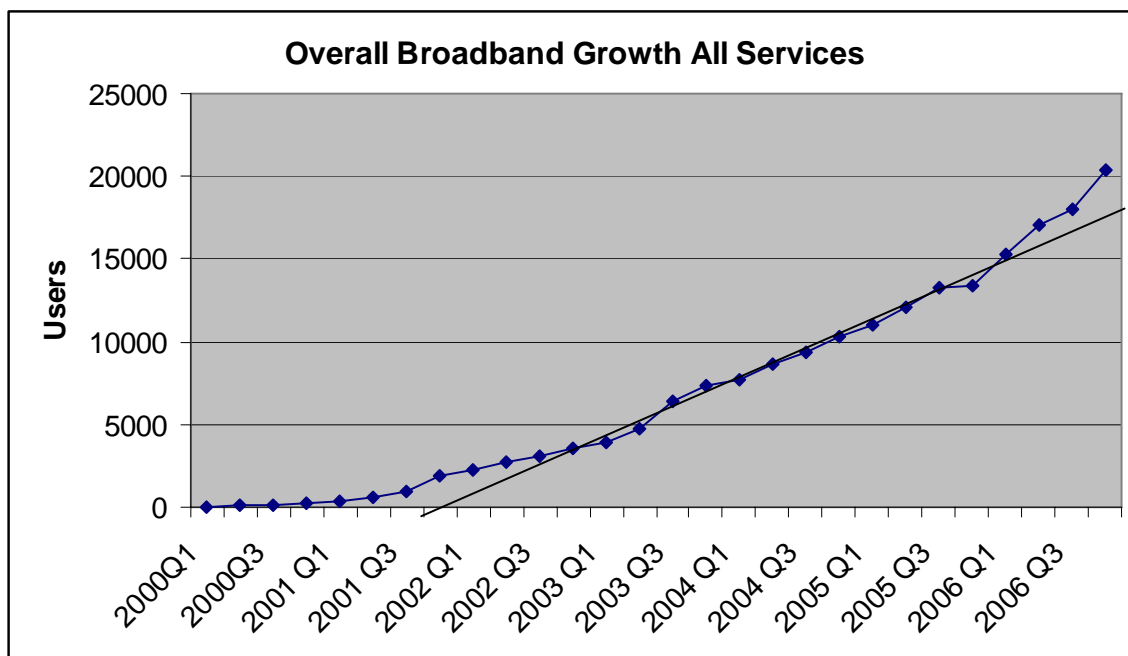


Fig 5

The number of broadband users increased by more than 50% during the last 5 quarters. Not all of this growth can be explained by consumers moving from dialup, but as noted in previous reports, the method of data collection of dialup users by some ISP's does not allow for accurate figures. Nevertheless, the overall growth as shown in Figure 5 has been quite linear (see overlay line) up until the last quarter of 2005 when lower prices were introduced this followed a slight slowing during quarter 3. Growth was slightly elevated during quarters one two and three of 2006 then it was followed by heavy promotion accompanying the service change to 2Mb/s during the last quarter which resulted in an upward lift in numbers at the year end.

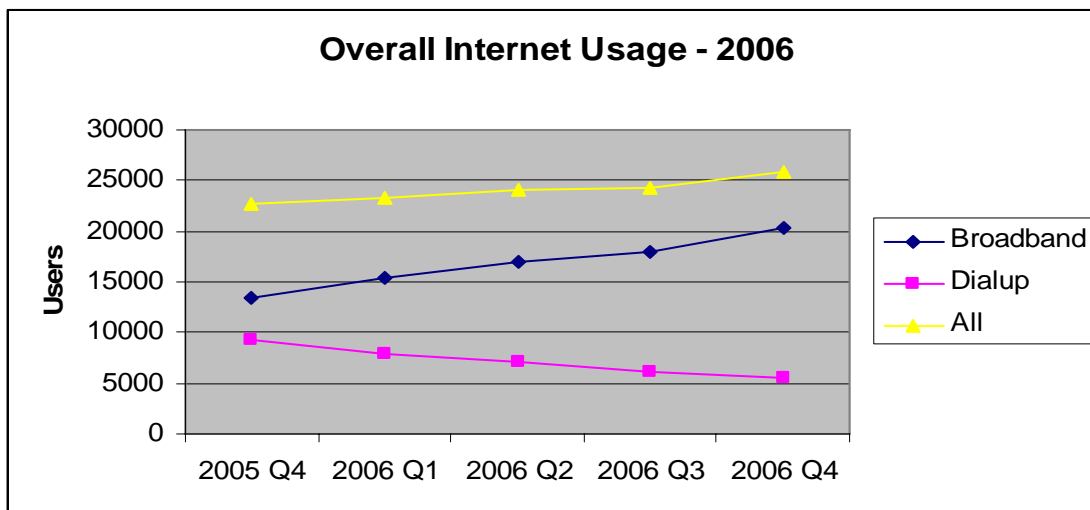


Fig 6

Since the end of 2006 there are now only two broadband offers available from suppliers. These are split into basic, which is served at 50:1 contention and Premium which is at 20:1 contention. Figure 7 illustrates the ratio of premium service users to the overall total of broadband users.

The contention ratio expresses the number of other users sharing the availability of the maximum bandwidth at any given time. The worst case is that downloaded data will be reduced by the bitrate/contention ratio, for example $2\text{Mb/s} / 20 = 100\text{kb/s}$. In practice, the traffic variations on any given DSLAM will rarely reach this base level unless the concurrent users are very high users of information download. This can occur if some users configure their connection to use as Peer to Peer networks or connect to streaming video or audio services. Management of users over the available DSLAMs can mitigate this problem.

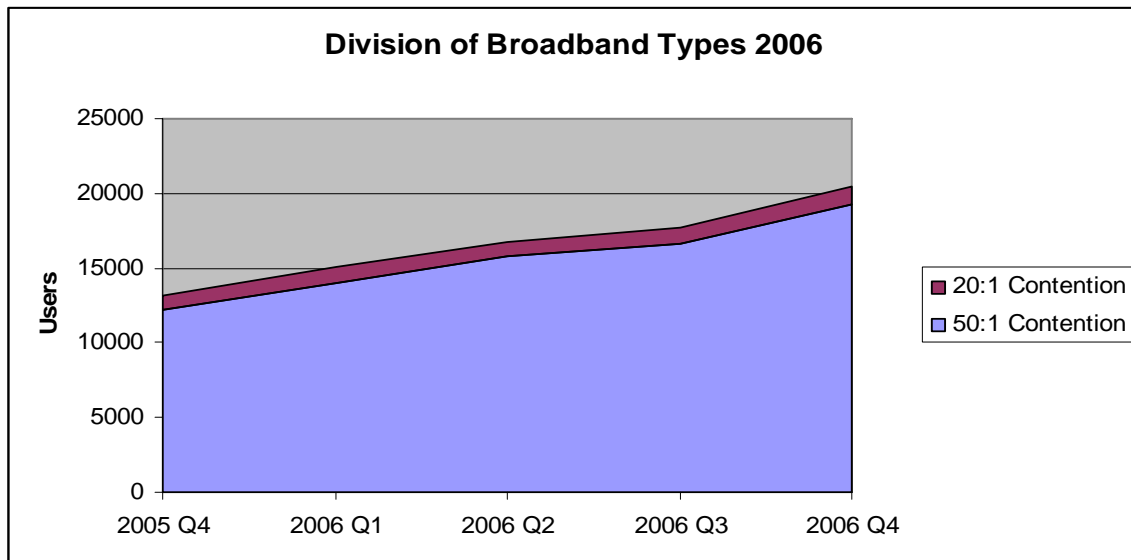


Fig 7

Changes in the available JT products means that only one download rate is now on offer, 2Mb/s. Differentiation, therefore, is by contention ratio alone

SDSL

SDSL introduced in 2005 enables users to create Virtual Private Circuits across the service or the Internet. JT has recently offered three products as both retail and wholesale these being 1Mb/s, 1.5Mb/s and 2Mb/s. However, at the end of 2006 all products were uplifted to the 2Mb/s rate with contention at 5:1. The current usage is shown in Figure 8 the subsets of lower rates previously available have not been included only the total number of users is shown.

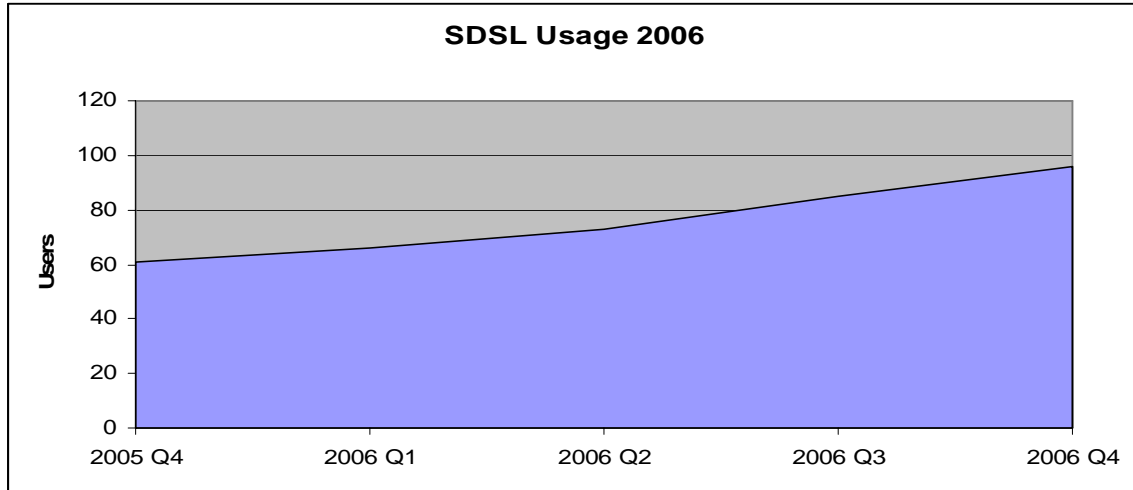


Fig 8

Mobile Internet Access

Access to the Internet via mobile telephones was enhanced during 2003 as JT introduced their GPRS and then later MMS services. Both these services are also available from Cable and Wireless on its Sure Mobile service.

JT had formerly been provided via dialup services in much the same way as for fixed lines (this service is still available). However, the data speed available over the built-in mobile phone modems limits data transfer speeds to 9600 baud. This lower speed did not enable full Internet services but did enable email for some users.

Using GPRS improves the user experience of mobile internet access and makes mobile services more affordable and scalable for business users that may wish to enable mobile functionality for travelling staff.

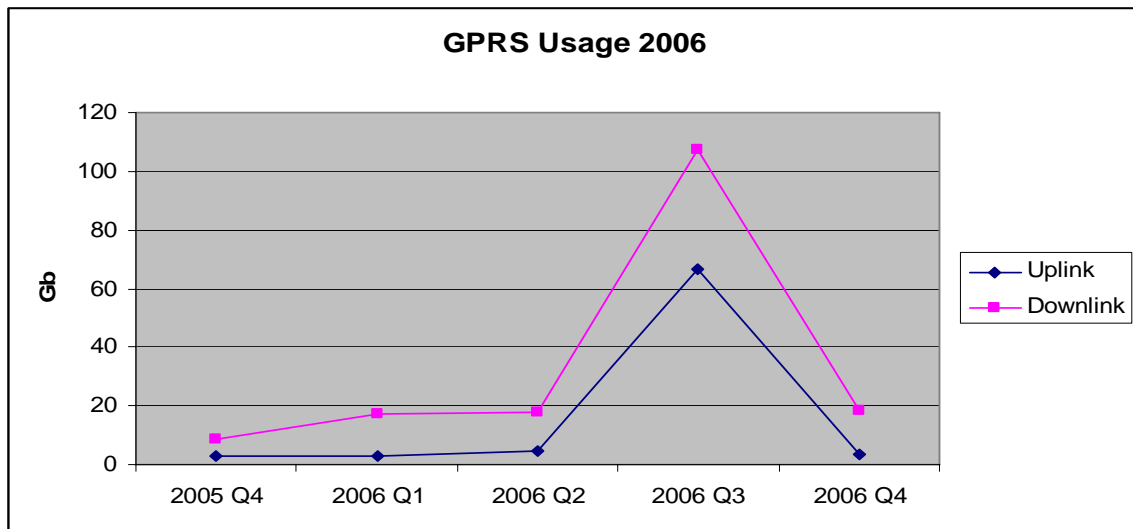


Fig 9

Figure 9 shows the average bandwidth usage of the JT GPRS service during 2006. Data for other operators will not be available until 2007. The reason for the peak during the 3rd quarter 2006 (shown at Q3 on the graph) was due to JT promoting its WAP services with a free connection offer. The usage, however, has not been sustained and usage levels have returned to the levels before the promotion. In a recent report⁴ it is claimed that mobile users are generally losing interest in mobile Internet services. It remains to be seen whether mobile operators can discover the “killer application” that will encourage both business and residential users to take up more bandwidth. Business currently tends to use low bandwidth applications such as email.

Pricing

In Jersey there are a number of payment schemes available for Internet access, depending on the ISP and/or the method of connecting.

For dial-up customers there is a choice of connecting either through a pay-as-you-go service or by monthly subscription. The monthly subscription ISP services provide the user with more facilities than the pay-as-you-go service but access is through a normal directory number, which is billed at the standard rate.

ADSL services are provided by two island operators for a fixed monthly fee, with no addition call charges. At the end of 2005 JT introduced a lower broadband rate which reduced the basic connection charge but at the same time applied limits to usage. The same service was also available from other providers. At the end of 2006 the basic rate product was uplifted to 2Mb/s and, although JT continued to apply limits, Newtel provides an unlimited version. Pricing has fallen significantly over the last few years. The 2Mb/s product is now standard but whether individual users will receive the full rate will depend on a number of factors including distance from the nearest DSL node, quality of the connection and the prevailing contention rate.

Dial-up rates are set at a maximum data rate of 56kb/s, which equates to a real data rate of 45kb/s, but the actual rate experienced by a user will depend on their own modem and the quality of the telephone line over which they are connecting together with the contention experienced on the ISP uplink between the exchange terminal modem and the Internet. Access is also available over ISDN services, where data rates of 64kb/s or 128kb/s may be achieved with more certainty. However, ISDN has declined in popularity since the introduction of ADSL and now represents an insignificant contribution to the overall data.

⁴ Forrester Research <http://www.forrester.com/Research/Document/Excerpt/0,7211,41010,00.html>

Dial-up

Pay-as-you-go

The local call charging methodology in Jersey is quite different from that in other jurisdictions. Currently, there is a minimum call charge of 7p for a period of up to 30 minutes; thereafter, it is charged pro-rata for all subsequent time. The minimum charge level also applies to the pay-as-you-go service which, on a standard line, is nominally 1p per minute evenings and weekends and 2p per minute at other times. This is accessed via a “Local Call Rate” 0845 number although the minimum 7p charge is applied. Thus a user must remain on line for a minimum period of 7 minutes (or 3.5 minutes peak rate time) to obtain par value. This makes the overall calculation of comparators somewhat difficult, if, for example, a low usage Internet user only logs on occasionally to send and/or receive email for less than the par value time. Therefore, although the headline rate is a per-minute rate, the actual rate can be aggregated to be slightly more. The Internet access services providers using this method of connection do not provide any POP mail, web space or other “value added” ISP services such as spam filtering and firewalling.

Based on this assumption, then the comparator rate against ADSL offers will be, on average, between 23 hours and 28 hours of Internet usage per month. That is around 1 to 1¼ hours per day, typically during the lower rate period at evenings and weekends. This comparator assumes the various price offers available for ADSL services, see below.

Pre-paid Internet Access

Pre-paid Internet access in Jersey is accessed either via a local directory number or via a Freephone (0800) number. Of the available 0800 service providers only AOL still offers services in Jersey. This is largely due to technical trunk routing issues. AOL’s service is £13.99/month for a maximum of 30 hours access, thereafter, access is charged at 1p per minute for all additional time. AOL explains that this is because of the additional costs involved with providing 0800 services to the Channel Islands.

PSI Link and Newtel (formerly Localdial) offer Internet access via a local directory number. These providers charge between £14.50/month and £14.99/month for a full ISP service including POP mail, web space and other value-added services, the range of which depends on the actual provider. Access charges are again set at 7p for 30 minutes with subsequent minutes at pro-rata rate, although there is also a minimum charge of 7p which means that users must stay on line for at least 30 minutes per access to gain par value. Using this method of access, and assuming an offset for the minimum charge, users would need to use between about 28 hours to 42 hours per month to justify changing to ADSL. This equates to between 56 minutes to 80 minutes of Internet access per day. At this rate, subscription to the basic broadband service is highly attractive even

for a moderate user, especially in consideration of the improved user experience and the ability to continue using the normal telephone service while online.

ADSL

All ADSL services rely on the provision of services by Jersey Telecom (JT) either through their own retail division or by way of wholesale access for other ISP's.

Currently, JT offers a range of products for residential and business customers in various packages of bandwidth and contention ratios which range from 20:1 to 50:1. Previously, JT offered a 40:1 service but under its new offer this has been withdrawn and, in addition, download limits have been imposed on its own retail products.

Consequently, prices for such services are determined to a greater or lesser extent by the wholesale price, therefore there is a tendency for price similarity between suppliers. Pricing has now dropped to £16.99 from Newtel and £17.99 from JT for a 2Mb/s service.

SDSL

During 2004 JT launched their Symmetrical Digital Subscriber Line product which enables data transfers at the same rate in either direction.

For this service pricing is considerably higher than ADSL products. The standard 2Mb/s product is currently priced at £229.00/month at 5:1 contention ratio.

Comparison with Other Jurisdictions

Prices across the entire EU have been largely stable over the last 12 months following dramatic reductions the previous year, but download speeds have continued to improve and many ISPs now offer VoIP services at the same price. Table 1 below gives a sample of prices in Euros per month and download bandwidth in different jurisdictions. It should be noted that direct comparison is difficult because of the mix of speed, contention ratios and services offered by each supplier. The table make comparisons with popular offerings among a range of EU countries.

Jurisdiction	Provider	Download BW	Price €	Notes
France	free	20Mb/s	29.99	Burstable * ‡
Netherlands	Orange	20Mb/s	22.95	Includes VoIP*
Belgium	Scarlet	4Mb/s	24.99	Burstable † 10gb/mth limit
Liechtenstein	Telecom FL	3mb/s	49.00	Download 150kb/s
UK	Virgin	8Mb/s	22.50	Burstable * †
Hull	Kingston Comms	8Mb/s	22.50	Unlimited †
Jersey	JT	2Mb/s	27.00	20Gb/mth limit
Jersey	Localdial/Newtel	2Mb/s	25.50	Unlimited
Guernsey	Cable and Wireless	1Mb/s	22.50	Pay-as-you-go 300 min/mth
Guernsey	Cable and Wireless	1Mb/s	37.50	
IOM	Manxnet	2Mb/s	34.50	10Gb/mth/limit

Table 1

* Free national calls included in package and reduced international call rates

† The maximum rate depends on prevailing contention

‡ Includes access to 200 TV channels

EU DSL prices have fallen over the last 12 months and the facilities offered by providers have increased. This comparison shows that ADSL residential services in Jersey are slightly above the middle of EU comparative costs although below the mean price - see Figure 10. Almost all providers except C&W Guernsey and Manxnet offer higher rate basic services, including Kingston which until 2006 only offered only a maximum of 1Mb/s. However, many EU ADSL providers also include voice telephony packages (VoIP) in base price and where it is not, prices are substantially lower.

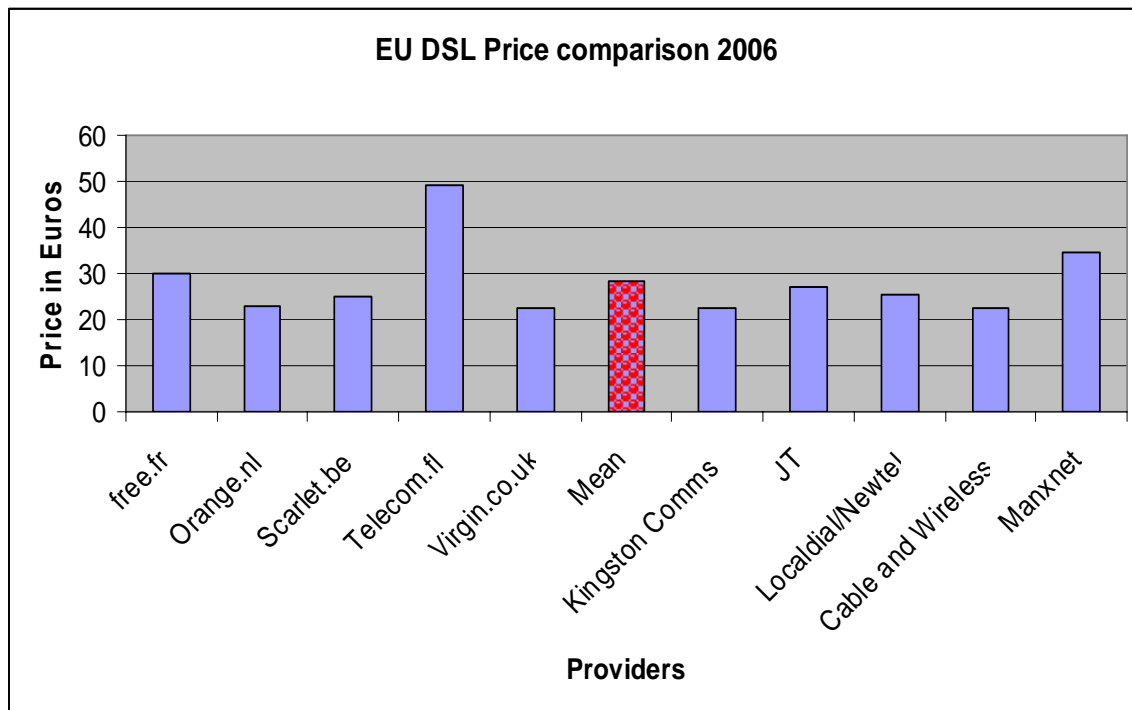


Fig. 10

Conclusion

According to the latest data, Internet usage and penetration in Jersey is comparable to that of other jurisdictions. The penetration of broadband as a percentage of all Internet accounts is about 63%. As a percentage of the overall population of 88,200⁵, which is a common measure used by EU regulatory authorities, this represents about 23%, which is on par with the EU (15) average but below the EU top 5.

The uptake of ADSL is likely to continue on this upward trend for the foreseeable future, stimulated by lower entry-level costs introduced at the end of 2005 and better experience of e-services (such as online banking and mail order) required by consumers. The available data shows that the uptake is approximately linear, with an average increase of about 9% annually, following a surge in accounts at the end of 2003 as a result of price reductions accompanied by heavy promotion. This was partly repeated with the introduction in late 2005 of lower prices and associated promotion by ISPs and will also be likely with the latest changes at the end of 2006 to higher rates followed by more heavy promotion.

Statistically measuring the penetration of Internet access in the population is difficult to determine exactly. The number of households with Internet access is high, but the average household in Jersey is 2.38 persons. Additionally, there are a high number of households (64%) which have only one or two occupants and 28% which have only one, and these households are occupied by younger salary-earners more likely to own a Personal Computer than some of the other demographic groups. On the other hand, low occupancy accommodation coupled with employment that has Internet access may limit Internet usage at home. The falling fixed line uptake may be slowed by more ADSL Internet access, but many low occupancy households may opt for only a mobile telephone service especially if users have alternative options to access the Internet. Consequently, the percentage of the population with Internet access at home may be lower than the headline rate would indicate. Many people have access to the Internet through their work, the education system, public libraries and commercial Internet cafés and other outlets that offer free WiFi.

Using the average household occupancy figure of 2.38 multiplied by the total number of registered ISP and Internet access accounts, this would indicate a population penetration of 65%, similar to the distribution as a percentage of households. However, with the caveat above of low occupancy of 1 or 2 persons for almost two thirds of households, this possibly may be adjusted down to nearer 55%. This is close to the EU average but lower than the higher penetration jurisdictions such as Sweden.

Although the penetration of Internet is measured here in Jersey, the time spent online is not. However, during September 2006 in the UK, the average home user spent 26.85⁶ hours per month surfing. This compares with 36.86 in France and 33.55 in Germany.

⁵ States of Jersey Statistics Unit <http://www.gov.je/Statistics/Population/>

⁶ Nielsen Inc <http://www.nielsen-netratings.com>

With the growing use of the Internet for banking, e-commerce, e-government, shopping and other services, such as multimedia downloading and perhaps VoIP and associated services, the average user is likely to spend more and more time on line. This will almost certainly lead to greater user expectations which will further stimulate growth in Internet use and in the requirement for broadband connections.

Furthermore, the introduction of a new, lower priced entry level ADSL products into the residential market sector is expected to stimulate growth into the current low user dialup sector. Currently, the broadband services available only offer basic Internet access services, however, as observed in other jurisdictions, broadband is also a provider of other value added and paid-for services such as music downloads and video. When this market is pursued locally it may provoke more growth.