



**Annual Review of Internet Usage  
2005**

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# Internet Usage in Jersey – JCRA 2004 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, although because of the technical restrictions imposed on interconnection of Local Rate (0844 and 0845) and Freephone (0800) Internet services, not all such ISP’s are accessible from Jersey and off-island broadband services are also unavailable.

## Overall Internet Usage

During 2005 the number of ISP and Internet access accounts among all operators in Jersey grew by just 3.5% 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 2004.

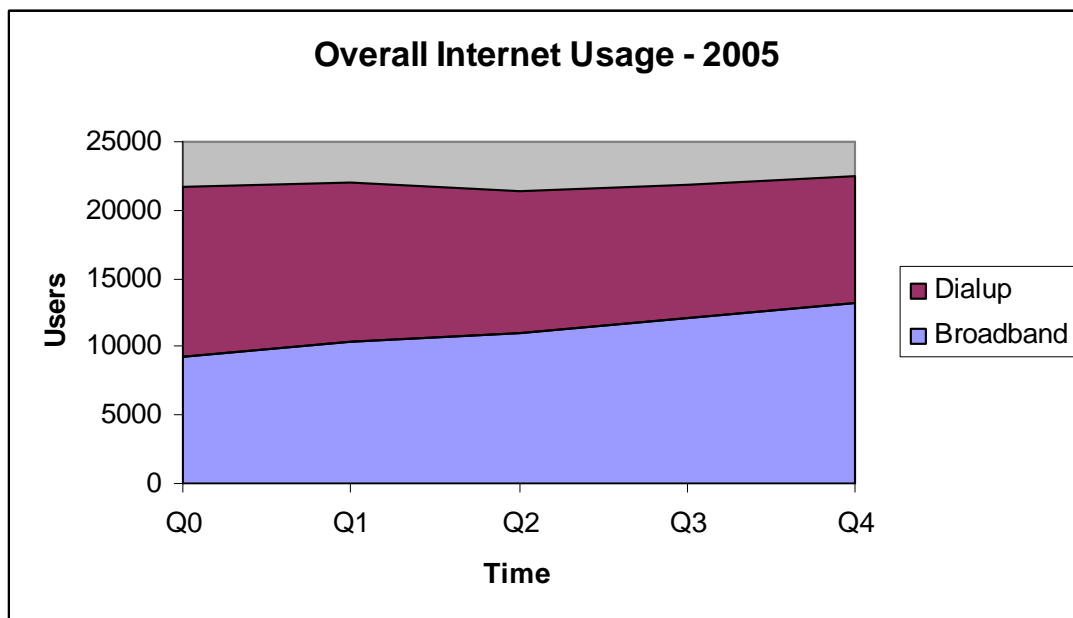


Fig 1

Dial-up accounts (Figure 2) declined by approximately 25% to 9,277 probably as a result of the trend towards 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 around 700 users are registered on their service but recognize that these users do not necessarily use AOL as their primary provider.

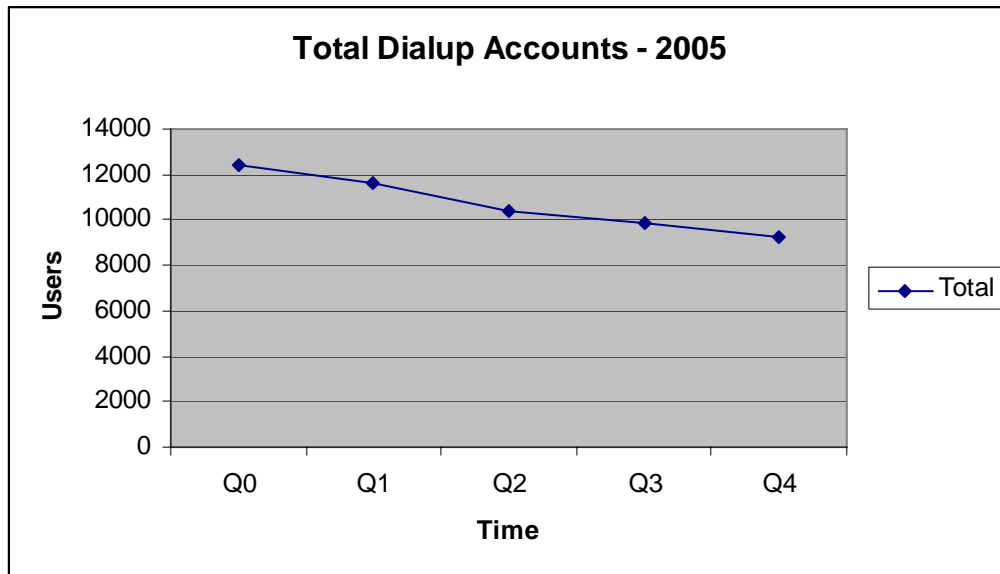


Fig 2.

### ***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 22,504 registered ISP accounts at the end of 2005 an increase of approximately 750 on 2004. This would represent a penetration of about 63%. however, it is known that the housing stock has marginally increased since the 2001 census statistics were collected. It would appear from that information that the overall penetration of access is virtually stable and at about the EU(15)<sup>1</sup> average. Broadband penetration is measured by the EU<sup>2</sup> as subscribers per 100 population, in Jersey this represents 15% which would indicate that broadband penetration in Jersey is slightly above the EU(15) average, approximately on par with the UK but still below the top 5 EU members.

<sup>1</sup> Source: EU <http://epp.eurostat.cec.eu.int/> and OECD <http://www.oecd.org>

<sup>2</sup> Ibid.

## Broadband

### ADSL

Broadband growth has been steady throughout the year. Figure 3 shows the growth during the 12 month period. The number of broadband subscriptions across all available offers was 13,227 at the end of 2005.

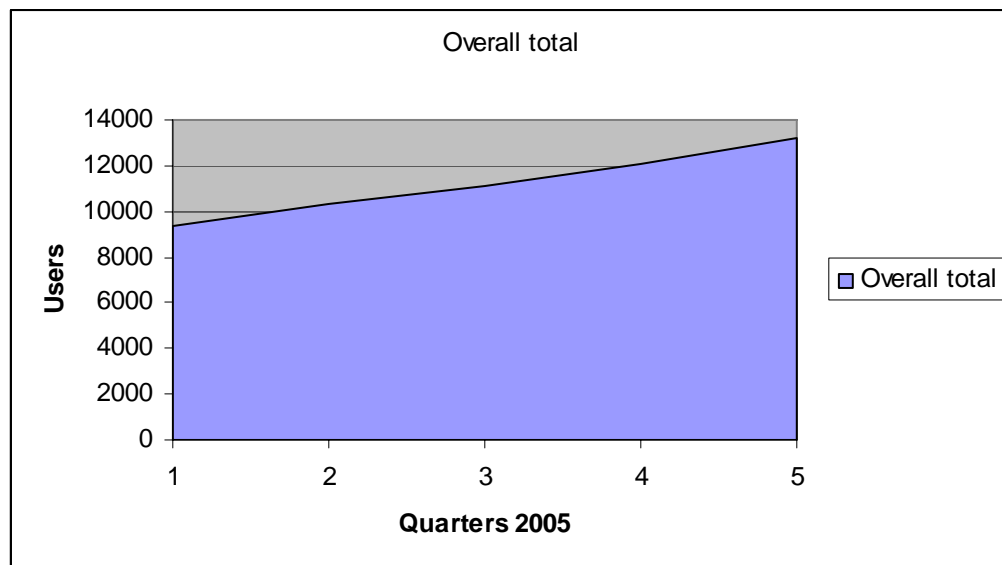


Fig 3

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 5. 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. However, insufficient time has elapsed since the introduction of the product for any firm conclusion on this statistic.

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.

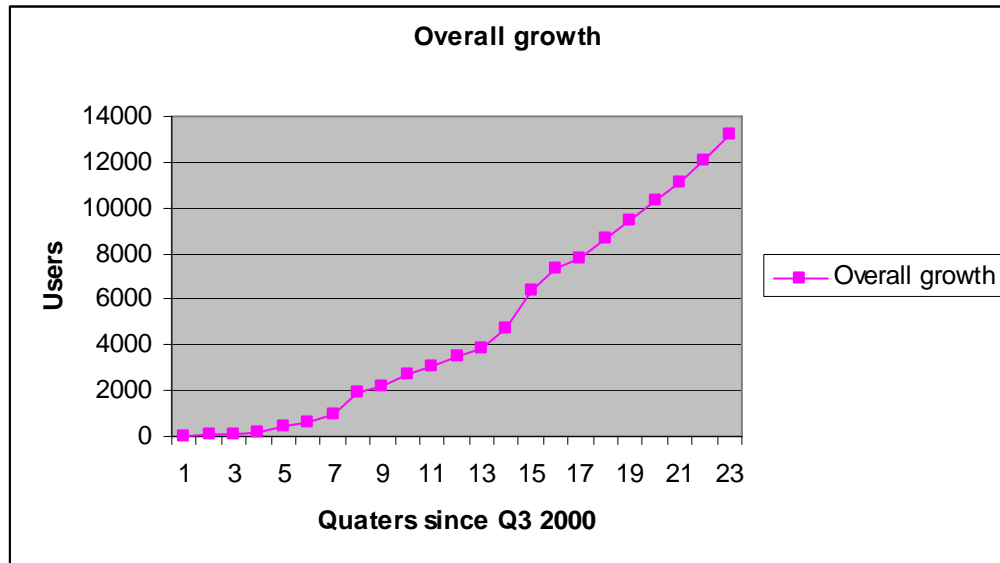
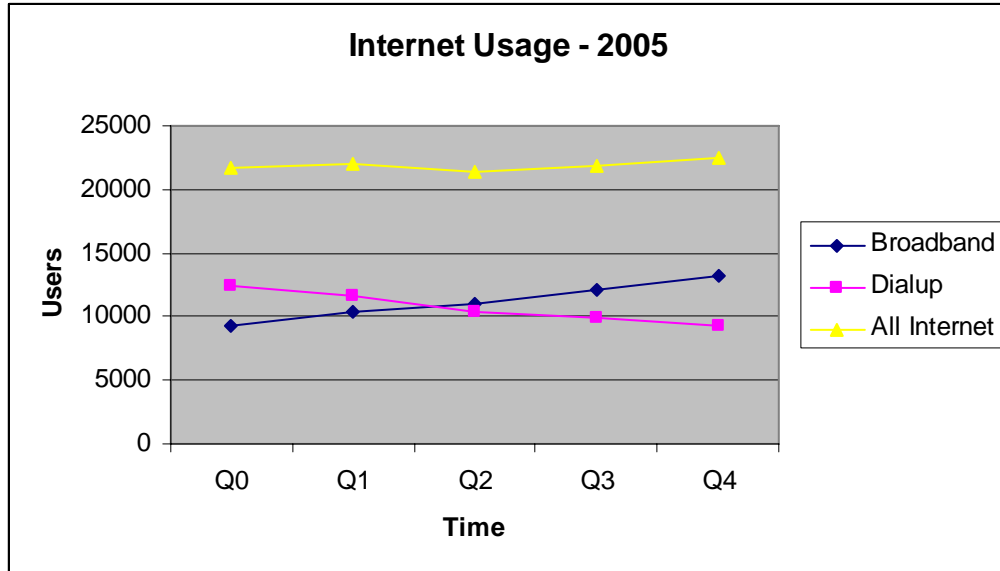


Fig 4

The annual rate of broadband growth during 2005 averaged about 8% per quarter while dialup declined about 25% throughout the year. This would indicate that new users prefer broadband, however, there is still some uncertainty in the accuracy of overall ISP data, particularly with regard to dialup. This is illustrated by the volatility of data since the first JCRA report on usage in 2003.



**Fig 5**

Within the broadband total are a number of product types offering various bitrate and contention rate options. In general premium service options offer a contention ratio of 20:1 as compared to the basic service which was until December 2005 offered at 40:1. Since December the JT retail and wholesale basic rate products have been offered at a contention ratio of 50:1. It is too early to assess the impact of this change. Figure 6 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  $1\text{Mb/s} / 20 = 50\text{kb/s}$ . 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.

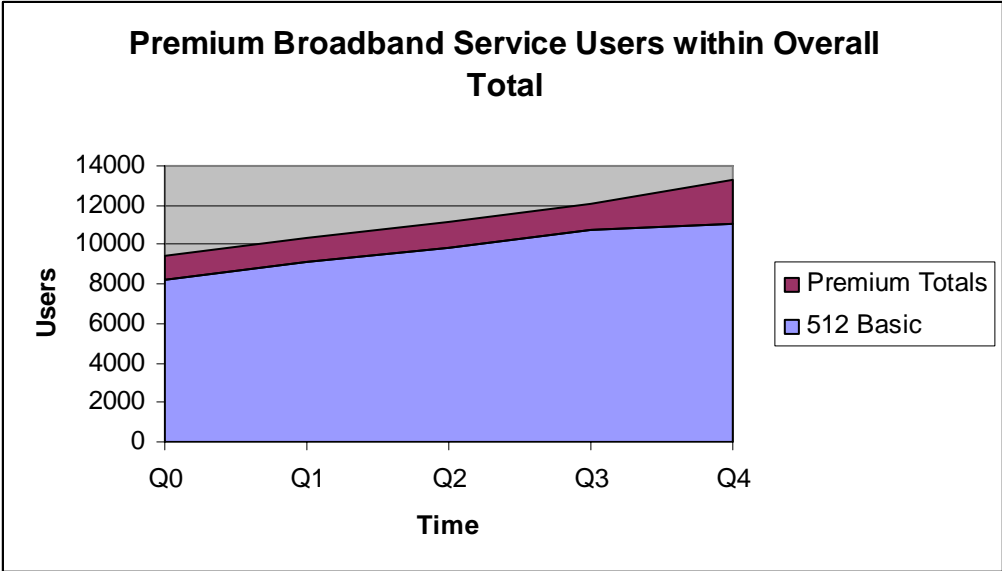


Fig 6

The uplift in the last quarter is due to the product changes introduced by JT which seems to indicate a switch to faster services. However, as this change was introduced late in the year, it is too early to express this in a meaningful way in this document.

The premium product distribution is shown in Figure 7, excluding the last quarter to avoid the impact of the JT product changes.

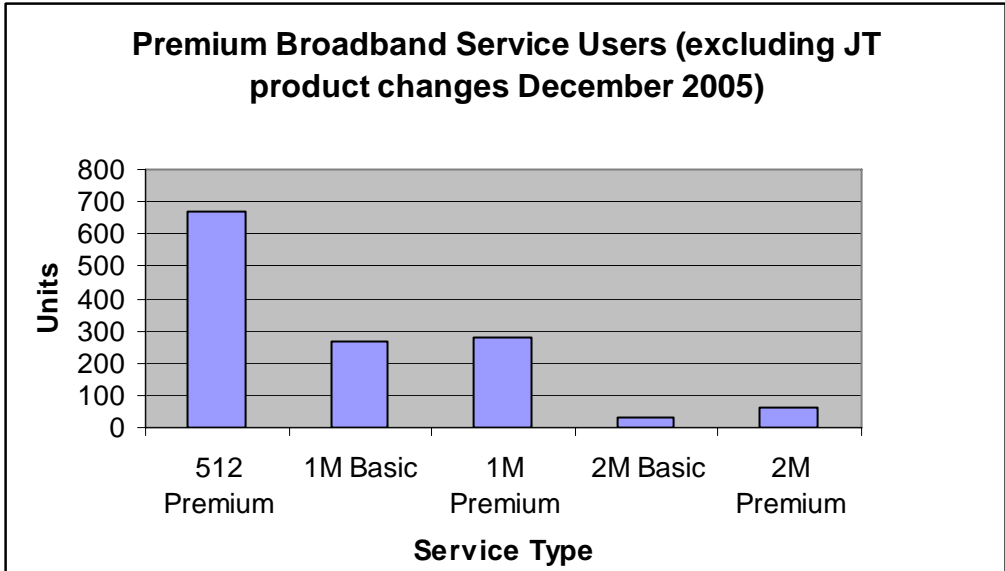


Fig 7



## SDSL

During 2005 JT introduced a Symmetrical DSL (SDSL) service. This enables users to create Virtual Private Circuits across the service or the Internet. JT has currently offered three products as both retail and wholesale these being 1Mb/s, 1.5Mb/s and 2Mb/s. The current usage is shown in Figure 8.

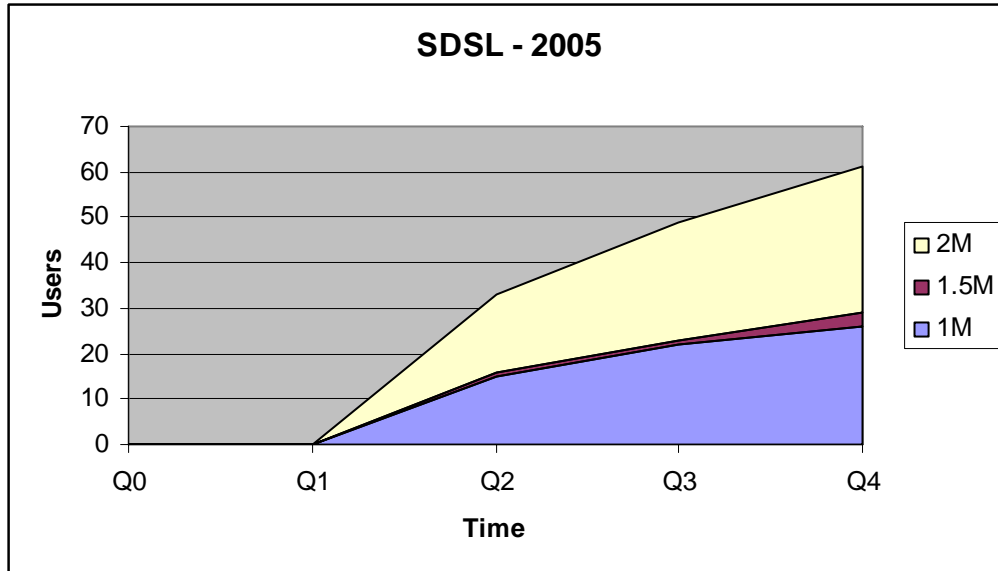


Fig 8

## Mobile Internet Access

Access to the Internet via mobile telephones was enhanced during 2003 as JT introduced their GPRS and then later MMS services.

Access 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.

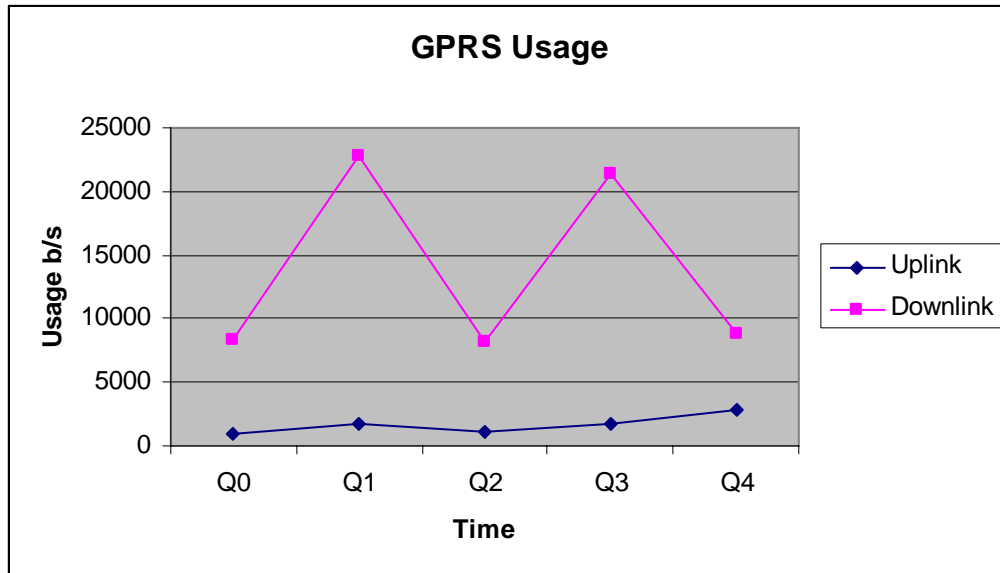


Fig 9

Figure 8 shows the average bandwidth usage of the JT GPRS service during 2005. The reason for the volatility of usage is as yet to be determined and it is likely that more statistical collection will be necessary. Nevertheless, uplink data usage seems steady, and possibly indicates usage by business for mobile applications.

## 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 several 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 is also available from other providers.

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.

## ***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 the new basic ADSL offer 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 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.

There are local providers of Internet access who use a local directory number for access. 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 the basic rate ADSL. This equates to between 56 minutes to 80 minutes of Internet access per day. Again, this takes into account the available prices of various ADSL tariffs. 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 remained the same as in the 2003 report until the last month of 2005.

## **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 equivalent download speed ADSL products, for example, the 1Mb/s product is currently priced at £290.00/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.

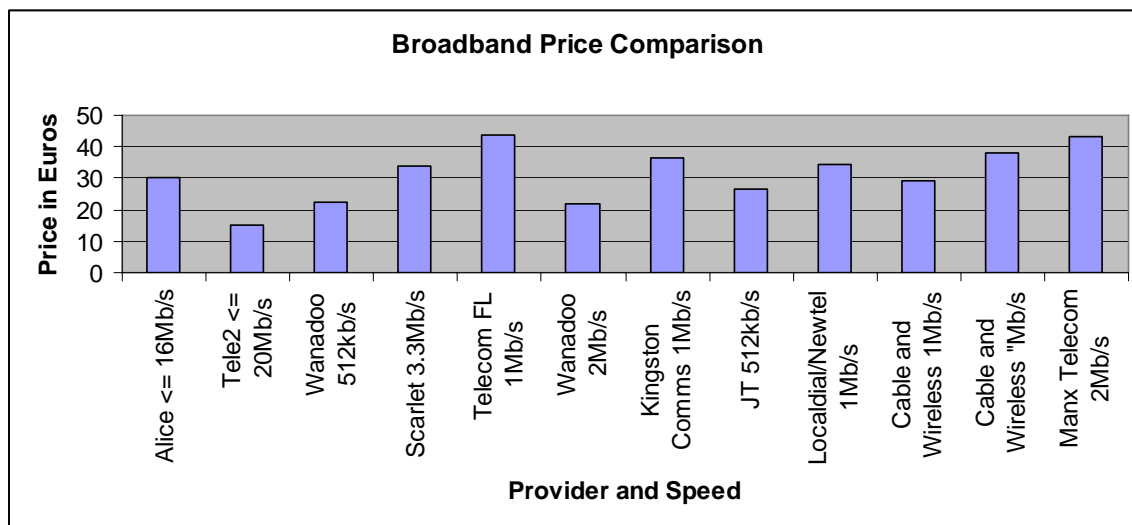
Jurisdiction	Provider	Download BW	Price €	Notes
France	Alice	<= 16Mb/s	29.95	Includes VoIP*
France	Tele2	<= 20Mb/s	14.85	Burstable †
Netherlands	Wanadoo	512kb/s	22.50	Includes VoIP*
Belgium	Scarlet	3.3Mb/s	34.00	Burstable † 10gb/mth limit
Liechtenstein	Telecom FL	1mb/s	44.00	
UK	Wanadoo	2Mb/s	22.00	Burstable †
Hull	Kingston Comms	1Mb/s	36.70	Unlimited
Jersey	JT	512kb/s	26.50	20Gb/mth limit
Jersey	Localdial/Newtel	1Mb/s	34.50	Unlimited
Guernsey	Cable and Wireless	1Mb/s	29.10	Pay-as-you-go 500 min/mth
Guernsey	Cable and Wireless	1Mb/s	38.00	
IOM	Manx Telecom	2Mb/s	43.00	Unlimited

**Table 1**

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

† The maximum rate depends on prevailing contention

This comparison shows that ADSL residential services in Jersey are about the middle of EU comparative costs see Figure 10. 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 87,700<sup>3</sup>, which is a common measure used by EU regulatory authorities, this represents about 15%, 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 is likely to be repeated with the introduction in late 2005 of lower prices and associated promotion by ISPs.

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 could also indicate lower Internet usage, since many low occupancy households may opt for only a mobile telephone. 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.

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, in January 2005 in the UK, the average home user spent 26.3<sup>4</sup> hours per month surfing.

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<sup>3</sup> Jersey in Figures 2005 <http://www.gov.je/NR/rdonlyres/A220C060-BF80-4A9D-9E0C-B89867794E66/0/JIF2005.pdf>

<sup>4</sup> 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.