



# **Telecommunications Statistical Review**

**2009**

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## **Introduction**

In common with regulatory authorities in other jurisdictions the JCRA monitors usage and developments in telecommunications within its jurisdiction.

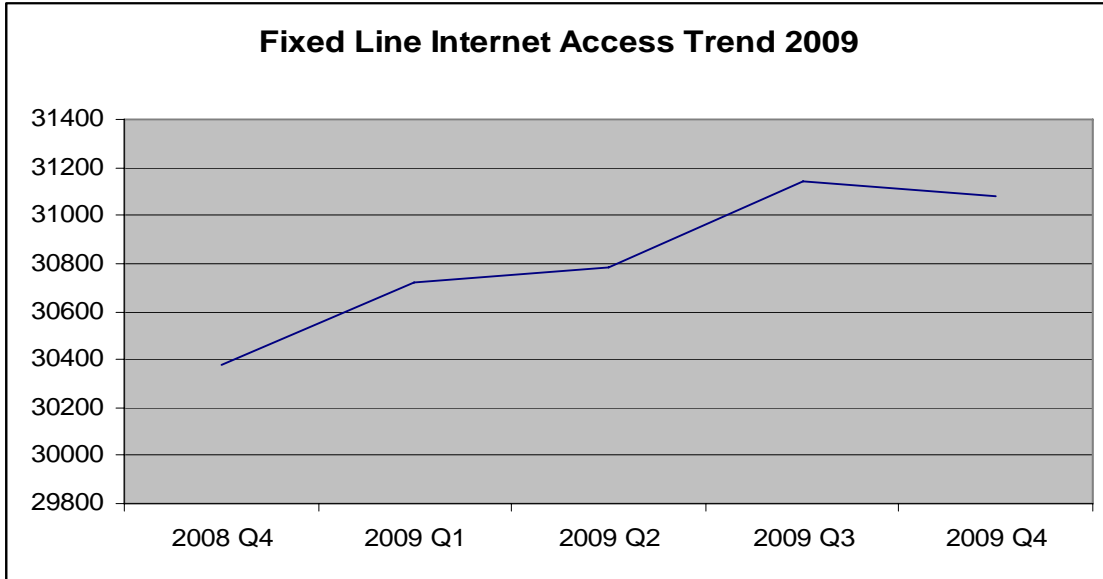
Telecommunications services are provided by a number of operators in Jersey for fixed, mobile and broadband services. This paper will summarize the data available to the JCRA regarding consumer usage patterns of telecommunications services.

In this 2009 review certain financial information will also be included for fixed, mobile and broadband services.

## **Overall Internet Usage**

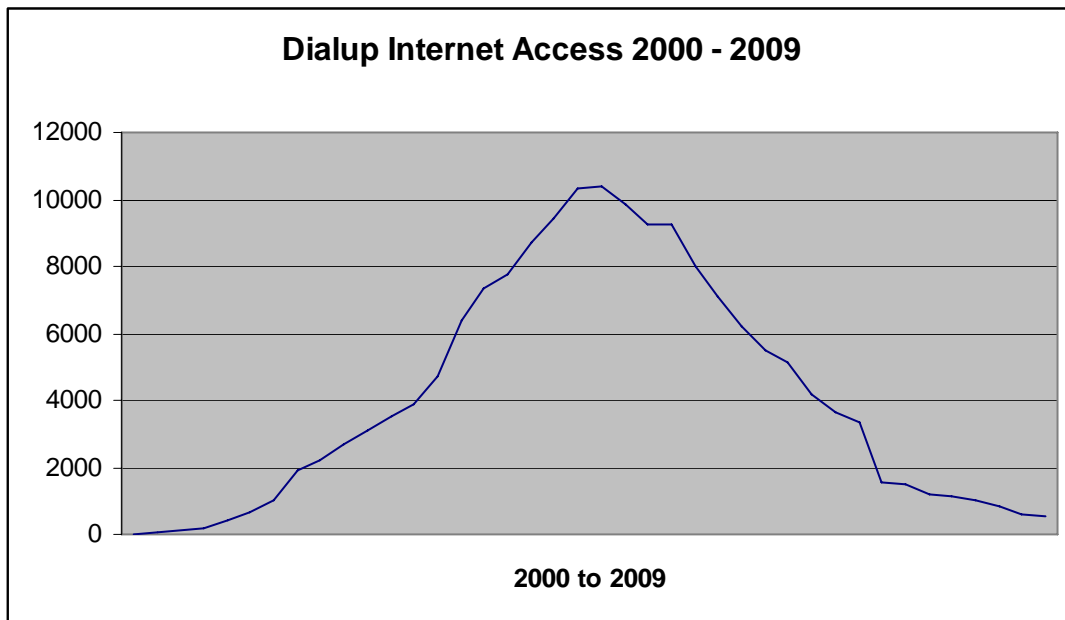
During 2009 Jersey Telecom (JT) the sole provider of both wholesale and retail broadband services introduced new 4Mb/s and 8Mb/s services. In addition to JT and the wholesale reseller Newtel, Cable & Wireless Jersey (branded Sure) also entered the retail fixed line broadband market taking JT wholesale services. The introduction of additional offers into the market was accompanied by a number of promotional offers and bundled services which enabled more choice and overall consumer benefit.

The number of fixed line ISP and Internet access accounts among all operators licensed in Jersey grew by just over 2% overall. This was lower than in 2008 and much lower than in previous years and further hints at the levelling off of demand or saturation of the available market first noted in 2008. See Figure 1. This slow down is despite aggressive marketing of ADSL services during the year by all providers, especially during the run-up to the launch of faster access speeds in September 2009.



**Fig 1**

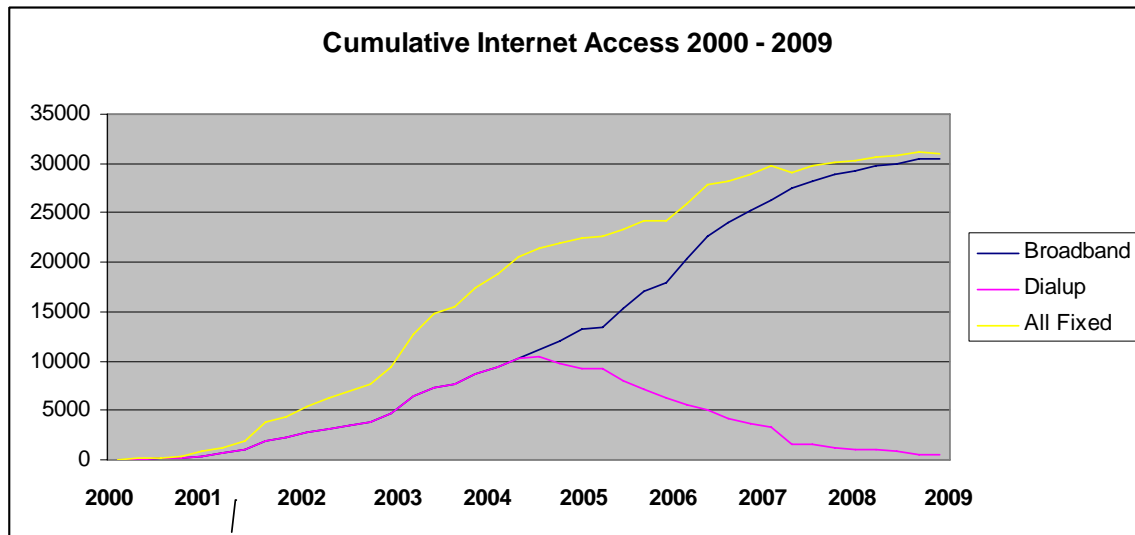
Dial-up accounts with on-island providers have declined by a further 50% during the year to just 550, continuing the recent trend. There is, however, some uncertainty of the true numbers of dialup users because of the method of calculating numbers adopted by providers. In addition there are users who also use off-island providers such as AOL and these accounts cannot be accurately calculated. Nevertheless, from the available data, remaining dialup users now access the Internet on average only 3.75 hours per week, almost half that of 2009. Figure 2 below shows the rise and fall in use of dialup Internet access over the past 9 years.



**Fig 2**

The peak of users was at the end of 2004 with almost 10,500 user accounts recorded over a number of ISPs both on and off island. At that date the number of broadband and dialup accounts was almost equal. Since then broadband has grown steadily with dialup falling away at about the same rate although the overall number of Internet fixed line user accounts has itself grown by a further 50% in that period.

Dialup is now very much a legacy technology but continues among a small number of users.



**Fig 3**

Figure 3 shows the historic trend for all types of Internet access - Dial-up, ADSL and SDSL. Growth was more or less linear until 2007, since when there is a levelling off of the graph.

## ***Broadband Services***

### **Fixed Line Broadband**

Broadband in Jersey was only offered at only one basic rate of 2Mb/s download 378kb/s upload until September 2009. JT then introduced two new wholesale and retail services at 4Mb/s and 8Mb/s to run alongside its basic 2Mb/s service. In addition each service is offered at contention ratios of 50:1 and 20:1. There is also a wholesale and retail symmetric DSL (10:1) service.

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 consumers 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 such as BBC iPlayer. Management of users over the available DSLAMs can mitigate this problem. In addition, JT now meters download and makes additional charges after a fixed monthly limit of 20Gb is exceeded. Newtel and Sure do not meter or apply limits.

The headline rates do not necessarily translate into actual data rates experienced by users. The actual download speed will depend on a number of factors including the prevailing contention, distance from the DSLAM and quality of the network cabling in the user's area or home.

The available services are as in Table 1 below:

Service Cont.	2Mb				4 Mb				8Mb			
	50:1		20:1		50:1		20:1		50:1		20:1	
	UP	DOWN	UP	DOWN	UP	DOWN	UP	DOWN	UP	DOWN	UP	DOWN
Speed MHz	0.384	2.0	0.384	2.0	0.512	4.0	0.512	4.0	0.64	8.0	0.64	8.0

**Table 1**

Total DSL services in operation at the end of 2009 were as in Table 2 below:

2Mb 50:1	4Mb 50:1	8Mb 50:1	2Mb 20:1	4Mb 20:1	8Mb 20:1
26904	601	1001	1315	231	165

**Table 2**

## **Mobile Broadband**

All three mobile operators, Jersey Telecom, Airtel-Vodafone and Sure, offer USB “dongles” for access to 3G HSDPA broadband at rates up to 1.8Mb/s. The actual rate is dependent on cell usage and relative distance from the cell transmitter. At the end of 2008 there were just over 2,000 dongles in use across the mobile networks. Recent developments in the local market includes the introduction of Pay-As-You-Go mobile broadband and the provision of wireless 3G routers, enabling wireless broadband sharing.

## **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 Statistics

Unit Update 2008<sup>1</sup> there were 37,900 households in the Island and an estimated population of 90,800. The JCRA estimates 31,223 registered fixed line ISP accounts (including dialup) at the end of 2009, an increase of 861 on 2008. This would represent a penetration by household of about 82% which is above the UK at 70%<sup>2</sup>. From this data the penetration of fixed line internet increased by about 1% since 2008. Fixed line broadband penetration as a percentage of households is 80%, somewhat above the UK fixed broadband penetration of 63%<sup>3</sup>. This is an increase of 7% over 2008, but is largely as a result of the migration of dialup subscribers. The number of fixed broadband accounts per 100 population is 33.4% a drop of about 1% since 2008, probably accounted for by more accurate population data.

However, as noted above, adding in mobile broadband connections then the total number of broadband connections increases the number of broadband connections to 32,320. This produces in a headline broadband penetration figure of 35.7% by population or 85% by household. However, this is not a statistically reliable result since many IT professionals and other IT aware users may well have both fixed and mobile options.

It would appear from that information that the overall household broadband penetration of 80% for fixed line access is well above the EU (25)<sup>4</sup> average of 58%, but below the highest of 87% (Iceland). Households with a dialup connection have declined to just 1.5% which is below the EU (25) average of 8% and similar to that of Iceland (2%).

Overall market share of all types of Internet access by operator is shown in Figure 4 based on number of subscribers to each service. At the end of 2009 there were a total of 30,874 fixed line ISP subscriptions across all types of fixed service including dialup and SDSL.

The distribution of broadband subscriptions is shown in Figure 4. The dialup market now only accounts for less than 2% of all subscriptions and is continuing to decline and thus has not been included in the statistics.

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<sup>1</sup> States of Jersey Statistics Unit Population Update 2008  
<http://www.gov.je/SiteCollectionDocuments/Government%20and%20administration/ID%20JerseyInFigure%202008%2020090429%20SU.pdf>

<sup>2</sup> National Statistics <http://www.statistics.gov.uk>

<sup>3</sup> ibid

<sup>4</sup> Source: EU <http://epp.eurostat.ec.europa.eu> and OECD <http://www.oecd.org>



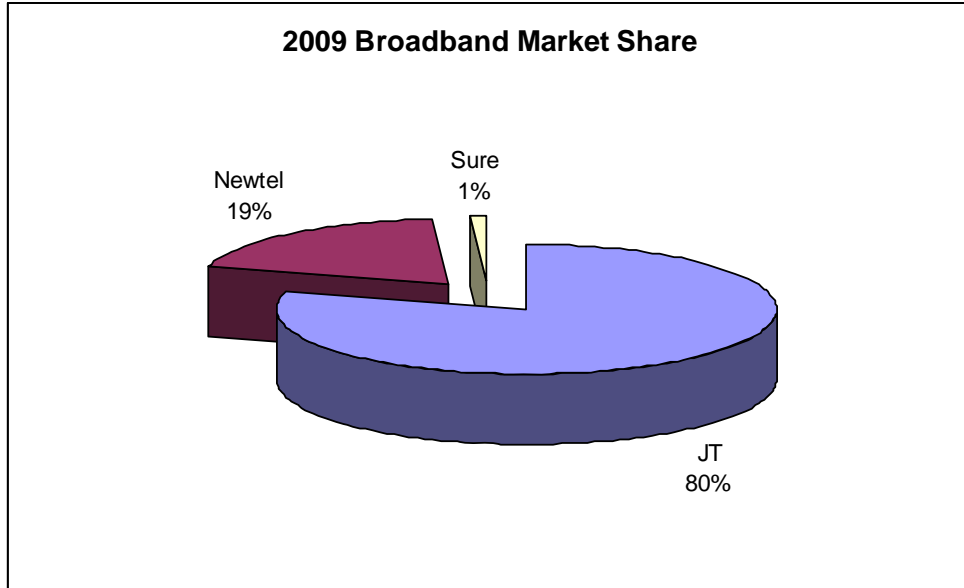


Fig 4

### Mobile Internet Access

Mobile 2G GPRS EDGE and 3G HSDPA services are available from all the operators on Jersey. All operators offer a stand-alone USB 3G modem for use with notebook computers for consumers on the move. In addition Airtel-Vodafone now offers a wireless router solution. The number of USB modems sold by ISPs has not significantly increased throughout 2009, although there are other sources for these devices and they can be used with normal SIMs, thus it is not a true indicator of overall use. No statistical data is available on the usage of these devices although it is likely that the majority are secondary connections for people on the move.

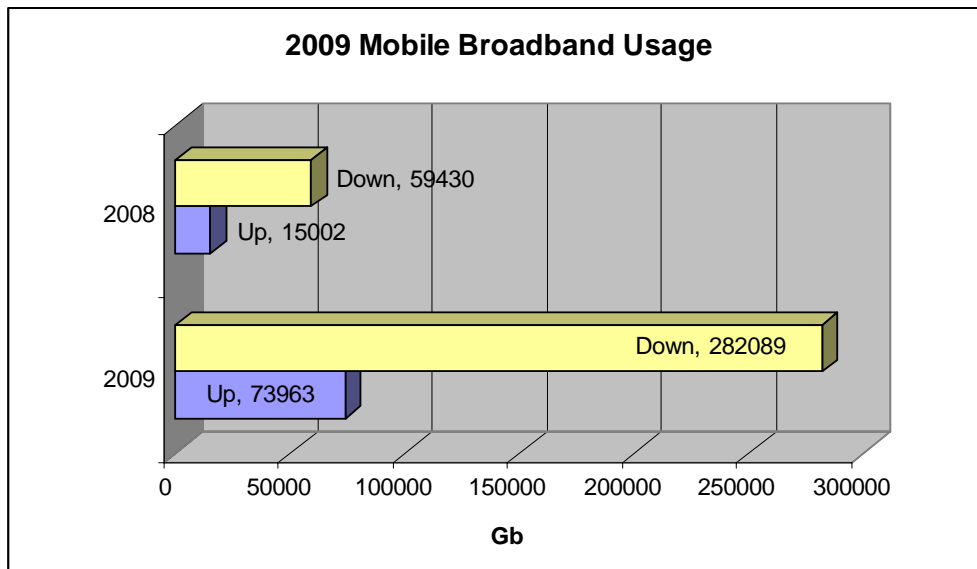


Fig 5

Figure 5 shows the average bandwidth usage in Gigabytes of the mobile operator's GPRS and 3G HSDPA bandwidth usage during 2009. The increase in mobile Internet usage over the last 12 months continues from the trend begun in 2008. This may be indicative of the rising popularity of smart phones and/or the bandwidth bundles now offered by operators, some of which include unlimited Internet access (albeit with reasonable use policy restrictions). Currently there is no data available on the type of content accessed by mobile users.

## ***Pricing of Internet Access***

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

For dialup customers there is a choice of connecting either through a pay-as-you-go (PAYG) service accessed via an 0845 number, or by monthly subscription. The monthly subscription ISP services provide the user with more facilities than the PAYG service but access is through a normal directory number, which is billed at the standard rate. PAYG charges are per minute of usage, the cost of which varies according to the time of use.

ADSL services are provided by three island operators for a fixed monthly fee, with no additional call charges but a fixed line connection is required at additional rental. During 2009 Sure entered the broadband market and additional wholesale and retail offers from JT were introduced. This resulted in aggressive marketing campaigns by the operators.

Dialup customers have a choice of provider either on or off the island, for instance AOL which provides an 0800 access service with its monthly subscription, albeit with a monthly limit on free minutes. Current data indicates that the average dialup user now spends about half an hour online per day which would cost from nothing (for 0800 – although AOL applies a monthly limit on free time) to 7p (+GST) per day in addition to the £0.50 (+GST) /day subscription for standard directory number access and up to £0.60 (+GST) for JT's standard line rental PAYG users. The average cost for dialup would therefore be about £16 - £17 per month disregarding connection method.

From the above data there is no advantage to dial-up based on price compared to the cost of the available options for broadband (below) and this is indicated by the rapid decline in its usage.

Headline monthly pricing for ADSL is £17.50 (inc GST) from Newtel and £18.53 (inc GST) from JT or Sure for a 2Mb/s service at 50:1 contention, however, a number of bundled offers are also available. In addition it is necessary to have a standard telephone line which is currently priced at £12.77/month inclusive of GST.

SDSL is currently about £229.00 (+GST) /month at 10:1 contention.

## Comparison with Other Jurisdictions

Prices across the entire EU have been largely stable over the last 12 months following dramatic reductions during 2008, but download speeds have continued to improve and many ISPs now offer inclusive VoIP services at the same price. Table 3 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 entry level offerings among a range of EU countries. £/€exchange = 1.10 (March 2009). Most ISPs offer ADSL at a 50:1 contention ratio.

Jurisdiction	Provider	Download BW Mb/s	Price €	Bits per € Cent	Notes
France free	free	28	29.99	93.3644548	Burstable * ‡
Netherlands Orange	Orange	20	20	100	Includes VoIP* +
Belgium Scarlet	Scarlet	6	25	24	Burstable † 30gb/mth limit
Liechtenstein Telecom FL	Telecom FL	5	33.5	14.9253731	Unlimited download
UK Be	Be	8	7.5	106.666667	Burstable †
UK (Hull) Karoo	Kingston	18	18.75	96	20G/mth limit †
Jersey Telecom	JT	2	20	10	20Gb/mth limit
Newtel Jersey	Newtel	2	18.9	10.5820106	Unlimited
Sure Jersey	Sure	2	20	10	Unlimited
Sure Guernsey PAYG	Cable and Wireless	2	16.5	12.1212121	Pay-as-you-go 300 min/mth free then 3p/min**
Go Malta		4	13.85	28.8808664	25Gb/month
Sure Guernsey	Cable and Wireless	2	27.5	7.27272727	Unlimited download**
IOM Manxnet	Manx Telecom	12	21	57.1428571	10Gb/mth/limit

**Table 3**

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

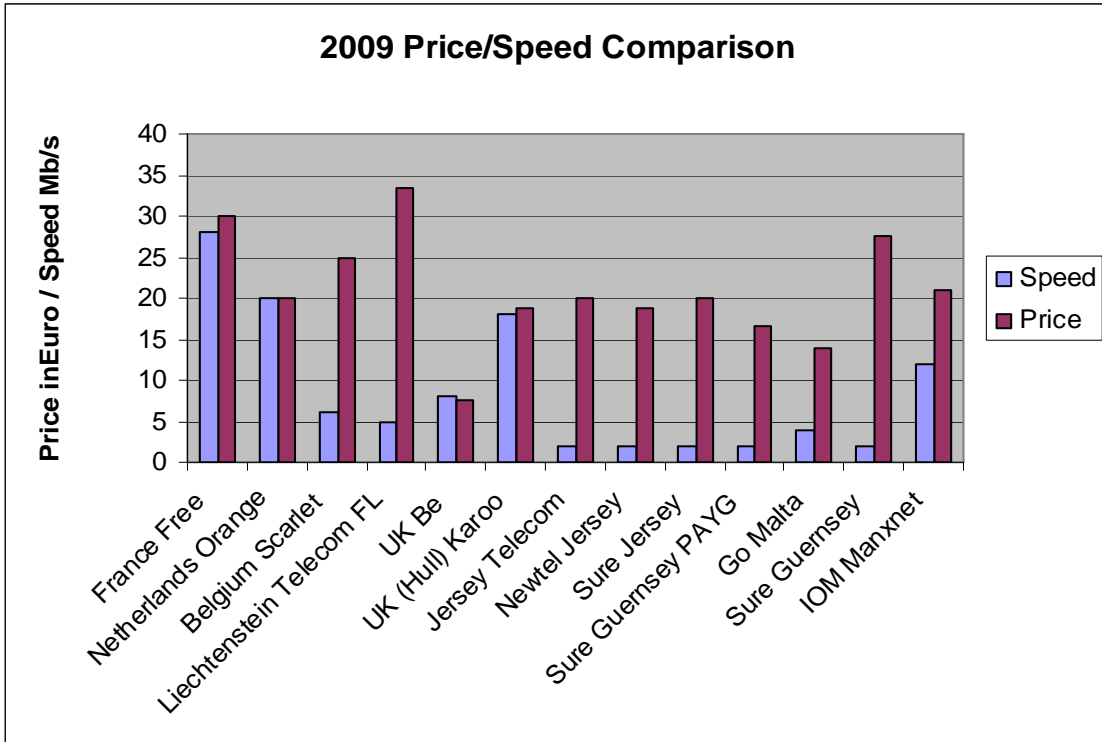
\*\* 40:1 contention

+ Tariff includes exchange line rental

† The maximum rate depends on prevailing contention

‡ Includes access to 200 TV channels

This comparison shows that ADSL residential prices in Jersey are in the middle bracket of EU comparative costs although just below the mean price - see Figure 6. Most other providers offer higher rate entry level services than Jersey Telecom. In addition many EU ADSL providers also include voice telephony packages (VoIP) in base price and where it is not, prices are substantially lower. Only Guernsey and Jersey now offer an entry level product of only 2Mb/s. JT does not offer either POP3 email or web space in its service, unlike all the other providers.



**Fig. 6**

Figure 7 below shows the relative value expressed in the entry level headline bits per Euro cent from the providers identified above.

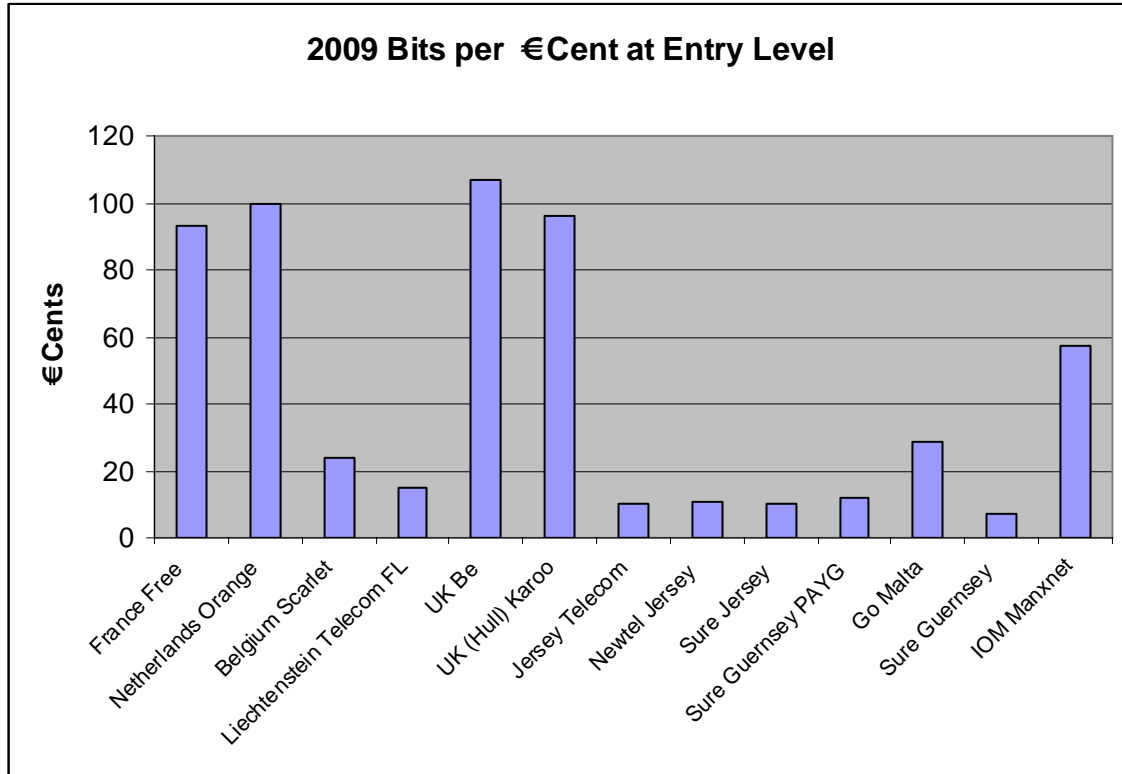


Fig. 7

As can be seen from this table Jersey does not perform well compared to other smaller jurisdictions in terms of value as expressed in cents per bit for entry level broadband.

## Wi-Fi Internet Access

Free Wi-Fi is available from a number of sources in Jersey. Jersey Telecom provides free access at the harbour, airport, the public library and a number of other public places, as does the other two local operators in various locations. In addition many cafés and public houses also offer free access. There are also commercial Internet cafés that make a charge for access and some local hotels also charge for WiFi access within the building. The backhaul for these services is over standard DSL services and thus will be included in the above data.

## Mobile Telephony

There are three mobile networks in Jersey:

- Airtel-Vodafone (Jersey Airtel)
- JT-Wave (Jersey Telecom)
- Sure (Cable & Wireless)

Each provider has both 2G (900MHz & 1800MHz) and 3G services provisioned on its network and island coverage is good for 2G and also 3G on most networks. All network operators provide data services using variously Enhanced Data rates for GSM Evolution (EDGE) and High-Speed Downlink Packet Access (HSDPA).

During 2009 a new entrant entered the mobile market as a virtual operator. Jersey Post Limited launched its Me:Mo product which uses the network facilities of Airtel-Vodafone.

There are approximately 108,000 active SIMs in circulation on the island networks, this compares to approximately 180,000 issued SIMs which was the previous measure up to 2008. The island population is estimated at about 90,800<sup>5</sup> which results in a mobile penetration of 119%. The island is known for its itinerant population and therefore it follows that there are high numbers of PAYG mobile consumers. Therefore it is likely that a proportion of the active SIMs are unused for part or most of their lifecycle. Some operators are now quarantining SIMs that are inactive for around 60 days thus removing them from their accounting unless reactivated.

The lifecycle is the time allowed by mobile operators that a SIM remains active. Once it has exceeded its lifecycle period without re-registering on a mobile network, then it is disabled. The lifecycle varies per operator:

- Airtel-Vodafone                      600 days
- Cable & Wireless (Sure)        12 months
- Jersey Telecom                      18 months

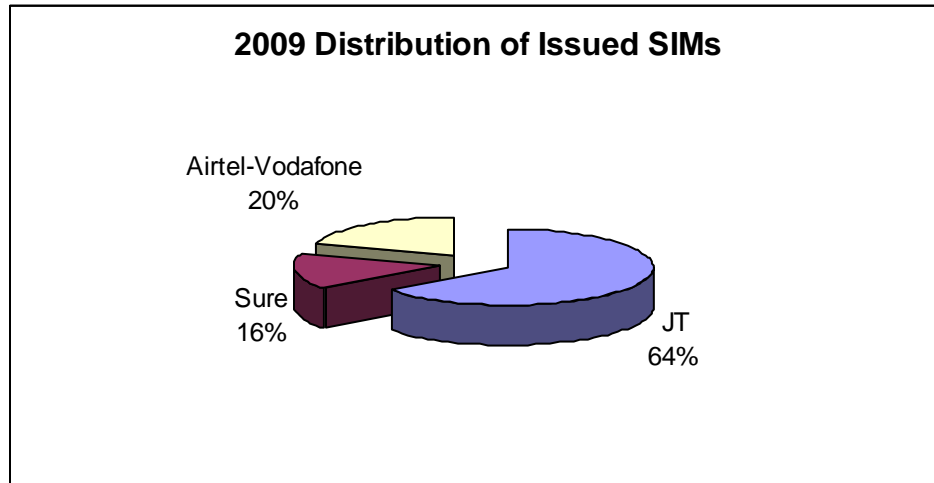
It therefore follows that the numbers of issued SIMs does not correlate directly to active mobile users. Nevertheless, some consumers do own more than one phone and/or SIM, depending on their own calling patterns since different networks offer differing call charges by destination. Consumers of pre-pay SIMs are also willing to buy special offers in order to gain additional minutes offered by competing operators.

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<sup>5</sup> States of Jersey Statistics Unit Population Update 2008  
<http://www.gov.je/SiteCollectionDocuments/Government%20and%20administration/ID%20JerseyInFigures2008%2020090429%20SU.pdf>

Since the readjustment in the collection of data from issued SIMs to active SIMs, trends will need to be reevaluated and thus previous uptake data in earlier reports cannot now be compared directly to the current data.

The distribution of issued SIMs is shown in Figure 8.

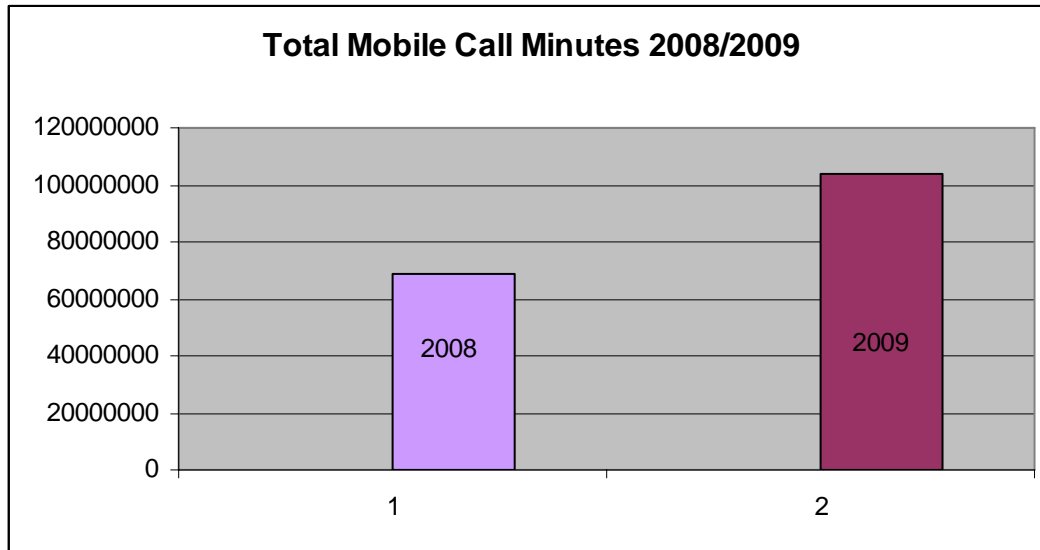


**Fig. 8**

This graph differs from 2008 in that it now expresses active SIMs rather than issued SIMs, thus the perceived market share has been re-adjusted. Consequently there is no direct comparison with earlier data.

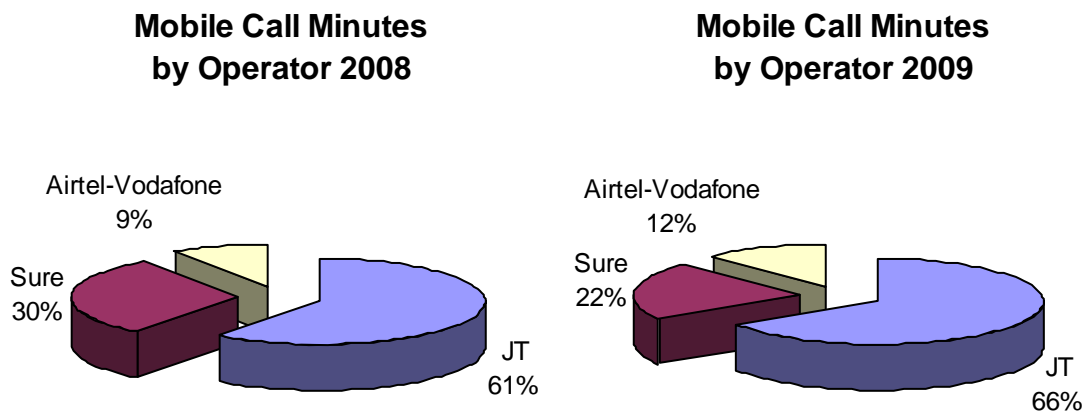
### ***Call Data***

The number of call minutes originated by mobile consumers as increased from 68,921,810 to 103,778,809 during 2009, representing approximately 66% growth. See Figure 9.



**Fig. 9**

The distribution of total call minutes by operator is shown in Figure 10.

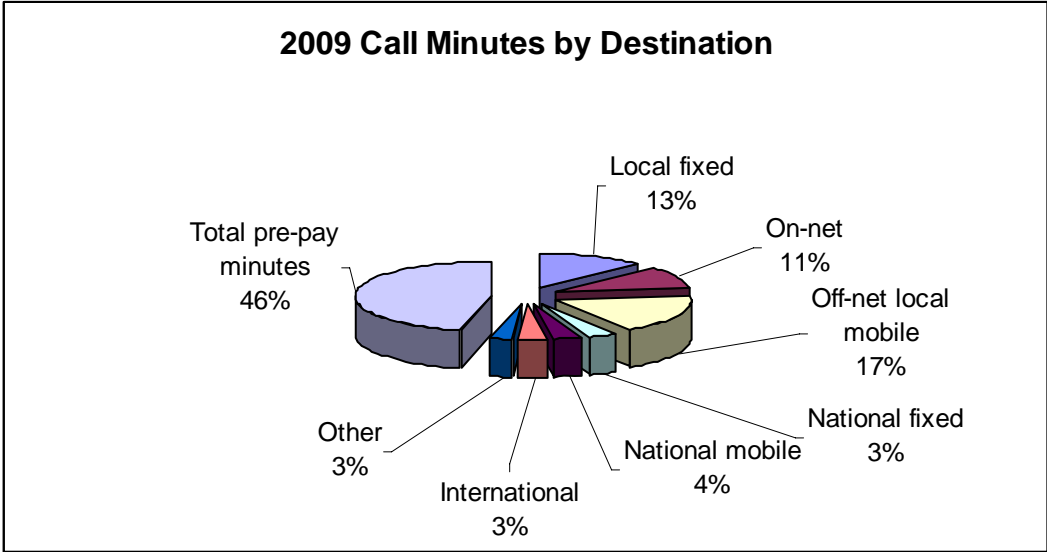


**Fig. 10**

The data in Figure 10 should be considered along side the overall increase in total call minutes generated on mobile networks.

The distribution by destination of mobile originated calls is shown in Figure 11. Note that pre-pay mobile data is not broken down by destination by the operators.

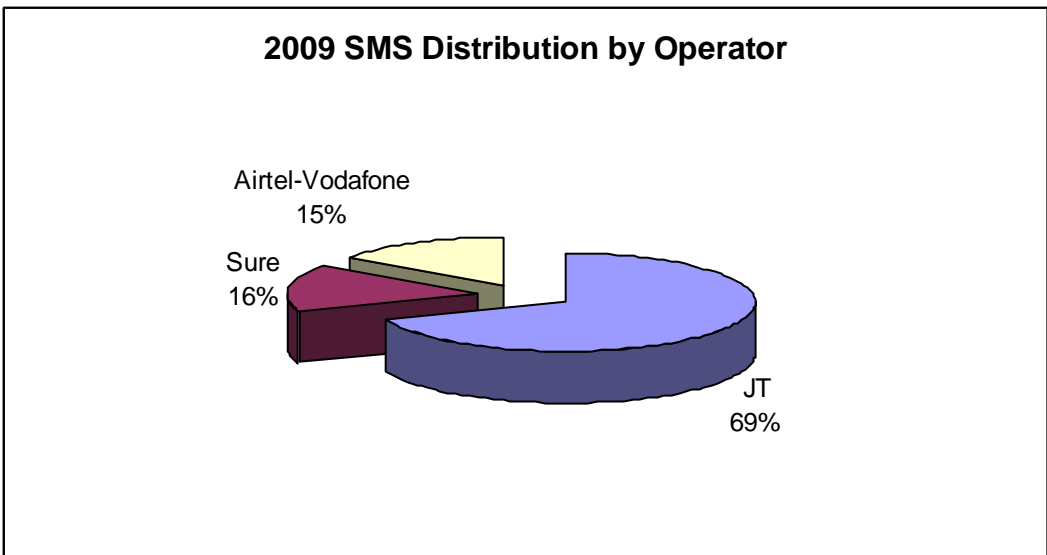




**Fig. 11**  
 \* Other refers to calls to Freephone, Premium etc

## SMS

The total number of SMS messages sent during 2009 was 91,785,224. Some operators were unable to provide a breakdown designation by destination and thus Figure 12 shows only the gross number of messages sent by each operator.



**Fig. 12**

## **Roaming**

During 2009 two operators, Airtel-Vodafone and Sure, introduced free in-bound roaming for mobiles roaming throughout the EU. This is a considerable benefit to consumers since it eliminates the cost of receiving calls whilst off the island. There is still a charge for outbound calls made while roaming and also a charge for use of data services while roaming, which may be many times more expensive than on-island. Destinations outside the EU continue to have an inbound roaming charge as well as charges for outbound roaming and data.

## **Number Portability**

Number Portability was introduced onto Jersey's mobile networks on 1 December 2008 and thus 2009 represents the first full year of operation of the service.

The Jersey MNP system requires that originating number block holders are responsible for rerouting calls arriving on their own network to the new destination network. MNP is provided free of charge to consumers in Jersey.

Operator number blocks for Jersey are allocated as follows:

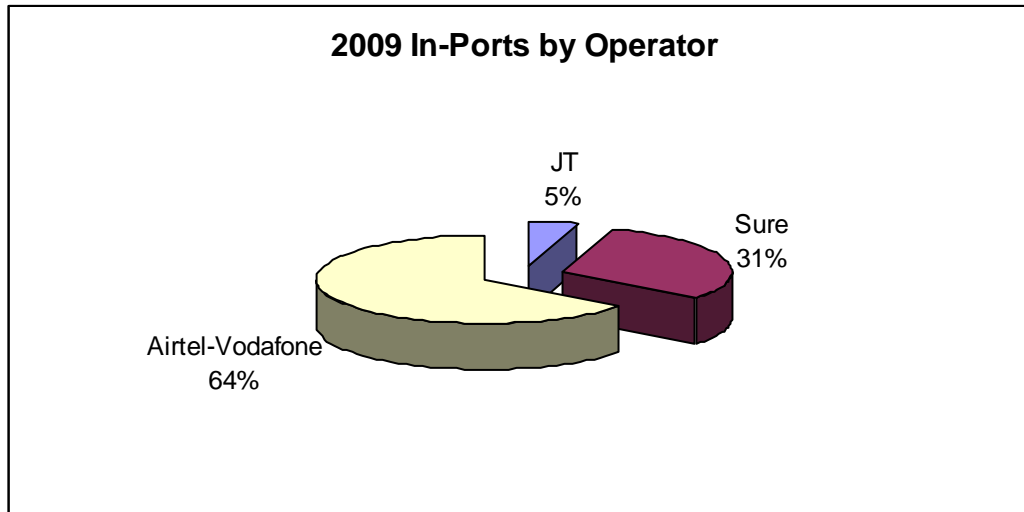
Airtel-Vodafone	07829 <sup>6</sup>
Sure	07700
Jersey Telecom	07797

MNP in Jersey is provided by a third party supplier (Porting XS) using a centralized database (CDB) solution. Ported numbers are managed by each operator through a browser interface and routing data is broadcast to each operator on a regular basis. Call routing is completed using an all call query (ACQ) methodology on each network. On-island routing uses the ACQ to determine the optimum route for ported numbers. Incoming calls from outside the island must be transited across the original number block holder's network for which a charge is passed to the destination number's new hosting network.

The number of ports completed successfully since 1 December 2008 is 5,912 of which 5,381 were completed during 2009. The distribution of In-Ports (that is the number of consumers moving to a new network) is shown in Figure 13

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<sup>6</sup> Me:Mo subscribers use a subset of the Airtel Vodafone number range and thus are included in the data provided by Airtel Vodafone.



**Fig. 13**

The MNP churn is 5% of the active SIMs on the island networks.

### **Comparison of Mobile Service Offers**

Table 4 below shows the relationship between entry level packages for a 12 month contract from the mobile operators in Jersey. Table 5 shows the basic Pre-Pay offers available for general usage, text or voice specific packages are also available from some operators. Note that the Me:Mo service is hosted on the Airtel-Vodafone network.

<b>Bundle Content/Operator</b>	<b>Airtel Vodafone</b>	<b>JT</b>	<b>Sure</b>
Bundle Price SIM only	£8	N/A	£8.50
Bundle Price free handset	£10	£9.99	£10
Included minutes	125	75	125
Unused minutes carry over	No	No	Yes
On-Net	In bundle	In bundle	In bundle
Off-Net	In bundle	In bundle	In bundle
Local Fixed	In bundle	In bundle	In bundle
UK Fixed	In bundle	Not in bundle	In bundle
UK Mobile	Not in bundle	Not in bundle	In bundle
International*	At cost	At cost	At cost
Inbound roaming*	Free in EU at cost elsewhere	At cost	Free in EU at cost elsewhere
Outbound Roaming*	At cost	At cost	At cost
SMS	Unlimited	75	125
Data (on-island)	1p/Mb	50Mb inc.	100Mb inc.
<b>Out of Bundle Cost</b>			
On-Net	10ppm	7ppm	10ppm
Off-Net	10ppm	14ppm	12ppm
Local Fixed	10ppm	7ppm	10ppm
UK Fixed	10ppm	10ppm	10ppm
UK Mobile	20ppm	20ppm	20ppm
SMS	1p	7p	6p
Data (on-island)	1p/Mb	1p/Mb	1p/Mb

**Table 4 – Post-Pay 12 Month Contract Comparison**

\* International call and roaming charges vary by destination and so have not been listed in the table

	<b>Airtel Vodafone</b>	<b>JT</b>	<b>Me:Mo</b>	<b>Sure</b>
Minimum cost SIM only	£5	£5	£5	£5
Included value	£5	£5	£5	£5
On-Net	1ppm	12ppm	4ppm*	10ppm
Off-Net	12ppm	12ppm	11ppm	12ppm
Local Fixed	12ppm	12ppm	11ppm	10ppm
UK Fixed	12ppm	25ppm	14ppm	10ppm
UK Mobile	12ppm	35ppm	14ppm	20ppm
International	At cost	At cost	At cost	At cost
Inbound roaming	At cost	At cost	At cost	Free in EU at cost elsewhere
Outbound Roaming	At cost	At cost	At cost	At cost
SMS on-net	1p	7p	4p	6p
SMS off-net	7p	7p	6p	6p
Data (on-island)	1p/Mb	15p/Mb	1p/Mb	1p/Mb

**Table 5 – Pre-Pay Comparison**

\* In this case on-net refers only to other Me:Mo mobiles

## Fixed Telephony

At present only Jersey Telecom, the former monopoly provider of telecommunications services on the island, is able to provide fixed line connections. However, alternative call origination options are available using Carrier Select (CS), which requires the dialling of a code before the E.164 number, or using bypass directory or special service numbers such as 08XX.

Sure (Cable & Wireless Jersey) is currently the only provider of CS services in Jersey while Newtel currently uses a bypass number access regime and also provides a voice over broadband (VoIP) offer for its ISP subscribers. In addition, SpeedDial is a reseller of bypass access and other off-island providers offer similar services that can be accessed from Jersey.

In order to avail of any of the above services from a fixed line telephone it is therefore necessary to subscribe to the JT fixed line service marketed as WireLine. In 2008 line rental was rationalized and some legacy products removed from the portfolio. A standard line is now £12.40 per month (£12.77 including GST) and this price, while being subject to a regulatory price cap mechanism, tends to be increased annually in July following the Jersey retail price index. There is only one line rental tariff, there being no differentiation between residential and business consumers. JT also offers a discounted line rental and call tariff for senior citizens, subject to a reasonable use policy.

JT's standard calling rate for local to local fixed line calls is currently set at 7p (+ GST) for 30 minutes or any part thereof. After the fixed period, calls are charged by the second *pro rata*.

The majority of consumers are tied to this rate but subscribers to bypass services can call local numbers for 0.21p per minute with a minimum charge of 5p (+GST) per call. The average call duration is somewhat shorter than the maximum time allowed by JT. The average call holding time in Jersey is approximately 3 minutes.

Operators also offer various discount packages along with the access services that attract different rates of discount depending on traffic volumes. This is of particular interest to business users as discount rates can become very attractive as calling rates rise. Bundles are also available for residential consumers in addition to standard line rental.

## VOIP

Voice over Internet Protocol (VoIP) services are also available from Jersey, either through local or off-island suppliers (e.g. Skype which offers national calls at 1ppm). In order to use a VoIP service it is necessary to have a broadband connection, which in turn requires a fixed line service. The Newtel offer has a headline rate of 2ppm (+GST) for all

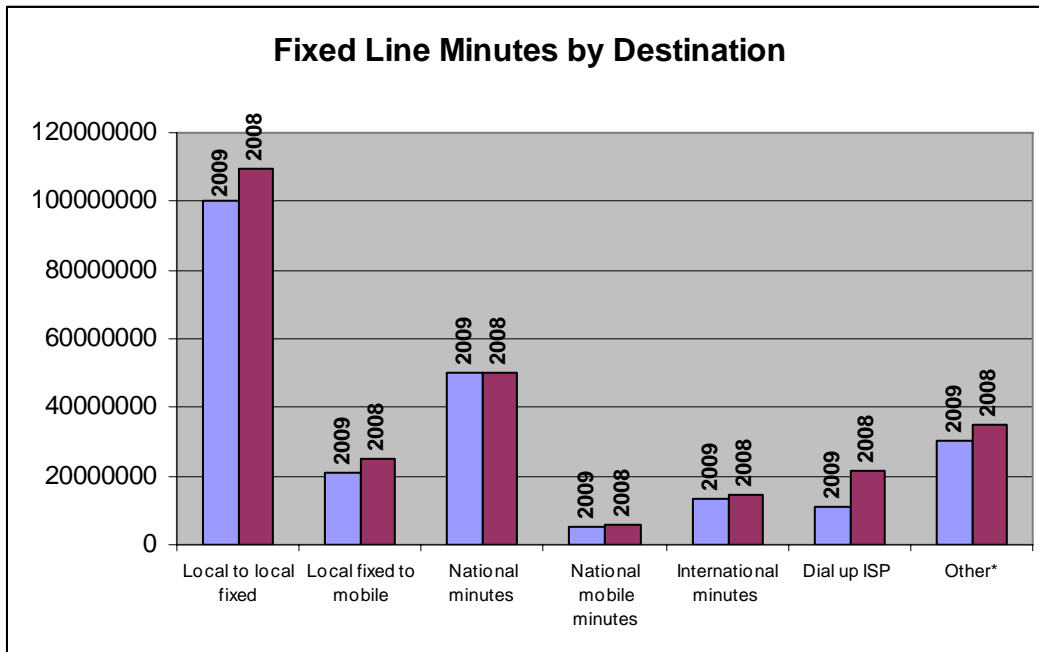
local and national fixed line calls regardless of time-of-day. In addition pre-paid minutes packages are offered.

According to a report<sup>7</sup> by telecommunications research company TeleGeography, Skype’s share of international traffic may have been as much as 12% in 2009. No statistical data is available from off island VoIP providers; however the minutes sold by Newtel are included in the fixed call data in Figure 14.

## Call Statistics

Jersey Telecom is the only provider of fixed lines in Jersey. Currently there is no local loop unbundling (LLU) or wholesale line rental (WLR) options available to OLOs.

JT does not itself provide broadband telephony options but these services are offered by other providers. In the last few years there has been a trend away from Fax towards email or other electronic messaging as a means of transmitting documented data and this is reflected in not only the number of fixed lines but also in the call minutes used by consumers.



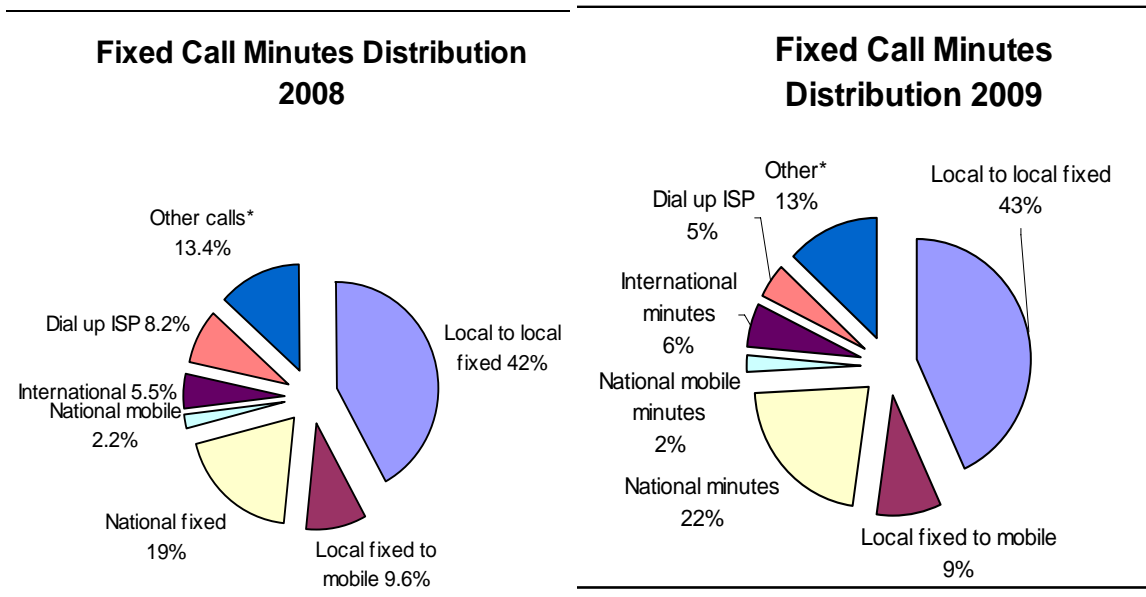
\* Other call minutes include Freephone, Premium and special numbers (087x, 084x etc)

Fig 14

The graph in Figure 14 does not include any VoIP calls made by operators not licensed by the JCRA.

<sup>7</sup> International Phone Traffic Growth Slows, while Skype Accelerates - [http://www.telegeography.com/cu/article.php?article\\_id=31718](http://www.telegeography.com/cu/article.php?article_id=31718) (accessed 21/3/10)

Comparison of 2008 and 2009 by call type is shown in Figure 15



\* Other call minutes include Freephone, Premium and special numbers (087x, 084x etc)

Fig 15

Fixed line call distribution by provider is shown in Figure 16.

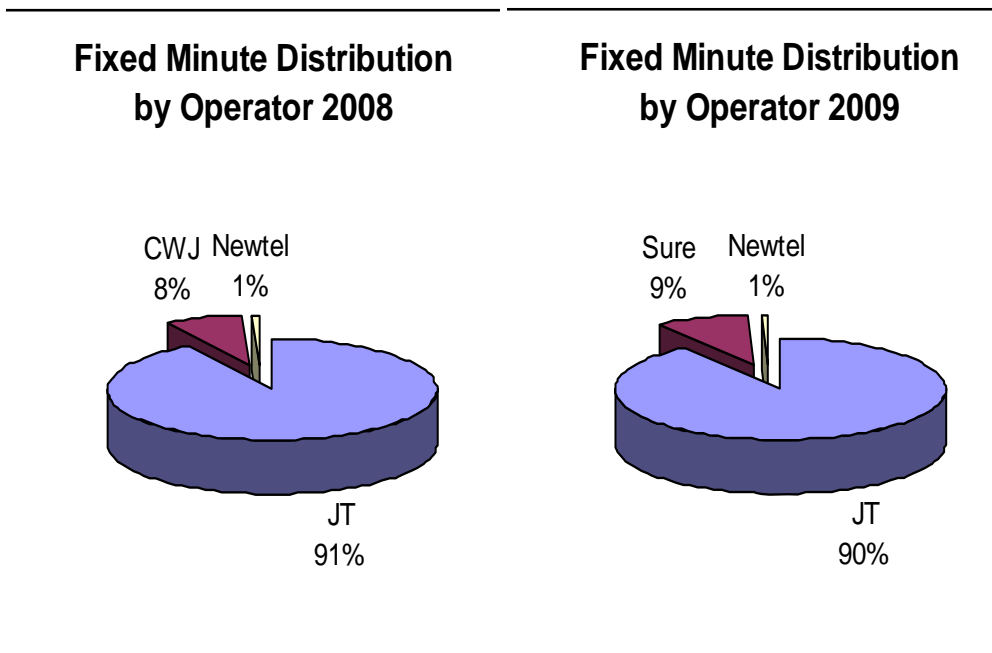


Fig 16

From this figure it can be seen that JT's share of the fixed line market has dropped from 91% to 90% during the last 12 months. However, this is in the face of a drop of 12% in

the total number of minutes originated by fixed line consumers over the same period. See Figure 17

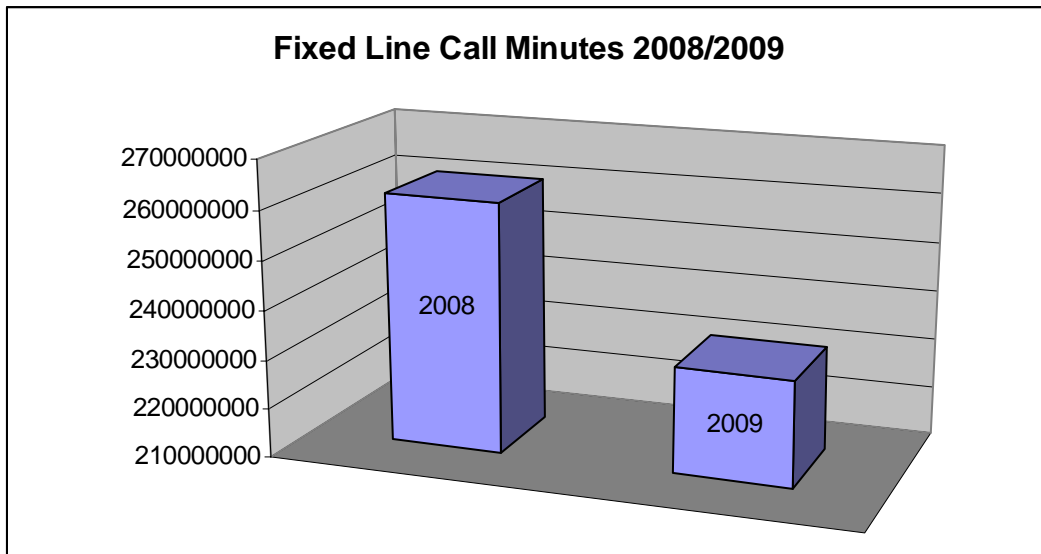


Fig 17

The number of fixed lines has been in decline since reaching a peak in the early part of this century see Figure 18. At the end of 2009 there were 57,708 fixed lines in service, 613 less than 2008.

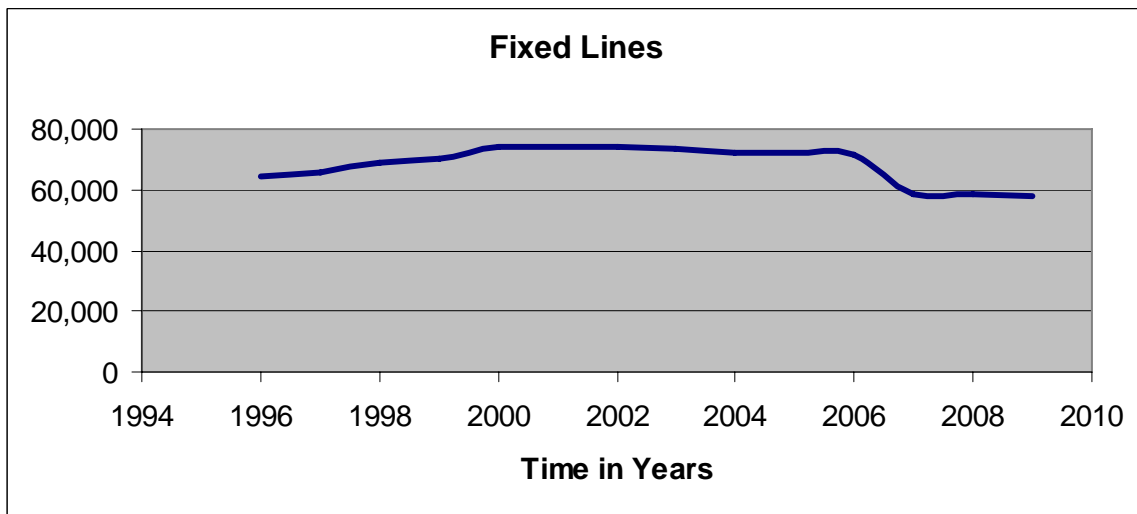


Fig 18

This trend can probably be explained as a consequence of both fixed-mobile substitution and the decline in the need for second lines for fax and/or dialup Internet access. There is a continuing decline in calls originated on fixed lines, suggesting a trend towards a



preference for mobile originated calls, a trend seen in other jurisdictions as consumers substitute mobile for fixed.

However, there has been an overall increase of just under 2% in total call minutes on all networks between 2008 and 2009 as shown in Figure 19.

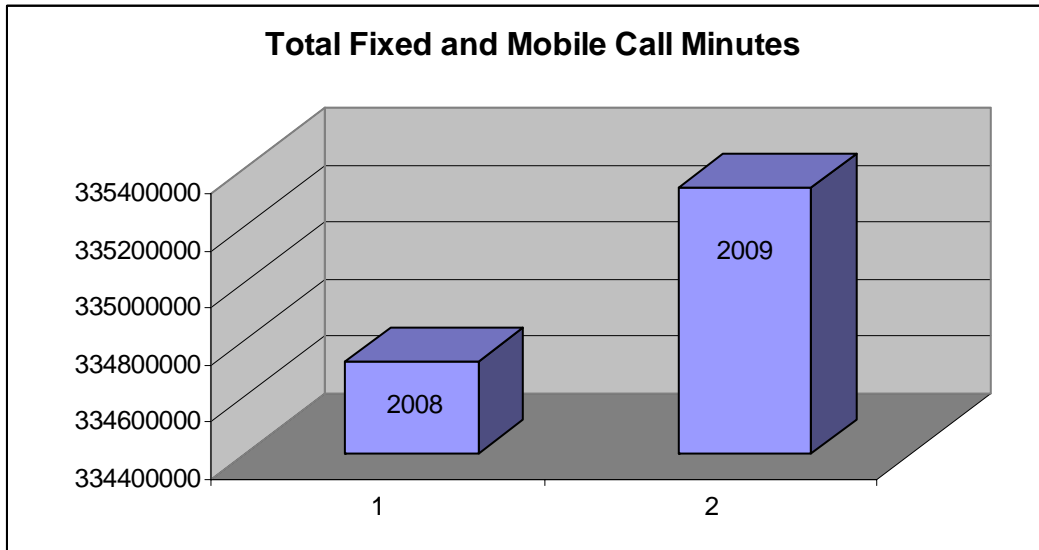


Fig 19

## Calling Data by Traffic Type

The number of call minutes by type of call during 2009 is shown in Table 6 below.

	Fixed	Mobile
<b>Total local fixed</b>	99,961,815	22,295,366
<b>Total of on-net minutes</b>		18,644,357
<b>Total of off-net local mobile</b>		30,495,090
<b>Total national fixed minutes</b>	50,332,709	5,772,248
<b>Total national mobile minutes</b>	5,397,123	6,180,376
<b>Total international minutes</b>	13,479,745	5,954,718
<b>Total other call minutes*</b>	30,208,570	4,668,705
<b>Total fixed to mobile</b>	21,140,691	
<b>Total fixed to ISP</b>	11,028,247	
<b>Total Pre-Paid Minutes</b>		81,258,604
<b>Total SMS on and off net</b>		89,487,977

Table 6

\* Other call minutes include Freephone, Premium and special numbers (087x, 084x etc)

## Private Circuits

Private Circuits (PC) -- sometimes called Leased Lines -- are used by businesses to connect between their sites either on the island or elsewhere in the world. PC's are also used in some cases to connect to the Internet thus providing a robust uncontended access for heavy users of IP services.

Under the terms of the Jersey Telecom licence it is required to provide PC at wholesale rates to other JCRA licensees of all licence classes.

PCs are divided into two types for the purpose of this report:

- on-island below 10Mb/s;
- on-island above 10Mb/s;
- off-island below 10Mb/s;and
- off-island above 10Mb/s

No differentiation is made by technology, SDH or Ethernet.

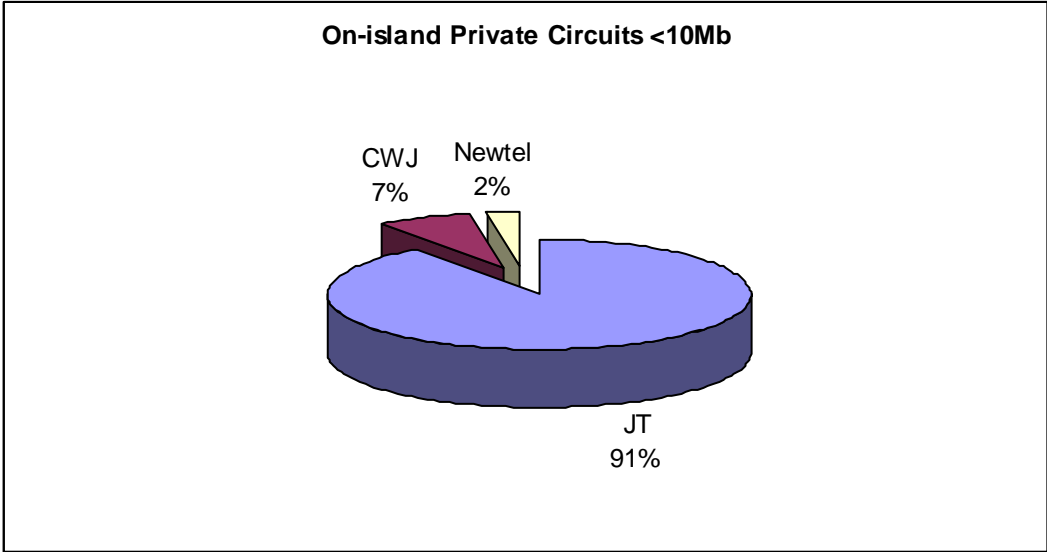
On-island fixed network PCs are only available through the JT network provision either as wholesale or retail products. Off-island PCs can be provided using backhaul over capacity which is owned or managed by JT, Newtel or Sure over various cables to France and the UK. There is also some microwave PC capacity between Jersey and Guernsey and from Jersey to France. Nevertheless, in order to utilize this capacity all operators require an on-island PC section to connect to the end user, as shown in Figure 20.



**Fig 20**

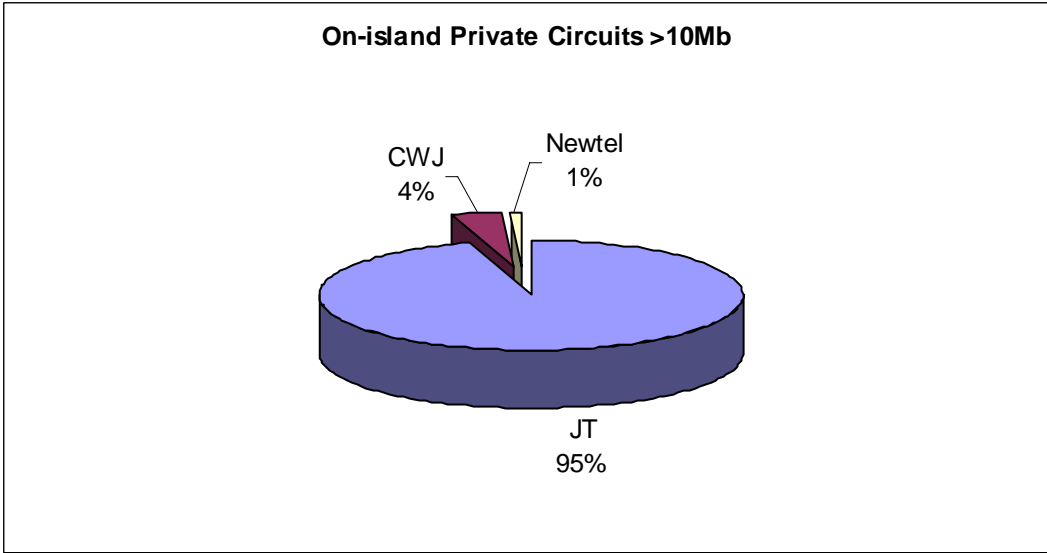
The competitive part of an off-island PC is therefore confined to the backhaul as the OLO is reliant on the JT wholesale provision for the on-island section.

Many of the under 10Mb/s PCs are legacy type circuits which are now no longer available as new products. JT therefore has the largest share of this type as a consequence of history. Nevertheless, there has been some competition in this sector as is shown in the distribution of this type of circuit in Figure 21.



**Fig 21**

Figure 22 shows the distribution of on-island PCs above 10Mb/s.



**Fig 22**

The off-island market is more competitive as is shown in Figures 23 and 24 below.

Table 7 shows the number of circuits in operation at the end of 2009.

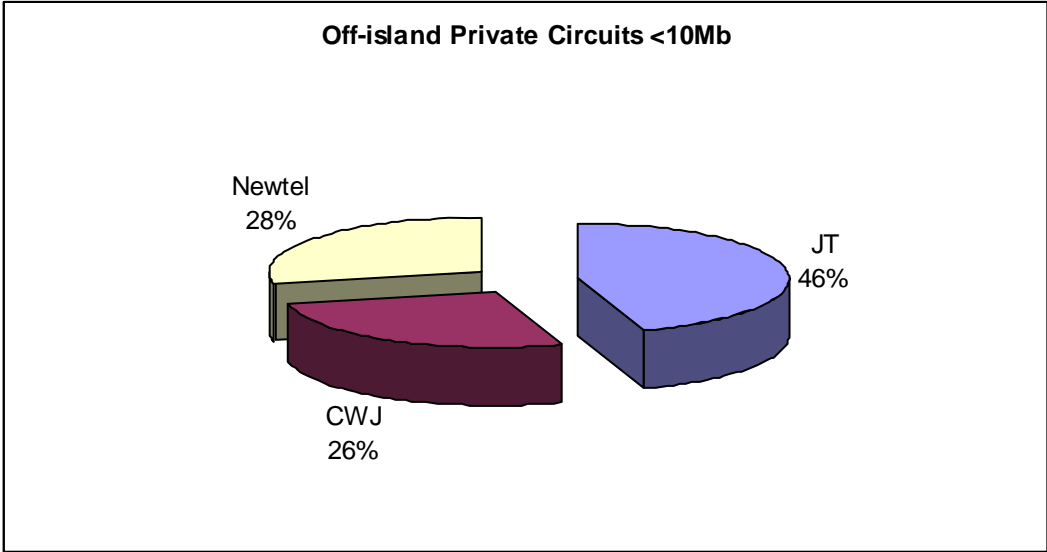


Fig 23

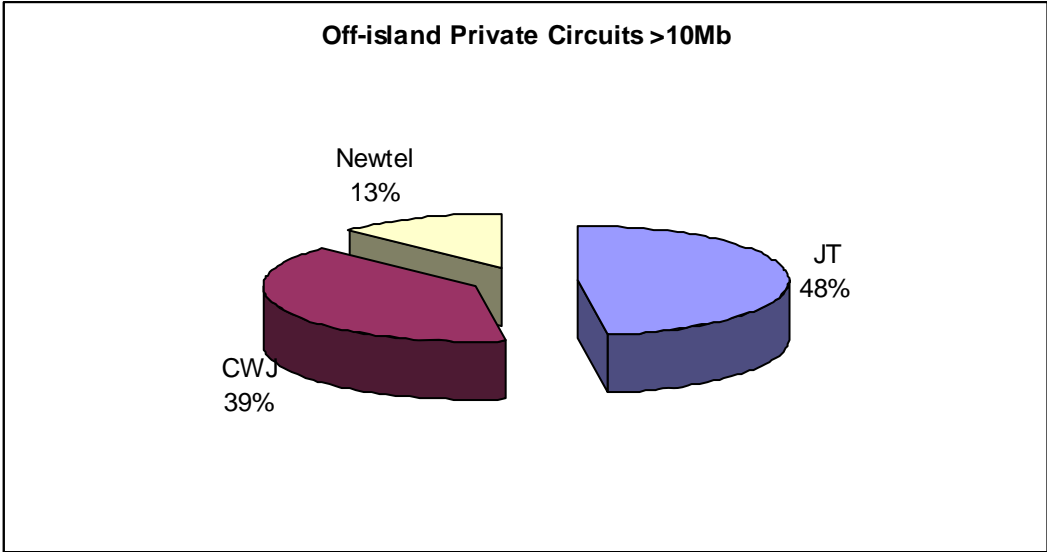


Fig 24

Circuit Type	Quantity
On-island Private Circuits	889
Off-island Private Circuits	275

Table 7

# The Telecommunications Market

## *Licenses*

The JCRA issues telecommunication licenses in three categories:

- Class I – Operators that have minimal impact on the market;
- Class II – Operators that operate commercial services that comprise the major part of the telecommunications market; and
- Class III – Operators that have Significant Market Power
- General Class Licence – Covers other licensable activities not needing a separate licence.

Currently there 17 Class I, 5 Class II and one Class III licenses issued.

Of the 5 Class II licenses only 3 operators are currently offering commercial services to the public. These licensees are:

### Class II

- Airtel-Vodafone      Mobile Telecommunications Services
- Newtel                 Fixed Telecommunications Services
- Sure                     Fixed and Mobile Telecommunications Services

### Class III

- Jersey Telecom      Fixed and Mobile Telecommunications Services

The licenses for all the JCRA operators can be viewed on the JCRA website [www.jcra.je](http://www.jcra.je)

## *Public Telephones*

There are 107 public telephones provided by JT throughout the island. Of these 88 are street kiosks and the remainder are located inside public buildings such as the harbours and airport.

Of the public kiosks more than half are located in the built-up areas of St Helier, St Saviour and in St Brelade, the remainder are spread throughout the other parishes mostly in areas of higher population density although a few are located in isolated places.

Private pay-telephones are also provided in many commercial establishments such as pubs, hotels and restaurants throughout the island.

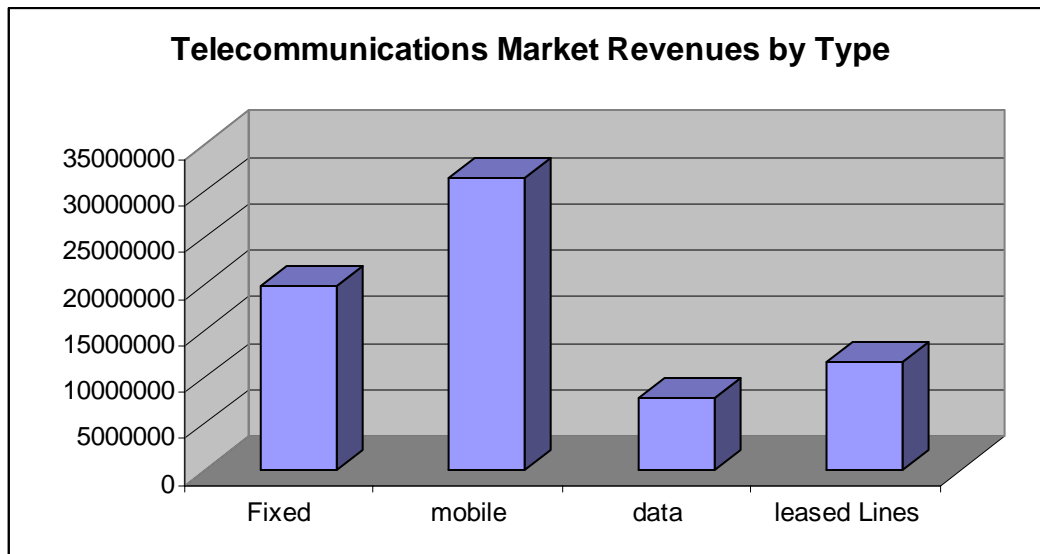
Only JT is required to provide public call boxes under the Universal Service Obligation of its licence. However, privately provided boxes are permitted under the Telecommunications (Jersey) Law 2002.

## Financial Review

The total revenue for the Jersey telecommunications market in 2009 was £70.6M.

This figure is comprised of originated fixed telephone calls and subscriptions, mobile calls, subscriptions and roaming revenue, broadband and private circuits

The distribution of the market revenues in 2009 is as shown in Fig 25 below



**Figure 25**

Notes:

1. Fixed includes calls and rental revenues
2. Mobile includes call, subscription and roaming revenues
3. Data includes fixed and mobile

The revenues shown only reflect telecommunications services and do not include retail revenues, such as handset sales and other activities, which the operators may also conduct within their businesses.

This is the first year of financial data collection and thus there is no historic comparison to be made.

## Glossary

2G	Second Generation Mobile
3G	Third Generation Mobile
ACQ	All Call Query – type of database access methodology
ADSL	Asymmetric Digital Subscriber Line
CDB	Centralized Database – all operators share the same data point
CS	Carrier Selection
DSL	Digital Subscriber Line
DSLAM	Digital Subscriber Line Access Multiplexer
E.164	ITU Standard for telephone numbering
EDGE	Enhanced Data Rate for GSM Evolution
Ethernet	A digital transmission technology
GPRS	General Packet Radio Service
GSM	Global System for Mobile
GST	Goods and Services Tax – currently 3%
HSDPA	High-Speed Downlink Packet Access
IP	Internet Protocol
ISP	Internet Service Provider
ITU	International Telecommunications Union
LLU	Local Loop Unbundling
MNP	Mobile Number Portability
OLO	Other Licensed Operator
PC	Private Circuit
POP3	Post Office Protocol 3 – email service
SDH	Synchronous Digital Hierarchy
SDSL	Symmetric Digital Subscriber Line
SIM	Subscriber Identity Module
USB	Universal Serial Bus
VoIP	Voice over Internet Protocol
WLR	Wholesale Line Rental