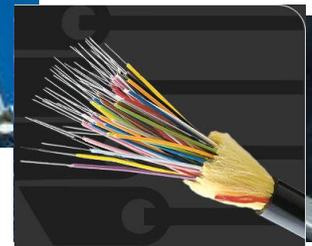


Eastern Caribbean Telecommunications Authority



Annual Telecommunication Sector Review

Period ended March 2008



January 2009

ECTEL MEMBER STATES

*Commonwealth of Dominica
Grenada
The Federation of St Christopher (St Kitts) and Nevis
Saint Lucia
St Vincent and the Grenadines*

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Contact Information

Address: *ECTEL
P O Box 1886
Vide Boutielle
Castries
Saint Lucia*

Telephone: (758) 458 1701
Fax: (758) 458 1698
Email: ectel@ectel.int
Web Site: www.ectel.int

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1.0 International Trends in Telecommunications

1.1 Overview

In 2007, the global telecommunications market experienced strong growth in the mobile sector, stagnation in the fixed voice sector and limited growth in internet use and broadband penetration. Growth in the mobile sector was largely concentrated in emerging and developing markets as the mobile sector in developed countries reached maturity with a number of countries recording mobile penetration of more than 100 per cent. According to the ITU, global growth in the mobile sector was 22 per cent with the number of mobile subscribers topping 3.3 billion. Fixed voice penetration remained relatively flat at 19 per cent globally with Africa recording the lowest penetration of just 1.9 per cent. Globally, fixed broadband penetration grew 5 per cent to 346 million fixed broadband subscribers, while Internet user penetration stood at 20 per cent representing 1.3 billion users.

According to the information technology research and advisory company Gartner Inc., total telecommunications service revenue was US\$1.49 trillion in 2007, with telecommunications equipment revenue recorded at US\$353 billion. Gartner Inc projected that worldwide the telecommunications market revenue was on pace to increase 7.6 per cent to reach US\$2 trillion in 2008, of which \$1.6 trillion or 81 per cent will come from telecommunication services. In 2007, North America was the largest telecommunications market with revenue of US\$490 billion. However, Gartner Inc. noted that Asia/Pacific was forecast to surpass North America in telecommunications revenues in 2008. Telecommunications revenue for North America was projected to increase 4.5 per cent to US\$511.6 billion while revenue for Asia/Pacific was forecast to increase 8 per cent to US\$513.1 billion.

Overall indications are that fixed voice is on the decline and mobile voice is growing. However, growth in the mobile sector is projected to stagnate by 2012, as trends in convergence erode margins in the telecommunication market. Will Hahn, principal research analyst at Gartner Inc. stated that “ Growth in legacy markets is ebbing fast, and the only way to maintain it will be via the scope to offer converged solutions, to provide service in non-traditional sectors and to enter and win in emerging markets whose profiles are very different from more mature regions.”

Providers will therefore have to focus investments in more promising growth areas including converged and wireless broadband technologies as well as emerging and developing markets. At the Connect Africa Summit in Kigali Rwanda in 2007, the GSM Association predicted that its members would invest US\$50 billion in mobile communication in sub-Saharan Africa over the period 2008 to 2012. This is expected to have a significant impact on the region as studies from the GSM Association have concluded that investment in mobile services offers significant benefits and have substantial multiplier effects on the national economy. A 10 per cent increase in mobile penetration can result in a 1.2 per cent increase in the annual growth rate in a country's GDP.

1.2 Fixed and Mobile Voice Services

In its *Report on the World Summit on the Information Society Stocktaking for 2008* (WSIS Stocktaking Report) the ITU noted that globally, the annual average growth rate of mobile subscription stood at 22 per cent, having increased by over a billion since 2005 and reaching over 3.3 billion mobile subscribers by the end of 2007. This represented a mobile penetration of 49 per cent at the end of 2007. The ITU estimated that global mobile penetration would reach 61 per cent by the end of 2008. Between 2005 and 2007, Africa experienced the most rapid annual growth of 39 per cent, followed by Asia with a 28 per cent growth rate. Meanwhile, in the more mature markets, including Europe, where mobile penetration has exceeded one hundred per cent, the growth rates have been slower.

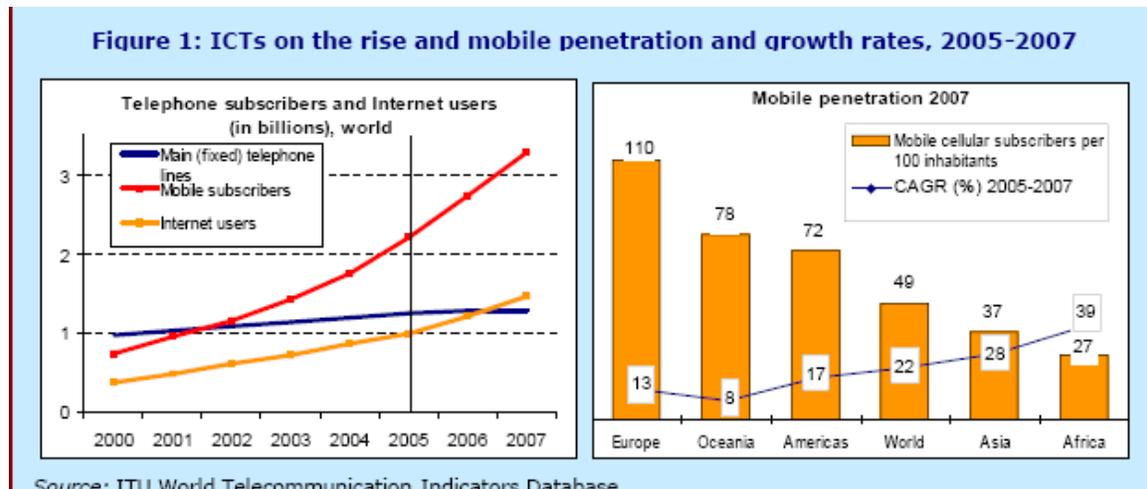
The rapid growth of mobile subscribers in the developing countries has resulted in 69 per cent of the world's mobile subscribers coming from developing countries at the end of 2007. By the end of the first quarter of 2008, mobile phone users in Africa grew a further 38 per cent to 280 million users and surpassed the levels in the United States and Canada ("Africa, the fastest growing mobile phone market in the world", *ITU News* May 2008). Mobile's dominance has meant that 71 per cent of all telephone subscribers are mobile subscribers.

In contrast to the continued expansion of mobile penetration, fixed telephone penetration has remained relatively flat at an average of 19 per cent globally, for the last few years. The WSIS Stocktaking Report notes that growth has been below one per cent between 2005 and 2007. There are a few exceptions, particularly developing

countries, like Nigeria, where fixed-line penetration has increased from under one per cent to over 4 per cent within three years, mainly through fixed-wireless systems.

At the end of 2007, the ITU estimated the number of fixed lines in service at 1.3 billion with 58 per cent concentrated in the developing world. Fixed line penetration ranged from a low of 1.9 per cent in Africa, to 31 per cent in the Americas to a high of 42 per cent in Europe. A negative consequence of the low fixed line penetration in the developing world is that there is limited infrastructure for deployment of fixed broadband services such as DSL, which is still the most commonly used fixed broadband technology.

Figure 1: Worldwide ICT penetration rates



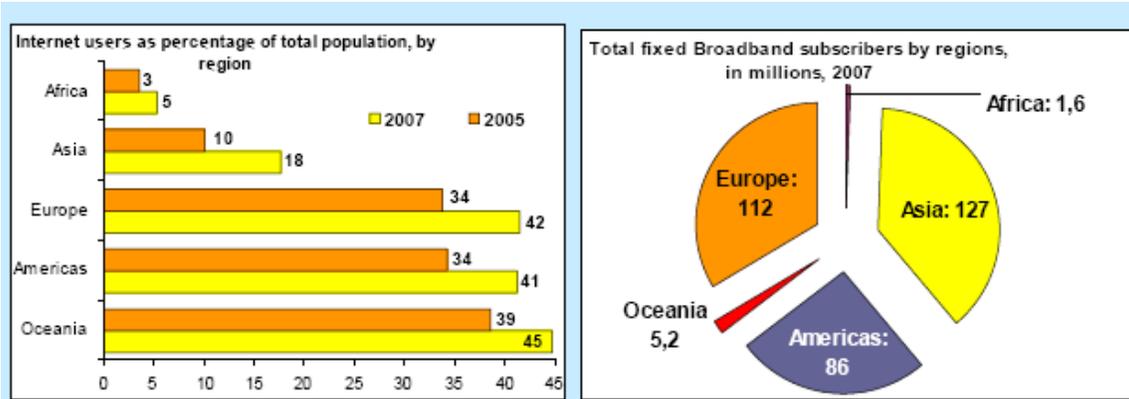
Source: Report on the World Summit on the Information Society Stocktaking 2008

1.3 Internet and Broadband Services

The ITU reports that at the end of 2007, there were 1.3 billion internet users globally. This represented a global penetration of 20 per cent with half of the internet users coming from the developing world. A comparison by region showed that the levels of internet penetration varied widely from over 40 per cent of the population in Europe and the Americas; to 18 per cent in Asia; to only one out of twenty people in Africa using the internet. Dial-up access is rapidly being replaced by broadband services across developed and developing countries and by the end of 2007, more than 50 per cent of internet subscribers were broadband subscribers.

Globally, broadband penetration had increased five per cent in 2007 and the total number of fixed broadband subscribers was estimated at 346 million. In the developing world, the uptake of broadband has been hindered by the absence of affordable rates or the commercial launching of high speed internet access. As a result, the difference in adoption of broadband is quite significant across different regions. While only 16 per cent of the world's population comes from high income countries they represent 66 per cent of all fixed broadband subscribers, with low income countries making up one per cent. At the end of 2007 fixed broadband penetration was a mere one per cent in Africa, but reached a high of 16 per cent in Europe and 10 per cent in the Americas.

Figure 2: Internet user penetration and total fixed broadband subscribers by region



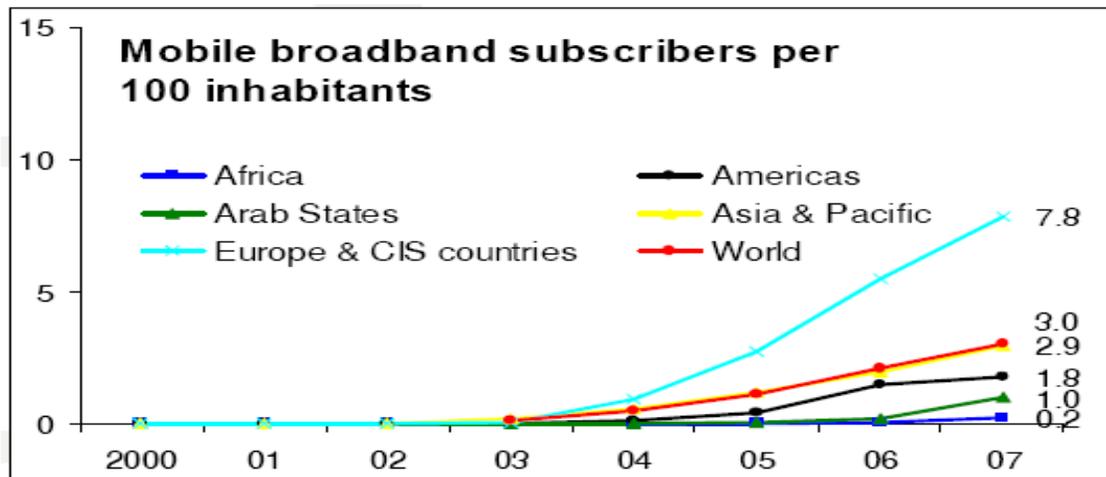
Source: Report on the World Summit on the Information Society Stocktaking 2008

The gradual phasing out of dial up is evident in developed as well as developing countries. By the end of 2007, in high income countries, 63 per cent of all Internet subscribers were broadband subscribers; this compares to almost 20 per cent in the low income countries and 39 and 50 per cent in lower middle and upper middle income countries.

There is an urgent need to bring more people online to benefit from the potential of broadband and the applications and services it can deliver in the areas of education, business, health, government services and environmental management. Wireless broadband technologies such as 3G mobile broadband and WiMAX promise to bring affordable Internet access to low and middle income countries. Brent Nordstrom noted in a November 2007 article "Mobile Broadband is Taking Off" for *businessweek.com*, that mobile broadband has become the fastest growing mobile service since the launch of pre-paid services and SMS text messaging. In a number of

markets, like South Africa, mobile broadband subscribers outnumber new fixed broadband subscribers and plug-in 3G modems (dongles) are outselling even the most popular mobile phones. The ITU estimated the number of mobile broadband subscribers worldwide at 167 million at the end of 2007 with Asia recording the fastest growth with over 120 million subscribers. However mobile broadband subscribers are still concentrated in the developed world. At the end of 2007, globally mobile broadband penetration ranged from a low of 0.2 per cent in Africa to 7.8 per cent in Europe.

Figure 3: Global mobile broadband subscribers



Source: ITU

1.4 Emerging Services

There is still significant potential for market expansion in the provision of Internet services with the most promising area being that of mobile data services. The article “The meek shall inherit the web” in the *Economist’s* Technology Quarterly for September 2008, reported that the number of mobile phones that can access the Internet is growing rapidly in the developing world and has surpassed the rate of growth of access using laptops. In China, the country with the largest number of Internet users in the world, 29 per cent of its 250 million Internet users, use their mobile phones to get online.

In its 2008 *Communications Market Report* OFCOM noted that in the UK there have been significant strides in the uptake and accessibility of mobile broadband. This has been fuelled by falling prices for Internet access on mobile phones; the increasing popularity of the 3G version of Apple’s iPhone; the introduction of the 3G mobile USB modems or dongles, which allows consumers to access the Internet using a

cellular network by plugging the dongle into the laptop; and the substitutability of fixed broadband access with High Speed Packet Access technology across 3G networks.

A mobile phone has changed from simply of being a convenience to the fisherman or farmer to a device offering more sophisticated value added services such as: mobile banking in the Maldives; payment of casual workers and taxi drivers and sending remittances to friends and family in emergencies in Tanzania and Afghanistan¹.

There is considerable potential for growth in demand for these services given that such sophisticated services can be done via text messages, which are relatively cheap, easy to use and is available on all mobile phones.

It is well known that with mobile Internet access many more services can be offered via the mobile phone. However, widespread global mobile Internet access is still lagging given that mobile web access still requires relatively expensive handsets. According to OFCOM's *Communications Market Report 2008*, while both mobile and fixed line operators are competing for the provision of Internet services, SMS remains the most widely used data service with 44 per cent of UK adults using texts on a daily basis compared to 36 per cent who use the Internet.

In the article "Industry Watch, Broadband News from Europe" (*ITU News*, June 2008) the ITU notes that, in the UK, there is a move to switch from broadband Internet connections attached to legacy networks to super-fast fibre to the home using Fibre Optical Cable Underground Sewer Systems. This new technology will allow households to access an ever increasing number of services such as video streaming and television via the Internet.

1.5 Outlook

Global mobile penetration surpassed the 50 per cent mark in early 2008 and the ITU projected global penetration at 61 per cent by the end of 2008. However, there continues to be huge variations in mobile penetration rates across regions and within countries. In developing countries high cost of network infrastructure still inhibits increase in mobile penetration in rural areas. Sharing of mobile infrastructure is increasingly being considered as an alternative that lowers the cost of network

¹ The Economist, Technology Quarterly, September 2008

deployment and could also stimulate the migration to new technologies that support mobile broadband. A number of countries including Spain, England, Brazil, India and Malaysia allow for mobile infrastructure sharing.

Broadband access remains a concern in many developing countries. While Africa has made substantial progress in mobile penetration, broadband access continues to be dampened by limited bandwidth and lack of affordability. Africa which is the poorest region in the world has the lowest rate for broadband access. Availability of broadband access is crucial for economic activities such as e-commerce, outsourcing, digital public services, e-learning and e-health. At the Connect Africa Summit in Kigali Rwanda in 2007, the GSM Association announced that its members planned to invest US \$50 billion between 2008 and 2012 to provide more than 90 per cent of Africa's population with mobile coverage. The role of government is critical to achieve social and economic benefits from this investment.

The ITU notes that prior to the collapse of the global financial sector in September 2008, the outlook for the telecommunications sector was vibrant as wireless technologies and fibre deployment promised increased opportunity to for universal access to data-rich services. With the financial crises the outlook for the sector has taken a dramatic turn. The effects on the telecommunications sector in the United States is already evident as *Businessweek* reports that AT&T, the largest telecommunication service provider in the US announced that it will slash 12,200 jobs owing to a shrinking economy. AT&T also indicated that it may reduce the amount spent on network upgrades in 2009. Other US operators have also announced lay-offs. Figure 4 outlines the *ITU's* view of the sector outlook for 2009.

Figure 4: Excerpt from ITU report

A vibrant ICT sector faces tough economic times

The year 2008 saw growth in mobile networks and subscribers rise to an all-time high, reaching an estimated 4 billion mobile subscribers worldwide¹. A growing array of broadband wireless systems are now available, opening the way for users in developing countries to access the Internet on mobile phones and other handheld devices. At the same time, more developing countries were deploying national fibre backbones and backhaul networks to transport their growing data-rich traffic. In addition, several new international submarine cable networks were set to connect developing countries to the global network of Internet backbones – just as a group of high-tech entrepreneurs were working to revive plans for a constellation of broadband satellites for the developing world.

Then came September 2008, and with it the exploding global financial and credit crisis. The dramatic events of autumn called into question whether the necessary financing would remain available to ensure that the positive trends in the ICT sector would continue. Indeed, financing network growth may have just become a lot tougher. As could be expected, the bad financial news in September and October sparked a handful of announcements that planned network upgrades would be postponed.

Analysts' predictions on the impact of the financial crisis on the telecommunication sector ranged from the optimistic – predicting only a slight impact through 2009 – to a decline of nearly 30 per cent in capital expenditures in the year ahead. But even the most dour prognosticators noted that everything depended on the severity of the financial crisis, which was still unfolding in late 2008.²

Source: ITU, Trends in Telecommunications Reform 2008

2.0 Regional Trends in Telecommunications

2.1 Overview

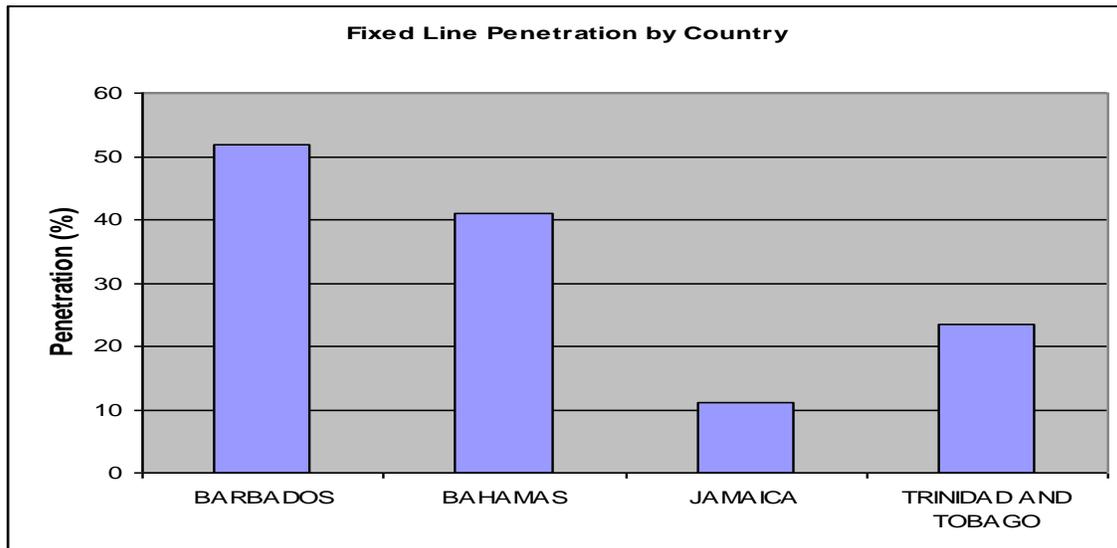
The mobile market remains the engine of growth for the telecommunications sector regionally. In its Caribbean Telecommunications Report Q4 2008, Business Monitor International notes that the mobile market across the Caribbean has been witness to exceptional growth. The report also cites almost no growth in the fixed line markets and only limited growth in Internet Access with a number of rural areas still without access.

2.2 Fixed Voice Service

There has been little change in the market players providing fixed voice service across the region for the period under review. At the end of 2007, in Trinidad and Tobago the incumbent Telecommunications Services of Trinidad and Tobago (TSTT) was the sole provider of fixed line services, though cable operator Columbus Communications Trinidad Ltd trading as Flow was expected to launch its voice and internet services in early 2008. In The Bahamas there are two fixed line operators but the incumbent Bahamas Telecommunications Company (BTC) enjoys a near monopoly over the new entrant System Resources Group (SRG). In Barbados and Jamaica, the fixed line market continues to be dominated by the incumbent Cable & Wireless; however cable operator Flow now offers a triple play of voice, Internet access and cable TV in Jamaica.

Fixed line penetration has remained relatively flat in The Bahamas and Jamaica, increased slightly in Barbados and decreased 5.6 per cent in Trinidad and Tobago after a trend of growth over the past seven years. Regionally, the decline in fixed line subscription has however been stemmed by the increased demand for broadband Internet access as DSL operators usually require a fixed line subscription for internet access and cable operators are increasingly offering triple play packages with voice, data and video at flat rates to consumers.

At the end of 2007, fixed line penetration ranged from a high of 52 per cent in Barbados to a low of 11 per cent in Jamaica. Penetration in The Bahamas was estimated at 41 per cent and 24 per cent in Trinidad and Tobago.

Figure 5: Regional fixed line penetration

Source: BMI Caribbean Telecommunications Report Q4 2008

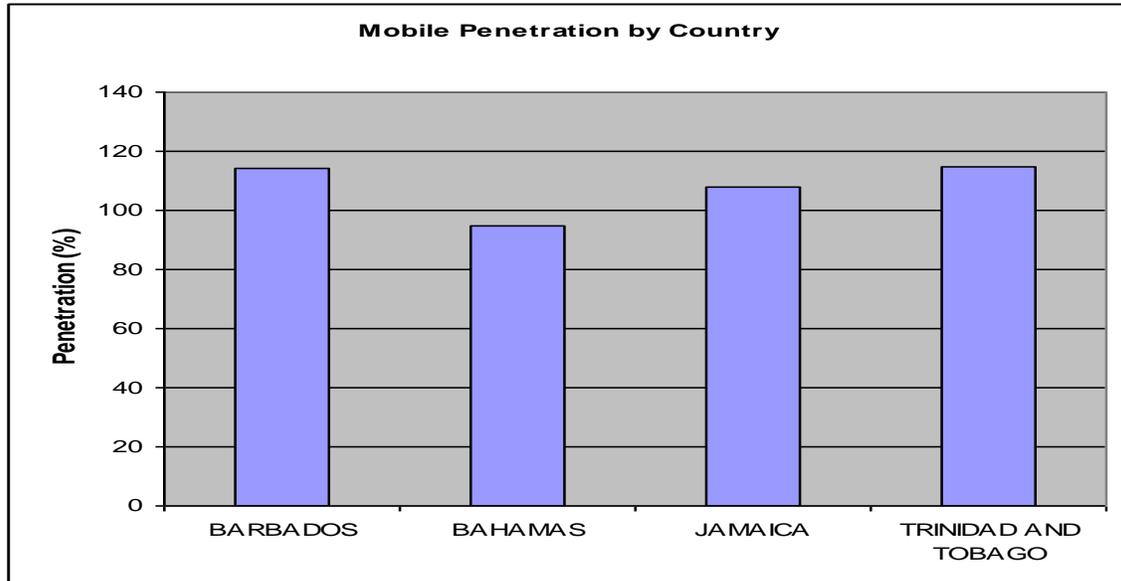
2.3 Mobile Voice Service

Throughout the region the mobile market remains the most dynamic and competitive. The Jamaican market was the most competitive with three active market players; Digicel with an estimated 70 per cent of the market, Cable & Wireless with 21 per cent and new entrant Claro claiming an estimated 9 per cent. Digicel has maintained its dominance in the Jamaican market despite not offering the lowest rates to consumers. In Barbados, Cable & Wireless and Digicel are more evenly matched in terms of market share. In Trinidad and Tobago Digicel launched operations in 2006 and at the end of 2007 it was estimated to have captured some 39 per cent of the market. Licences have been issued to a third operator in Barbados and Trinidad and Tobago but these operators have so far failed to launch operations. The Bahamas remains the last holdout as the incumbent retains its monopoly on the mobile market since the government revised its Telecommunications Sector Policy in 2002.

Except in Trinidad and Tobago, the mobile markets expanded for the period under review. At December 2007 the number of mobile subscribers in Trinidad and Tobago was estimated at 1,509,776, representing a 0.6 per cent reduction in subscribers. This reduction was the first since 2001 and has been attributed to a reassessment of active subscribers. Accordingly mobile penetration was recorded at

115.3. Mobile penetration was estimated at 114.4 in Barbados, 108.7 in Jamaica and 95 per cent in the Bahamas.

Figure 6: Regional mobile penetration



Source: BMI Caribbean Telecommunications Report Q4 2008

2.4 Internet and Broadband Services

The market for Internet Access has attracted a number of new entrants, however growth in subscribers and competition in that market does not reflect the interest shown by investors in the market. Growth in the sector remains constrained by the cost of computers, which up till now were seen as the device of choice to access the Internet. However with the advent of less costly smart-phones and other PDAs as well as new technologies that offer mobile and wireless broadband solution of comparable quality to fixed line access, there are new growth opportunities in the Internet market. In the region Digicel has launched a mobile broadband service using Enhanced Data rates for GDM Evolution (EDGE) which promises to offer more affordable broadband access to consumers.

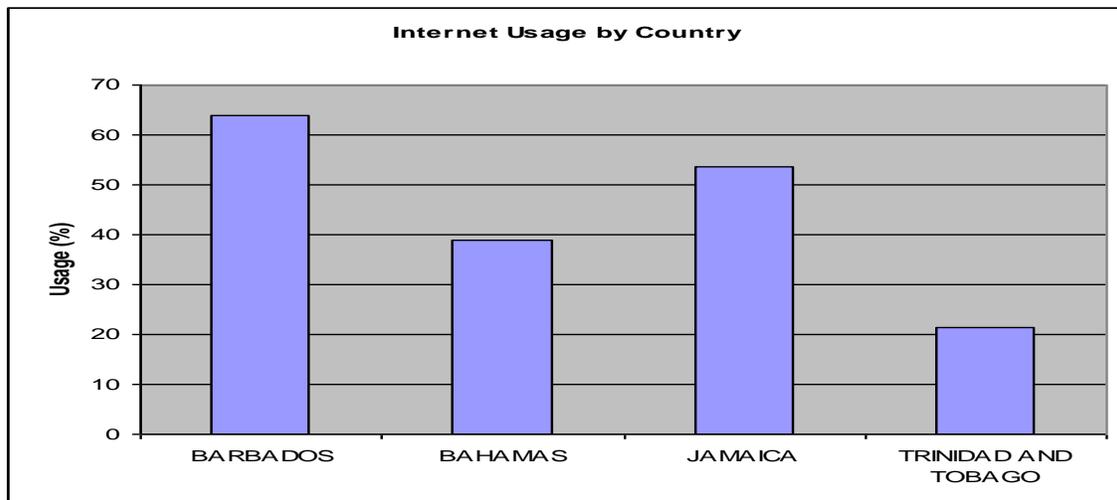
Fixed wireless solutions also promise increased broadband access. Barbados, Trinidad and Tobago and The Bahamas have all issued Fixed Wireless Licenses and Digicel has indicated its intension to launch a WiMAX network throughout the region.

At the end of 2007 there were five ISPs in Barbados with Cable & Wireless still the dominant provider and Tele-Barbados offering services mainly to businesses. In Jamaica the number of ISPs stood at around seven, Cable & Wireless again maintaining dominance with cable operator Flow offering Internet access as part of a triple play offering. A similar situation existed in Trinidad and Tobago where incumbent TSTT is the main provider of the seven licensed ISPs. In The Bahamas the situation is reversed where cable operator Cable Bahamas is the largest Internet service provider followed by incumbent BTC, with another eighteen licensed ISPs in the market.

In spite of the number of providers, Internet penetration remains relatively low in the region. Only limited data on number of subscribers was available at the time of this report. Trinidad and Tobago recorded an 11.5 per cent increase in subscribers with fixed wireless subscribers accounting for 7.3 per cent and broadband subscribers accounting for 43.4 per cent of total subscribers. In The Bahamas, Cable Bahamas recorded a 13.3 per cent increase in subscribers to 41,000.

The website *internetworldstats.com* estimates Internet users and at June 2008, the website estimated that Internet users in region ranged from a high of 64 per cent in Barbados to low of 22 per cent in Trinidad and Tobago. Internet users in The Bahamas were estimated at 39 per cent and 54 per cent in Jamaica.

Figure 7: Regional Internet users



Source: www.internetworldstats.com November 24, 2008

2.5 Trends in Pricing

Regionally, the rates for fixed and mobile voice services have remained largely unchanged for the review period. Increased competition and international connectivity due to a new submarine cable system in the Caribbean has however resulted in significant downward movement in the rates for Internet access.

There was a 20 per cent increase in the charges for monthly subscription for fixed line access in Jamaica while elsewhere the rates remained unchanged and ranged from \$13 in Trinidad and Tobago, \$24 in Jamaica and a high of \$50 in Barbados. It should however be noted that there are no usage charges for local fixed calling in Barbados.

There has also been little movement in the rates for mobile calling. Off-net rates ranged from \$0.95 to \$0.97 in Barbados, \$0.38 to \$0.66 in Jamaica and \$0.55 to \$0.68 in Trinidad and Tobago. In Jamaica and Trinidad and Tobago there has been a shift away from the price differential for on-net versus off-net calls as the incumbent offers a uniform *anyone* rate for local mobile calls. In Barbados as in the ECTEL Member States the discounting of on-net calls is still prevalent and can be up to 57 per cent.

The rates for international calls from a fixed or mobile phone to the United States ranged from \$0.52 in Jamaica, \$0.54 in Trinidad and Tobago, \$1.26 in The Bahamas to \$1.62 in Barbados.

The rate for broadband Internet access has seen some decline after remaining relatively flat the past few years. Throughout the region, providers are now offering increased speed at lower rates. In Barbados and Jamaica Cable & Wireless offers 1Mbps at \$80, while TSTT offers 1Mbps at \$87. In The Bahamas the main provider Cable Bahamas offers 3Mbps at \$102 while BTC offers 1Mbps at \$149.

Table 1: Regional rates for telecommunications services

Country	Rates to US from a fixed line (EC\$)	Mobile to Mobile off-net calls(EC\$)	Rates for 1Mbps Broadband Access (EC\$)
<i>BARBADOS</i>	1.62	0.95	81
<i>BAHAMAS</i>	1.26	0.89	102 (for 3Mbps)
<i>JAMAICA</i>	0.52	0.64	80
<i>TRINIDAD AND TOBAGO</i>	0.54	0.61	87

Source: Company Websites

3.0 Domestic Trends in Telecommunications

3.1 Overview

For the period ending March 2008, the telecommunication sector in the ECTEL Member States expanded in terms of both subscribers and call volumes. Despite expansion in these areas, total revenues were estimated to have fallen some 6 per cent as a result of the continued decline in the fixed line market. At the end of 2007, the sector was estimated to have contributed 10.8 per cent to GDP up from 10.6 per cent in the previous period.

The main highlights of the sector for the review period:

- Voice services remain the main source of revenue for the industry but revenues from Internet services record a 20 per cent increase even as overall sector revenue is estimated to have contracted some 6 per cent.
- The mobile market recorded 16 per cent growth in subscribers with three Member States recording mobile penetration rates in excess of 100 per cent.
- The decline in fixed lines in service stabilized and the number of lines in service experienced modest growth of 2 per cent.
- The mobile market for voice services dominated fixed services in terms of revenue generation, subscribers and outgoing international traffic. However, the majority of local traffic still originated from the fixed network.
- Growth in the market for Internet access outpaced growth in the markets for voice as reduced rates and increased speeds for high speed Internet access resulted in increased uptake of fixed broadband service. There is still significant room for expansion in the market for Internet access with average penetration registered at 11.6 per cent.
- The market for mobile Internet access and in particular, mobile broadband access was enhanced with the introduction of Enhanced Data rates for GSM Evolution (EDGE).
- SMS messaging continues to be widely used by customers owing to its affordability and ease of use.

Table two presents some telecommunication indicators for the ECTEL Member States.

Table 2: Telecommunication Indicators in the ECTEL Member States

Indicator	Dominica	Grenada	St Kitts and Nevis	Saint Lucia	St Vincent and the Grenadines	ECTEL
Fixed voice and Internet services						
Value (EC\$)	22.3	71.9	69.7	78.8	67.1	309.8
Volume (million minutes)	44.3	321.6	86.4	190.6	94.5	737.6
Fixed voice Penetration (%)	24.8	26.9	40.4	23.9	23.4	27.9
Internet Penetration (%)	9.8	8.2	22.0	9.0	9.3	11.6
Mobile voice services						
Value (EC\$)	52.3	89.3	54.7	160.3	80.6	437.3
Volume (million minutes)	96.7	126.4	101.0	238.0	129.3	691.4
Penetration Rate (%)	125.5	89.8	146.4	99.1	112.5	114.6

Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

Traffic volumes includes only outgoing local and international voice

3.2 Revenues, Investment and Employment

3.2.1 Revenues

Despite growth in subscribers in all market segments, overall revenues collected by individual licenses fell by an estimated 6 per cent to EC\$747 million due to declines in revenues from fixed line services. Revenues from mobile services accounted for the lion's share of 59 per cent of total revenues in line with its performance in the previous period. Revenue from Internet Services experienced a significant 20 per cent increase accounting for 8 per cent of total revenues, owing mainly to a corresponding increase in the number of fixed broadband subscribers. In contrast, revenues from fixed line services continued its decline accounting for 33 per cent of total revenues down from 44 per cent in the previous period.

As the mobile market reaches maturity, it is increasingly difficult to grow revenues as intense competition has led to a number of promotional rates being offered to entice consumers to use their mobile phones. This has led to the phenomenon of growth in both subscribers and traffic being accompanied by flat or declining revenues in the mobile market. In the ECTEL Member States, the mobile market recorded an overall 8 per cent growth in revenue in the review period.

3.2.2 Investment

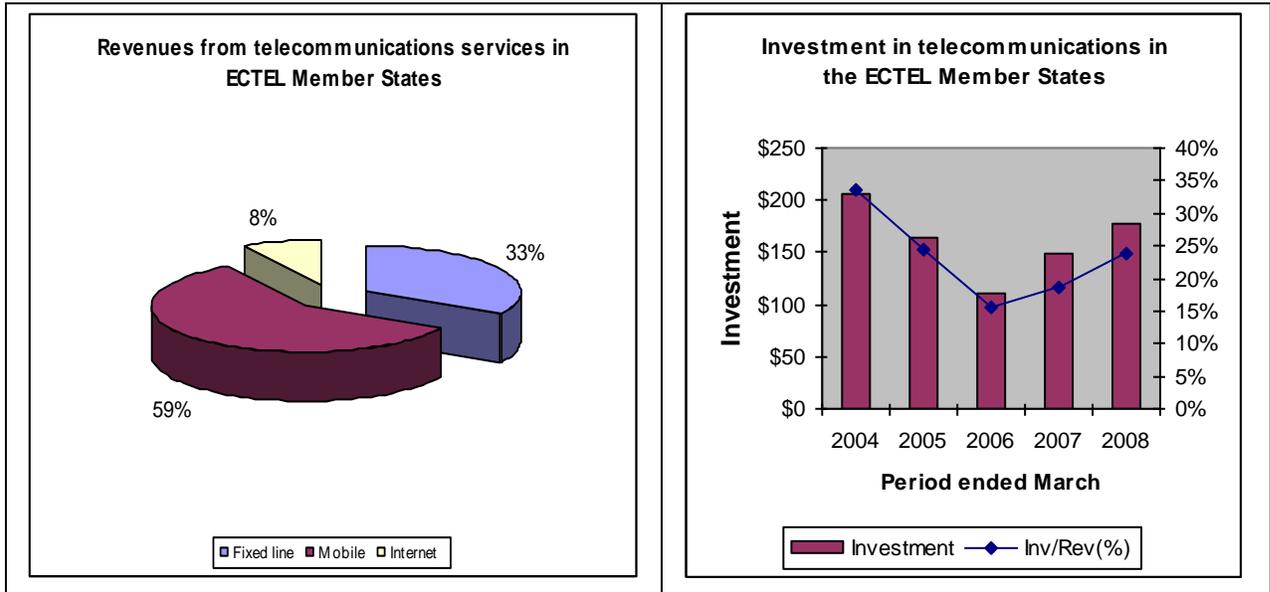
Investment in the sector was estimated to have increased some 20 per cent to in excess of \$177 million, largely due to expansion in the mobile market in an effort to increase coverage and upgrade mobile services. There has been significant expansion in the supply-side of the mobile market, including the erection of additional towers and deployment of other equipment and new technologies to improve the quality of mobile voice and Internet services. There has also been investment in the laying of cables for the provision of both domestic and international leased circuits.

Increased investment in the telecommunications sector is expected to have a significant positive impact on the ECTEL Member States. In an address to participants of the GSMA Mobile World Congress in Spain in 2008, Secretary-General of the ITU noted that investment in mobile telephony has strong multiplier effects for national economies. This is in keeping with conclusions from GSMA studies that a 10 per cent increase in mobile penetration can lead to a 1.2 per cent increase in the annual growth rate in a country's GDP.

3.2.3 Employment

For the period under review, the level of direct employment reported by individual licenses increased by 13.7 per cent to 1548, largely on account of expansion in the mobile and the Internet services markets. Total employment in the sector is not readily available and ECTEL estimates that more than 3,200 persons benefit from the sector in areas such as customer premise services, retail sales of mobile handsets and accessories as well as sale of phone cards and electronic top-up services for prepaid mobile customers.

Figure 8: Revenues and Investment in ECTEL Member States



Source: ECTEL/ operators
 Includes estimates where ECTEL did not receive data from operators

3.3 Market Players

During the review period six new licenses were issued. Three new entrants were issued licences in Saint Lucia, one for Public Mobile Telecommunications, one for Internet and Network Services and one for Submarine Cable. In St. Vincent and the Grenadines, a licence was issued for Public Mobile Telecommunications and one for Internet Network and Services. In St. Kitts and Nevis there was one new entrant in the public mobile services market. No new licenses were issued in Dominica while in Grenada Columbus Communications took over the operations of Grenada Cable Vision. Sixty-two telecommunications licences have been granted in the ECTEL Member States since liberalization.

The fixed line market remained a de facto monopoly in Grenada, Saint Lucia and St. Vincent and the Grenadines despite the issuance of a number of fixed line licenses over the years. For the review period, Caribbean Cable Communications launched its fixed line voice service as part of a triple play offering in Nevis. The mobile telecommunications market was dominated by the incumbent, Cable & Wireless and Digicel in all of the Member States. In St. Kitts and Nevis and Dominica, a third mobile operator is also present in the market. Cable & Wireless also remained the dominant provider of fixed broadband access with cable companies also offering broadband service in Dominica, St. Kitts and Nevis and St. Vincent and the

Grenadines. In the summer of 2008, Karib Cable launched Internet and Cable TV services in Saint Lucia, bringing competition to both markets.

There are also a number of class licensees who provide services to the public such as the resale of international voice minutes, Internet service, radio and television broadcast or are licensed to provide telecommunications service within their business operations.

3.4 Market Trends

During the review period the telecommunications sector expanded both in terms of number of subscribers and usage, but experienced some contraction in terms of revenue generation. In line with international trends, growth in mobile penetration accelerated reaching 114.6 per cent, up by 16 per cent from the previous year. The continued uptake of mobile phones in a saturated market reflects the success of competitive strategies aimed to encouraging the ownership of multiple cell phones.

Internet penetration, especially broadband penetration, continues to grow moderately but remains well below its full potential. Internet penetration reached 11.6 per cent up from 9.3 per cent in the previous year, with 92 per cent of subscribers having broadband access.

In line with international trends of a slow down in the decline for fixed lines, demand for fixed lines in the ECTEL Member States increased marginally and fixed line penetration edged upwards by 0.1 per cent to 27.8 per cent.

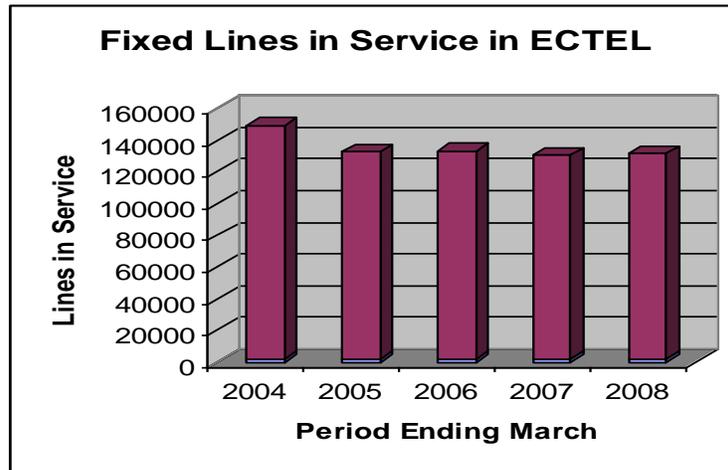
3.4.1 Domestic Fixed Voice Service

Total fixed lines in service in the ECTEL Member States increased 2 per cent to roughly 130,000 at March 2008. This follows a 2 per cent decline in the previous period. The dramatic reduction in the number of lines in service has stabilized in the past four periods with fixed line penetration settling at an average of 27.8 per cent.

Total fixed call volumes was estimated to increase some 13 per cent to 687 million minutes in the review period. This overall increase was attributed to a 17 per cent increase in fixed to fixed calling, which accounted for 92 per cent of fixed call volume, even as fixed to mobile calls fell 11 per cent. Despite the increase in both total number of lines in service and traffic there was a decrease in revenue generated

from fixed line service which accounted for 33 per cent of total revenue down from 44 per cent in the previous period. This decrease in revenue from fixed line service is a trend observed by a number of regulators as mobile and Internet services gain prominence in the telecommunications sector.

Figure 9: Fixed Line in Service in the ECTEL Member States



Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

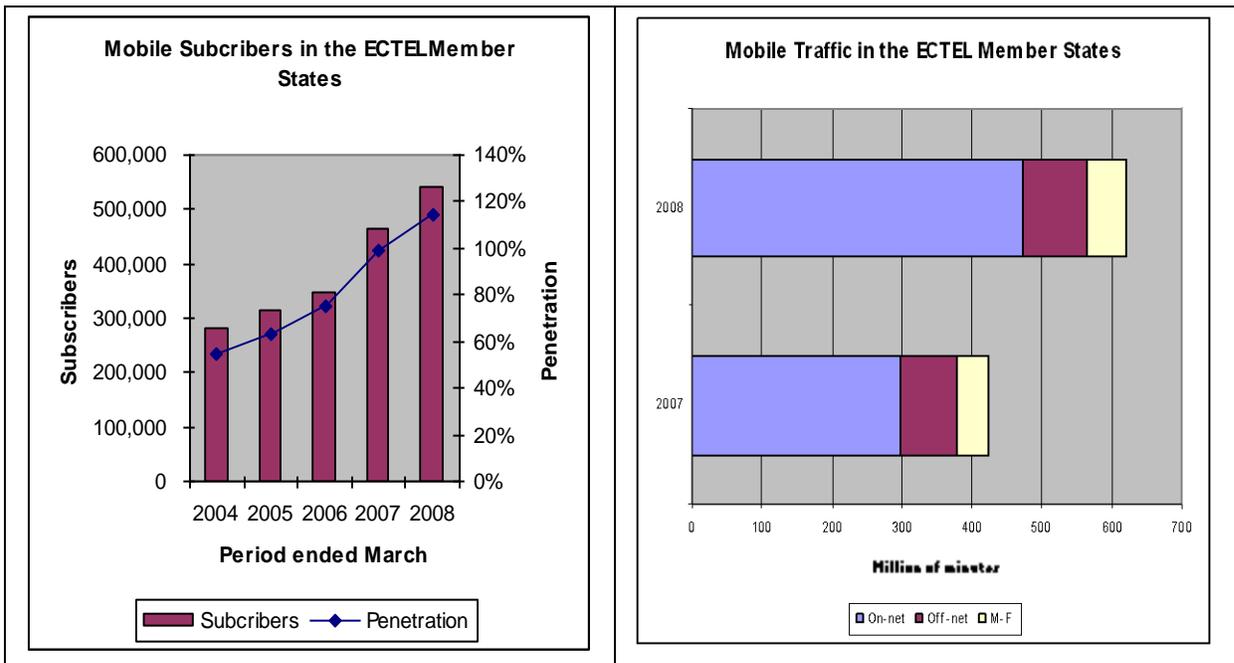
Call volumes generally respond to pricing strategies vis-à-vis competing services and economic activity at any given period. The price of fixed calls which are regulated under a Price Cap Plan remained largely unchanged in the review period. However, the increase in fixed to fixed call volumes may be in response to Cable & Wireless' offer of an unlimited fixed to fixed calling package to residential customers at a flat rate of \$25 per month.

3.4.2 Domestic Mobile Service

The number of mobile subscribers continued to grow, albeit at a reduced rate, in the review period. The number of subscribers grew 16 per cent compared to a 34 per cent growth rate in the previous period. At March 2008, the number of mobile subscribers in the Member States was estimated at 540,000 resulting in an average penetration rate of 115 per cent. Only Grenada and Saint Lucia recorded mobile penetration rates below 100 per cent.

Traffic originating on mobile networks reached approximately 620 million minutes, a 47 per cent increase over the previous period. Calls originating from a mobile network accounted for 47 per cent of local calls up from 39 per cent in the previous period. The increase in mobile traffic was due in large part to increased on-net traffic though off-net and mobile to fixed calling also registered increases. On-net traffic rose some 60 per cent and accounted for 76 per cent of mobile traffic. The increase in on-net traffic may be in direct response to competitive promotional on-net pricing offers aimed at encouraging on-net activity. Mobile to fixed calls represent a small percentage of mobile calls but have increased steadily over the past two periods and accounted for 9 per cent of mobile calls.

Figure 10: Mobile Subscribers and Traffic in ECTEL Member States



Source: ECTEL/ operators
 Includes estimates where ECTEL did not receive data from operators

In the ECTEL Member States taken as a whole, the mobile market recorded growth in terms of subscribers, traffic and overall revenues. Consistent with the increase in the subscriber base and usage, revenue generated by the mobile market totaled \$435 million an increase of 9 per cent over the previous period.

For the review period there has been little movement in the rates for mobile calls. Price differentials between on-net and off-net calls are still prevalent with the rates for on-net calls being at least 10 cent less than the rate for off-net calls.

The total number of SMS messages sent by mobile users in the ECTEL Member States was in excess of 135 million minutes. SMS messages have become a popular form of communication given that it is more economical than voice, especially for the low budget consumer and the youth. The use of SMS messaging is much more prevalent in Dominica and St Kitts and Nevis than in the other Member States.

MMS messaging is also available in the Member States; however data on use was not available at the time of this report. The rates of messaging services have remained largely unchanged in the review period. SMS rates ranged from 10 to 25 cents per message for local messages while one provider offers MMS messaging at 50 cents per message.

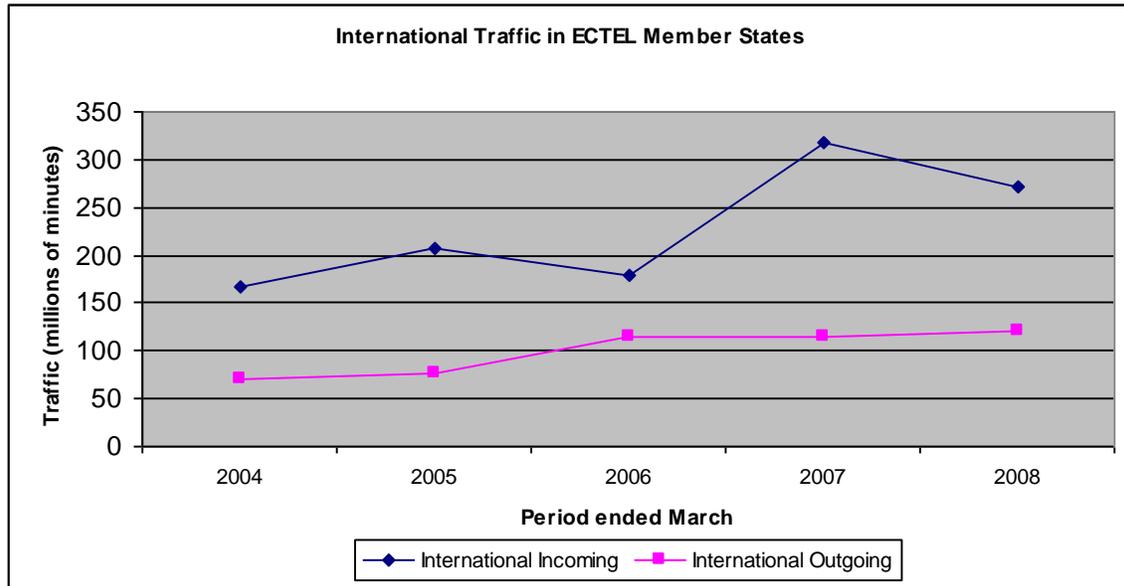
3.4.3 International Voice Service

Outgoing international call volumes have remained relatively flat over the past three periods. For the review period, total outgoing international call volumes increased 6 per cent to in excess of 121 million minutes, this following a 4 per cent drop in the previous period. In contrast to what obtains in the domestic voice market, international calls originating from mobile networks continue to outpace calls from the fixed network growing 15 per cent in the review period, and representing 58 per cent of all outgoing international calls. Outgoing calls from the fixed network contracted 4 per cent to just over 50 million minutes. For the review period, the rates for outgoing international calls remained largely unchanged.

Incoming international call volumes have traditionally outpaced outgoing call volumes. For the review period, this trend continued even as incoming call volumes contracted by 15 per cent to an estimated 271 million minutes. This contraction was due to a drop in calls terminating on the fixed network even as calls terminating on a mobile network grew by more than 30 per cent. A majority of incoming calls, 57 per cent, still terminated on the fixed network, but calls to mobile networks are gaining momentum.

International calling is also available via VOIP services, however data on this service is limited for the review period. Based on available information, demand for this service has grown by more than 60 per cent in the review period.

Figure 11: International Voice Traffic in ECTEL Member States



Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

3.4.4 Internet and Broadband Services

The market for Internet services experienced significant expansion in the review period both in terms of growth in fixed line broadband access and increased availability of mobile and wireless access. Mobile Internet access and in particular mobile broadband is promising to be a viable substitute for fixed broadband access in the ECTEL Member States.

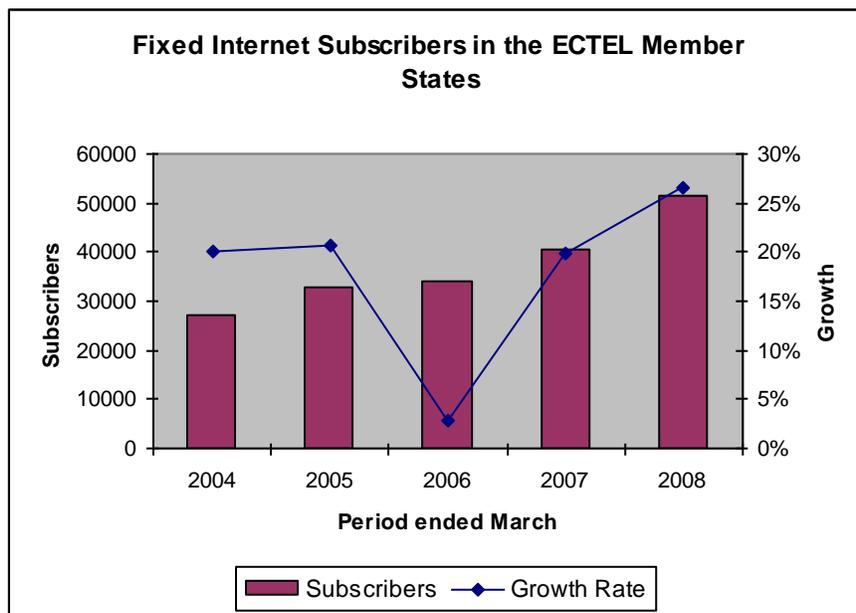
The Internet can now be more readily accessed with many mobile phones as well as laptops with wireless access. The recent introduction of Enhanced Data rates for GSM Evolution (EDGE) - an upgrade of GSM - by Digicel, has made it possible for consumers to enjoy increased data capacity over GPRS, using their mobile phones and laptops.

3.4.4.1 Fixed Line Internet Access

For the period under review the number of fixed line Internet subscribers grew 26.5 per cent to in excess of 51,000 with broadband subscribers representing 92 per cent of

all subscribers. The growth in total subscribers was due in large part to the continued increase in the number of ADSL broadband subscribers even as the total number of dial-up subscribers continues to decline, falling some 31 per cent over the review period. Subscribers using a cable modem for high speed Internet access were estimated to have increased by 15 per cent accounting for just under 10 per cent of total Internet subscribers. Overall Internet penetration was recorded at 11.6 per cent with broadband penetration at 9.5 per cent.

Figure 12: Subscribers of Fixed Line Internet Access in ECTEL Member States



Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

Revenues generated from the provision of Internet services increased an estimated 20 per cent and accounted for 8 per cent of total revenue. Expansion in fixed line Internet access was associated with the re-pricing and re-branding of the ADSL broadband service offered by Cable & Wireless. Consumers were offered a four fold increase in speed and a 20 per cent reduction in monthly charge. The lowest speed now offered is 1Mbps at a rate of \$79 per month. The rates for dial-up packages have remained unchanged thus encouraging the switch to ADSL offerings.

3.4.4.2 Fixed Wireless Internet Access

Fixed wireless Internet access has been available in the ECTEL Member States via public WiFi hotspots, however uptake as a paid service by both residential and business customers is very limited. Data on the total number of hotspots is not readily available. However WiFi hotspots are available at most airports, in the lobby of a number of hotels and in coffee houses and other restaurants. Public wireless access provides an opportunity for users without access at home as well as visitors or persons away from home or the office needing Internet access.

3.4.4.3 Mobile Broadband Access

In the ECTEL Member States, as in other countries, mobile broadband promises to provide new opportunities for mobile operators in the face of the looming decline in mobile voice revenues as the market reaches maturity.

Mobile operators in the ECTEL Member States have been offering Internet access on mobile phones using GPRS technology at narrowband speeds. The advent of mobile broadband makes the use of handheld devices for Internet access much more viable as the experience will be more closely matched to fixed line access. One mobile operator, Digicel has launched a mobile broadband offering using EDGE in the ECTEL Member States.

Revenue and subscriber data on mobile broadband offerings is limited at this point. However, preliminary indications are that an estimated 30 per cent of all Internet subscribers in the ECTEL Member States are mobile users. As Internet ready handsets become more readily available and affordable, the number of subscribers is expected to increase. Mobile broadband could provide the avenue for increased broadband penetration as it will prove to be more affordable for low income consumers than fixed line access which requires a computer, the cost of which is often prohibitive.

Internet access via a mobile phone was offered at a rate of 1 to 3 cents per Kbps for prepaid customers, or a flat monthly rate of \$40 for postpaid consumer.

3.5 Prospects

The global financial crisis and restructuring in the sector may pose some threats to the telecommunications sector in 2009. The two major players in the sector, Cable & Wireless, which has re-branded its operations as LIME, and Digicel have announced

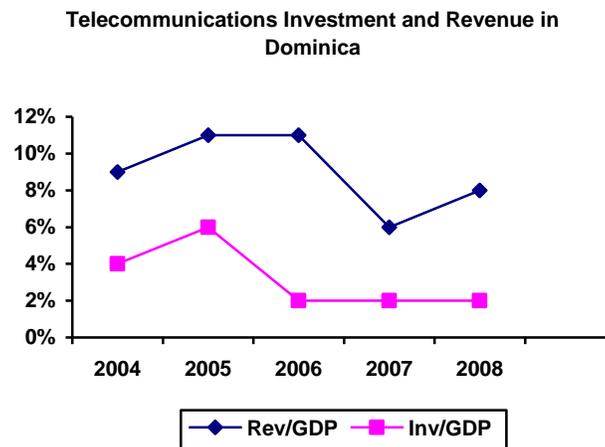
a number of layoffs. Investment in the sector and the launch of new technologies may also be compromised as the global credit crunch impacts the region. Even so, there remains significant opportunity for growth in both fixed and mobile broadband services and with the introduction of converged services.

4.0 Trends in Telecommunications - Dominica

4.1 Overview

The ECCB estimated real GDP growth in Dominica at 1.82 per cent in 2007. Growth in the telecommunications sector was estimated at 2.51 per cent with the sector contributing 15 per cent to GDP. At March 2008, total investment by individual licensees fell an estimated 14 per cent to EC\$18 million or approximately 2 per cent of GDP. This drop in investment came after a 30 per cent increase in the previous period owing to the landing of a new submarine cable system in Dominica. Approximately 300 persons were directly employed by individual licensees.

Figure 13: Telecommunications Revenue and Investment in Dominica



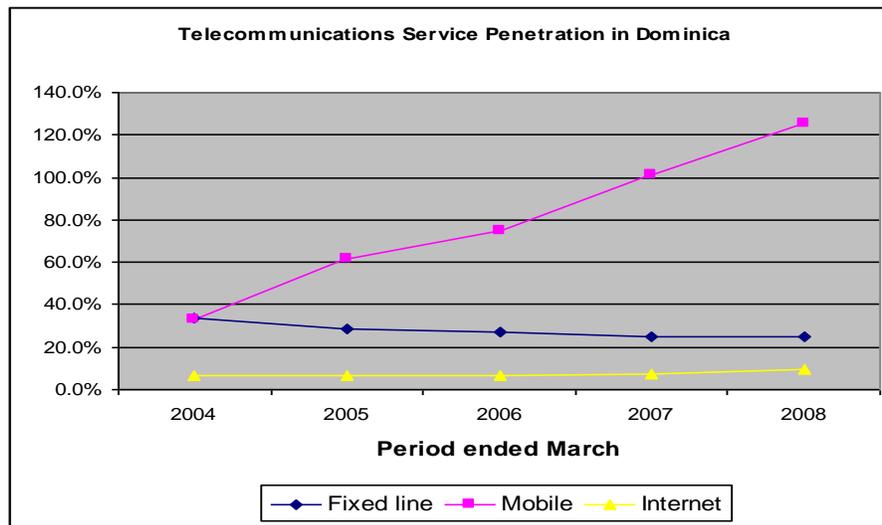
Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

Following a decline in the previous period, total revenue earned by individual licensees was estimated to have increased 32 per cent to EC\$75 million or 8 per cent of GDP. This increase was driven by growth in revenue from mobile services which outpaced fixed service revenues and accounted for an estimated 70 per cent of the total revenues, up from 56 per cent in the previous year. Fixed line revenues accounted for 20 per cent of total revenues while revenue from Internet services represented the smallest share of total revenue at 10 per cent.

For the first time subscriber growth was lead by growth in the number of subscribers to Internet access rather than mobile subscribers. The number of Internet subscribers grew approximately 35 per cent with penetration reaching 9.8 per cent up from 7 per cent in the previous period. Despite a penetration level in excess of 100 per cent, activity in the mobile sector remained robust with the number of subscribers increasing a further 25 per cent with penetration reaching 126 per cent. Activity in the fixed line market however remained flat even as the decline in lines in service has been stemmed by the growth in ADSL subscription.

Figure 14: Telecommunications Service Penetration in Dominica



Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

4.2 Market Players

During the review period, no new individual telecommunications licence was issued in Dominica. The number of active service providers also remained unchanged with Cable & Wireless and Marpin Telecommunication and Broadcasting offering fixed and Internet services and Cable & Wireless, Orange Dominica and Digicel offering mobile services.

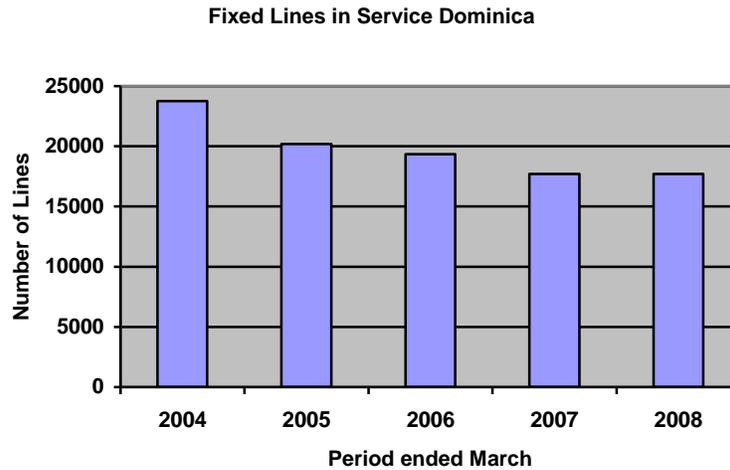
4.3 Market Trends

4.3.1 Domestic Fixed Line Service

During the review period, the number of fixed lines in service remained flat at approximately 17,700 following a reduction of 8.5 per cent in the previous year. This slowdown in the decline is consistent with international trends as ASDL

broadband access, still the most popular form of broadband access, uses the fixed line. At March 2008 fixed line penetration held at 25.0 per cent.

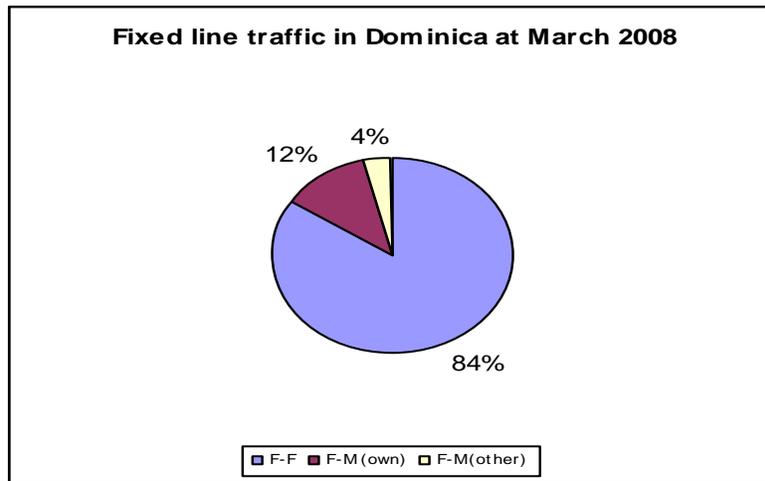
Figure 15: Fixed Lines in Service in Dominica



Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

Local fixed call volumes were estimated to have fallen 2 per cent to an estimated 40 million minutes. This follows a substantial 42 per cent decrease in the previous period. Fixed to fixed calling continued to dominate local fixed traffic and accounted for 84 per cent of local calls originating from a fixed line. The fall in local fixed call volumes was a result of declines in both fixed to fixed and fixed to mobile call volumes.

Figure 16: Fixed Line Traffic in Dominica

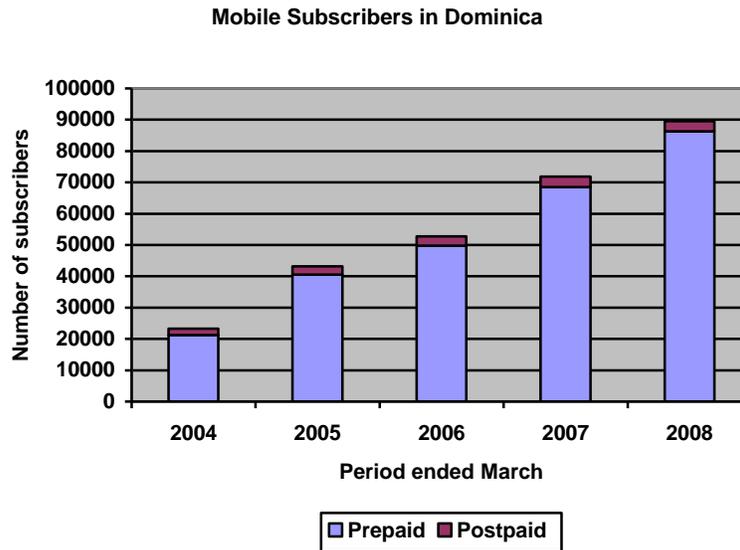
Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

Prices of domestic fixed line services, which are currently regulated under the Price Cap Plan, remained unchanged from the previous period with the peak local fixed to fixed calling rate at \$0.07 and the off-peak rate at \$0.04. The peak rate for fixed to mobile calling was \$0.71 and off-peak rate at \$0.69.

4.3.2 Domestic Mobile Service

Activity in the mobile market remained buoyant even as there are signs of slowdown as mobile penetration surpassed 100 per cent last period. The total number of active mobile subscribers increased 25 per cent to approximately 89,540, representing a penetration of 126 per cent up from 101 per cent in the previous period. Among the active subscribers, the number of prepaid subscribers increased 26 per cent and accounted for 95 per cent of total mobile subscribers while the number of post-paid subscribers fell 2 per cent.

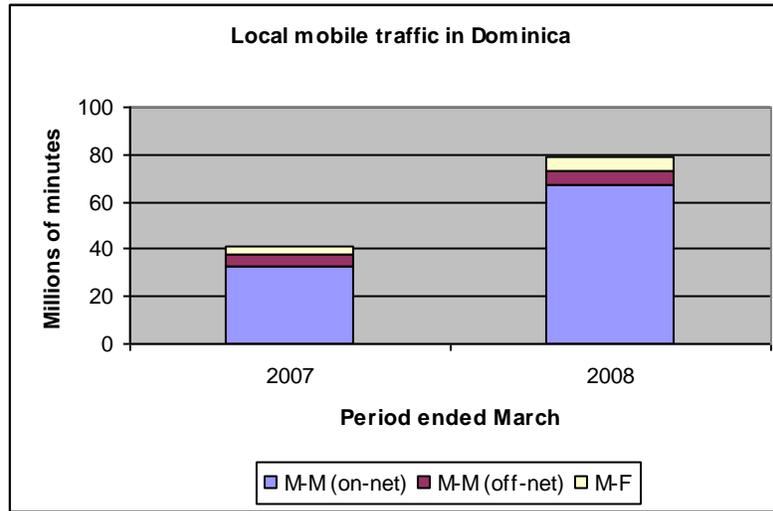
Figure 17: Mobile Subscribers in Dominica

Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

The rates for mobile calls remained largely unchanged in the review period. Rates for calls within the same network (on-net) were at least 20 cents lower than off-net rates, encouraging on-net calling. On-net rates ranged between 50 cents and 60 cents while off-net rates ranged between 80 and 85 cents. The rate for mobile to fixed calls was in the range of 60 to 80 cents.

Local mobile call volumes totaled an estimated 79 million minutes, a growth rate of 73 per cent over the previous period. There was an increase in both mobile to mobile and mobile to fixed calling volumes. Mobile to mobile calling accounted for 93 per cent of local mobile calling while local calls originating from a mobile phone accounted for 66 per cent of total local call volumes up from 50 per cent in the previous period.

Figure 18: Mobile Traffic in Dominica

Source: ECTEL/ operators

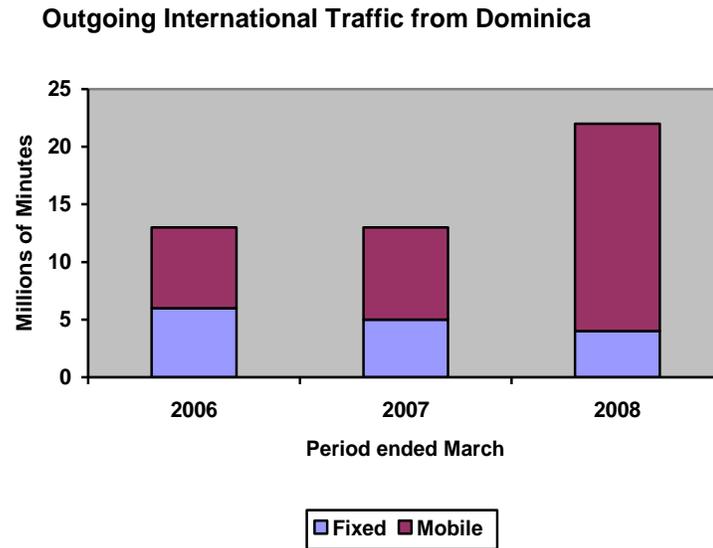
Includes estimates where ECTEL did not receive data from operators

The total number of SMS messages sent by mobile users was in excess of 32 million messages as SMS messaging is increasingly viewed as an affordable communications tool for a large number of consumers. The rates for SMS messages now range from 15 to 30 cents for local text messaging and 15 cents to 55 cents for international text messaging. MMS messaging is available at a rate of 50 cents per message but data on the number of MMS messages sent was not available for the review period.

4.3.3 International Voice Service

For the review period, the total outgoing international call volumes increased 67 per cent to just over 22 million minutes, this was mainly due to a significant increase in outgoing international calls from mobile phones. Eighty per cent of outgoing international calls originated from a mobile network up from 59 per cent in the previous period.

Incoming international call volumes increased approximately 32 per cent with the strongest growth in calls terminating on a mobile phone. Fifty five per cent of all incoming international calls terminated on a mobile phone.

Figure 19: International Traffic from Dominica

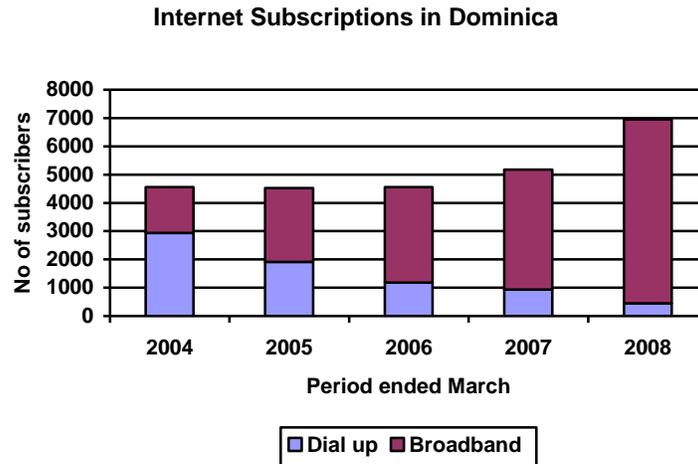
Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

The strong growth in outgoing international calls was accompanied by reduction in rates for international calls. During the review period, the rate for calls to the United States and Europe decreased 40 per cent to 99 cents while calls to other non-Caribbean destinations fell 25 per cent to \$1.65. The rates for calls to Caribbean destinations remained unchanged.

4.3.4 Internet and Broadband Services

There was significant activity in the Internet market during the review period. Total Internet subscribers increased by 37 per cent to in excess of 6,950 with broadband subscribers accounting for 93 per cent of total subscribers compared with 82 per cent in the previous year. This increase in Internet subscribers was driven by growth in broadband subscribers as the number of dial-up subscribers continued to fall. Internet penetration stood at 9.8 per cent up from 7 per cent in the previous period.

Figure 20: Internet Subscribers in Dominica

Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

In Dominica, Internet service is currently provided by two suppliers, the incumbent Cable & Wireless and Marpin Telecoms and Broadcasting, both providing high speed Internet access with Cable & Wireless also offering dial-up access.

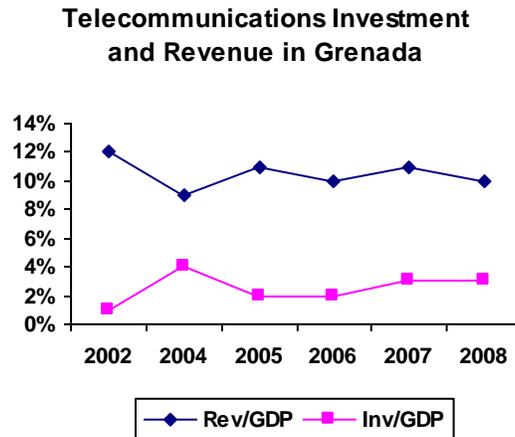
The significant increase in broadband subscribers was accompanied by a re-pricing of the ADSL broadband service offered by Cable & Wireless. The lowest speed offered to residential consumers was increased four fold to 1Mbps, while the monthly subscription price fell 20 per cent to \$79. The rates for dial-up service however remained unchanged at \$69 for unlimited access making this option less attractive to consumers.

5.0 Trends in Telecommunications - Grenada

5.1 Overview

Activity in telecommunications sector contributed positively to economic growth in Grenada, in the review period. The ECCB estimated that overall, real GDP grew by 4.5 per cent while the telecommunications sector grew by 11.4 per cent and contributed 12.6 per cent to GDP. For the period ended March 2008, investment in the telecommunications sector grew by 10.2 per cent to \$44.1 million or 2 per cent of GDP however the number of persons directly employed in the sector decreased some 5 per cent.

Figure 21: Telecommunications Revenue and Investment in Grenada



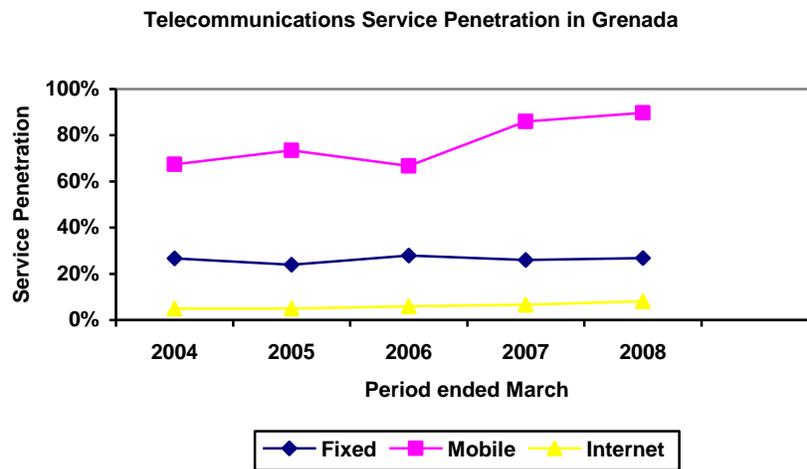
Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

Notwithstanding an increase in subscriptions to all telecommunications services, total revenue declined by 6.8 per cent to an estimated \$161 million or 10 per cent of GDP. Revenues from mobile services increased to 55.1 per cent of total revenue, up from 47.5 per cent in the last period. Following a similar trend, revenue from Internet access increased to 7.5 per cent of total revenue up from 6.3 per cent. Bucking this trend, revenue from fixed voice service continued its decline as call volumes continue to fall even as there was a slight uptick in fixed subscribers. For the review period revenue from fixed voice services fell to 36.7 per cent of total revenue down from 46.2 per cent in the previous period.

The number of active providers remained unchanged even as investors show continued interest in the sector as a number of new licence applications were submitted. There was growth in all three telecommunications services markets. Fixed line penetration edged upwards by 3.5 per cent to 26.9 per cent. Growth in mobile subscribers slowed considerably as the market approaches maturity. Mobile penetration increased 4.4 per cent to 89.8. Internet penetration recorded the most significant growth of 23.7 to 8.2 per cent at March 2008.

Figure 22: Telecommunications Service Penetration in Grenada



Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

5.2 Market Players

During the review period, no new individual telecommunications licence was issued in Grenada. The total number of licences issued therefore remained at sixteen. The number of active service providers also remained unchanged with Cable & Wireless being the sole provider of fixed and Internet services and Cable & Wireless and Digicel offering mobile services. Since March 2008, Columbus Communication, a cable company, which was granted a licence in the last review period, has launched its Internet service offering.

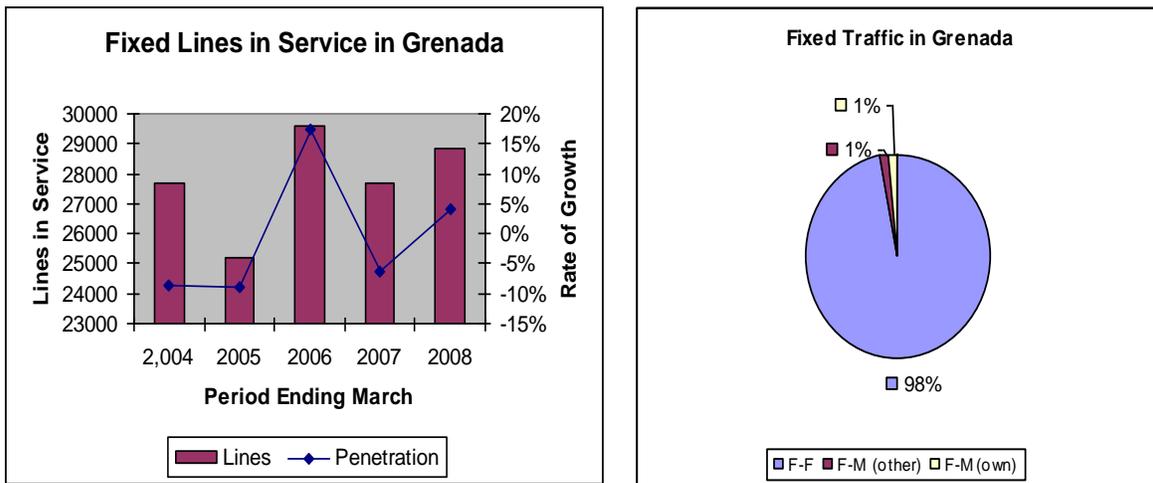
5.3 Market Trends

5.3.1 Domestic Fixed Voice Service

The total number of fixed lines in service increased by 4.2 per cent to roughly 28,860 by March 2008 and penetration rose by 0.9 of a percentage point to 26.9 per cent. Notwithstanding the growth in subscription, fixed line revenues fell by some 26 per cent.

Local fixed call volumes increased 2 per cent to an estimated 313 million minutes and accounted for 73 per cent of all local calls. Fixed to fixed calling continued to dominate local fixed traffic and accounted for 97 per cent of local calls originating from a fixed line. However, fixed to fixed traffic increased by only three per cent compared with 15 per cent in the previous year. On the other hand, fixed to mobile traffic recorded a 25 per cent decline.

Figure 23: Fixed Line Subscribers and Traffic in Grenada



Source: ECTEL/ operators
 Includes estimates where ECTEL did not receive data from operators

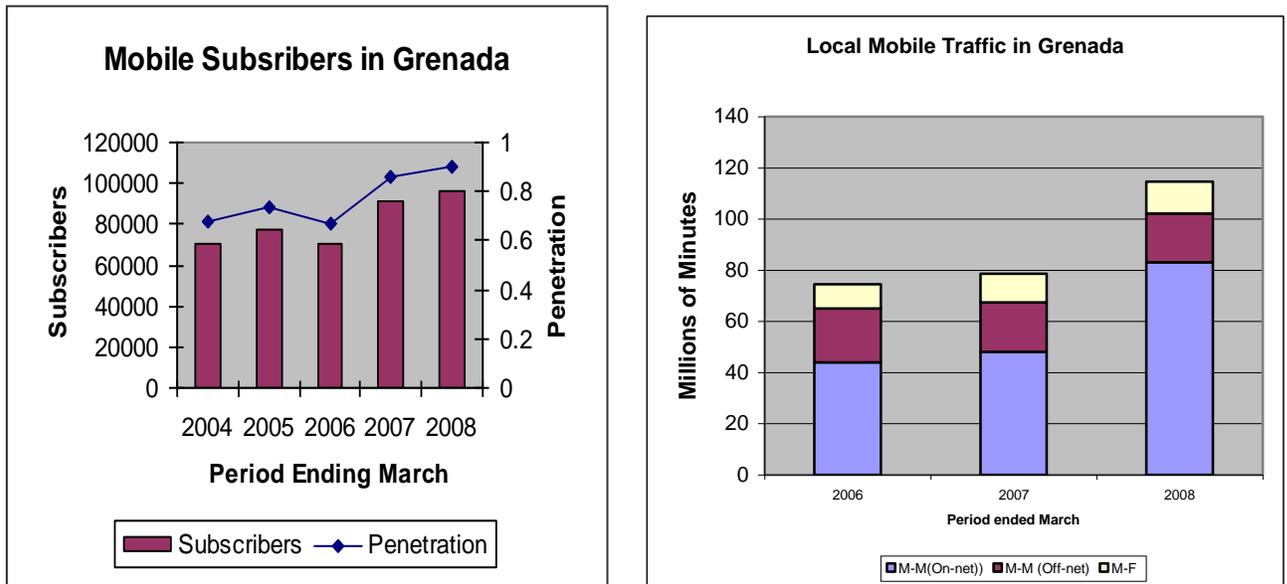
Prices of domestic fixed line calls, which are currently regulated under the Price Cap Plan, remained unchanged from the previous period with the peak rate for local fixed to fixed calling at \$0.07 and off-peak rate at \$0.04. The peak rate for fixed to mobile calling was \$0.71 and off-peak rate was \$0.69. Cable & Wireless also offers an unlimited fixed-to-fixed calling package to residential consumers at a rate of \$25 per month.

5.3.2 Domestic Mobile Service

In the review period, the accelerated demand in the mobile market continued, albeit at a greatly reduced rate. By March 2008, the number of mobile subscribers had increased by 5.1 per cent to 96,370 or an increased penetration of 3.8 percentage points to 89.8 per cent. This compared to a growth rate of 30 per cent in the previous period. The slowing demand for mobile voice service is expected to continue as the market reaches maturity.

The increase in mobile penetration contributed to strong growth in local mobile call volumes. Local calls originating from a mobile phone increased an estimated 46 per cent largely on account of the more than doubling of on-net calls. Mobile to mobile traffic accounted for roughly 89 per cent of all local mobile traffic. Fuelled by increased mobile penetration and call volumes mobile revenues grew approximately 8.2 per cent.

Figure 24: Mobile Subscribers and Traffic in Grenada



Source: ECTEL/ operators
 Includes estimates where ECTEL did not receive data from operators

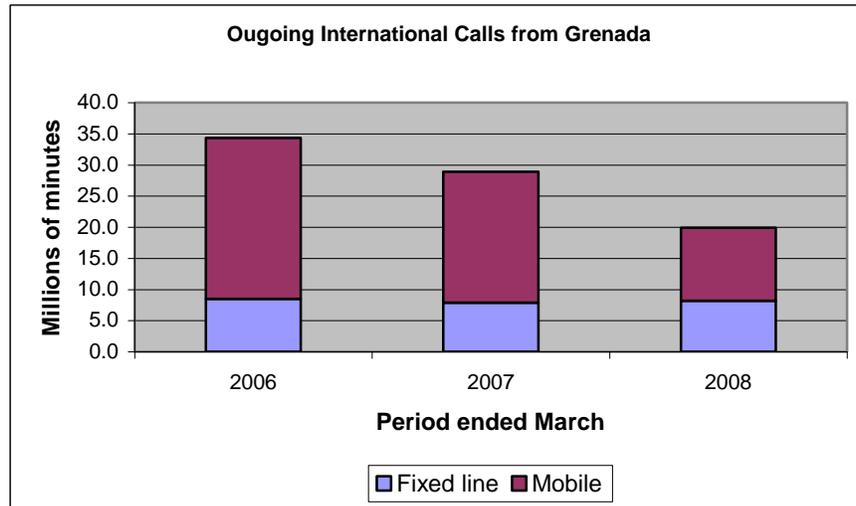
There was little movement in the rates for calls from a mobile phone in the review period. Rates for mobile to the same network ranged between 40 cents and 85 cents, while the rate for calls to other networks ranged from 79 cents and 85 cents.

SMS text messages remain the most economical option for the low budget consumer. In comparison to a voice call, the rates for a text message can be as much as 25 cents less than the per-minute rate for a voice call. The rate for an SMS message ranges from 10 cents on-net to 0.25 cents off-net to 40 cents for international service. An estimated 15 million SMS messages were sent over the review period. MMS messages are also available from mobile operators but data on the number of MMS messages sent was not available for the review period. The rate for MMS messages is 50 cents per message.

5.3.3 International Voice Service

There has been a steady decline in outgoing international call volumes over the past three periods. Total outgoing international call volumes fell an estimated 30 per cent over the review period; this followed a similar drop in the previous period. The most significant fall was in outgoing calls from a mobile phone. A factor which may have an impact on outgoing international call volumes is the use of VOIP services such as Netspeak from Cable & Wireless and other Internet based services. Over this period of reduced call volumes, the rates for outgoing international calls have remained unchanged.

Incoming international call volumes which have traditionally outpaced outgoing call volumes was estimated to have increased a very modest one per cent to in excess of 75 million minutes, with 35 per cent of calls terminating on a mobile phone.

Figure 25: International Traffic in Grenada

Source: ECTEL/ operators

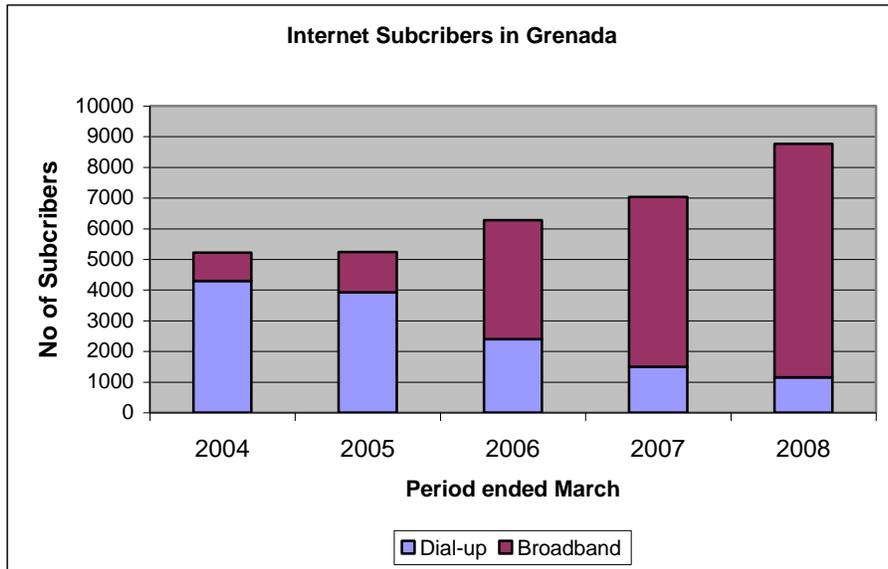
Includes estimates where ECTEL did not receive data from operators

5.3.4 Internet and Broadband Services

For the period under review, the total number of fixed Internet subscribers increased some 25 per cent to approximately 8,760 of which 87 per cent were broadband subscribers up from 79 per cent in the previous period. The number of dial-up subscribers continued to decline with the decline outpaced by uptake in broadband access. Overall fixed Internet penetration edged up 1.6 percentage point to 8.2 per cent.

The significant increase in broadband subscribers was accompanied by a re-pricing of the ADSL broadband service offered by Cable & Wireless. The lowest speed offered to residential consumers was increased four fold to 1Mbps while the monthly subscription price fell 20 per cent to \$79. The rates for dial-up service however remained unchanged at \$129 for unlimited access making this option less attractive to consumers.

Figure 26: Internet Subscribers in Grenada



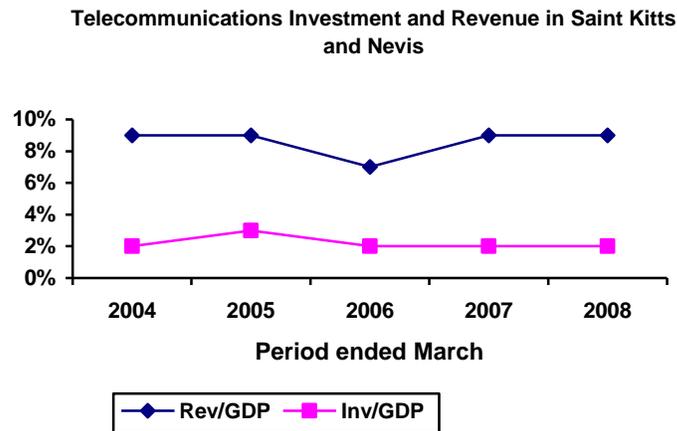
Source: ECTEL/ operators
Includes estimates where ECTEL did not receive data from operators

6.0 Trends in Telecommunications - Saint Kitts and Nevis

6.1 Overview

The ECCB estimated that value added for the telecommunications sector in Saint Kitts and Nevis increased 3.04 per cent with the sector contributing 10.23 per cent to GDP in 2007. For the review period total investment by individual licensees is estimated to have increased 8 per cent to \$23 million, or 2 per cent of GDP, following a 6 per cent decline in the previous period. Positive gains were also recorded in employment as the number of employees recorded by individual licensees increased 12 per cent to more than 175 persons. Revenue however remained relatively flat at an estimated \$125 million or 9 per cent of GDP, following a robust 35 per cent increase in the previous period.

Figure 27: Telecommunications Revenue and Investment in Saint Kitts and Nevis



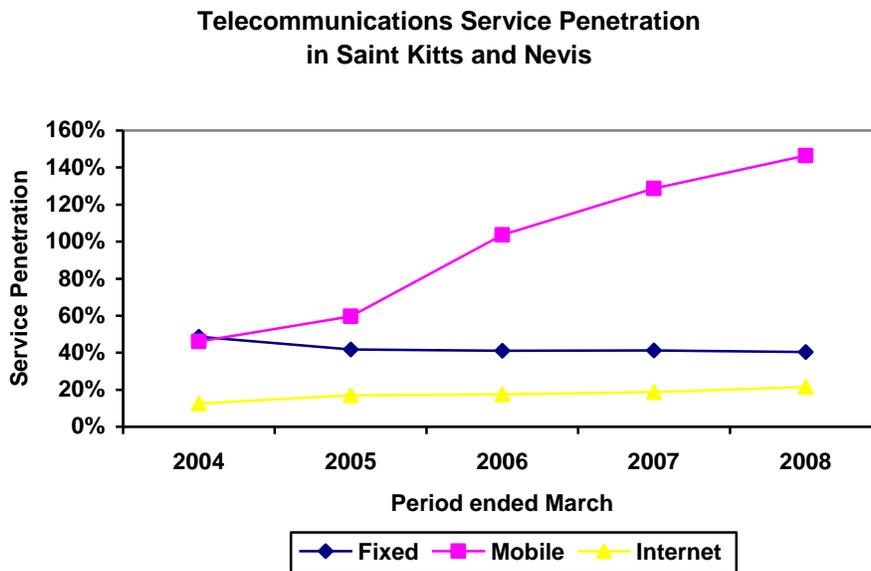
Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

Revenues across all market segments remained relatively flat despite growth of 15 per cent in subscribers for both mobile and Internet service. In St Kitts and Nevis revenue from fixed voice still outpaced revenue from other services accounting for 45 per cent of total revenue, down from 46 per cent in the previous period. Mobile service contribution remained at 43 per cent with Internet services accounting for 11 per cent of sector revenue.

Despite mobile penetration of more than 129 per cent in St Kitts and Nevis, the number of mobile subscribers grew an estimated 15.1 per cent for the review period bringing mobile penetration to 146 per cent the highest in the ECTEL Member States. The Internet market also recorded a 15 per cent growth rate to more than 10,800 subscribers or as Internet service penetration rate of 21.5 per cent. Fixed line services however declined 1 per cent to approximately 20,400 lines in service, with penetration at 40 per cent. St Kitts and Nevis has the highest penetration rates in all telecommunications services in the ECTEL Member States.

Figure 28: Telecommunications Service Penetration in Saint Kitts and Nevis



Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

6.2 Market Players

For the period under review one new individual licence was issued for Public Mobile Telecommunications. This brings to twelve the number of individual licences issued since 2001. The number of active telecommunications providers however remained unchanged from the previous period. The market for fixed voice services is dominated by Cable & Wireless but two cable companies also offer voice as part of their triple play offering. During the review period there were also three active providers in the mobile and Internet markets. Mobile providers were Cable & Wireless, Digicel and UTS-CariGlobe (Chippie) while Internet service was provided

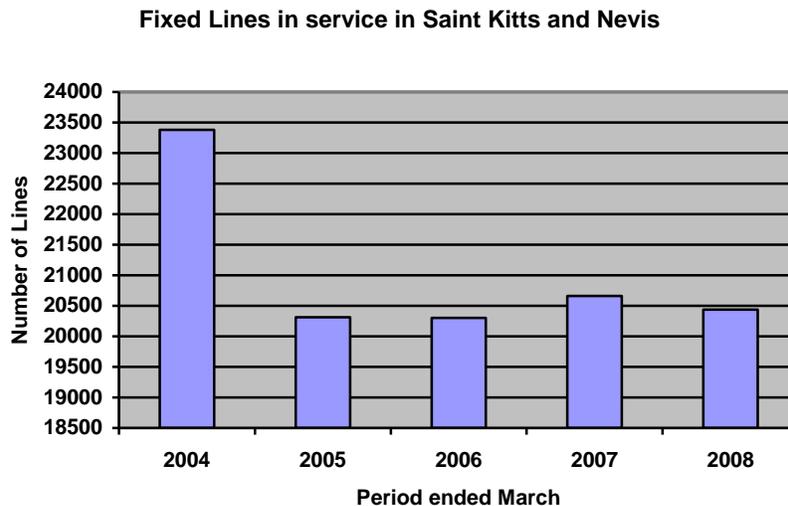
by Cable & Wireless, The Cable on St Kitts and Caribbean Cable Communications on Nevis.

6.3 Market Trends

6.3.1 Domestic Fixed Voice Service

The decline in the fixed line market in St Kitts and Nevis has stabilized since the dramatic decline in 2005. However, the number of fixed lines in service declined 1.1 per cent following a 1.8 per cent increase in the previous period. At March 2008, fixed line penetration was recorded 40.1 per cent. In keeping with the stability trend, revenue from fixed line services remained flat and accounted for 45 per cent total revenue, remaining the major source of sector revenue in the review period. St Kitts and Nevis remains the only ECTEL Member State where revenues for mobile services have not outpaced revenues from fixed services.

Figure 29: Fixed Lines in Service in Saint Kitts and Nevis



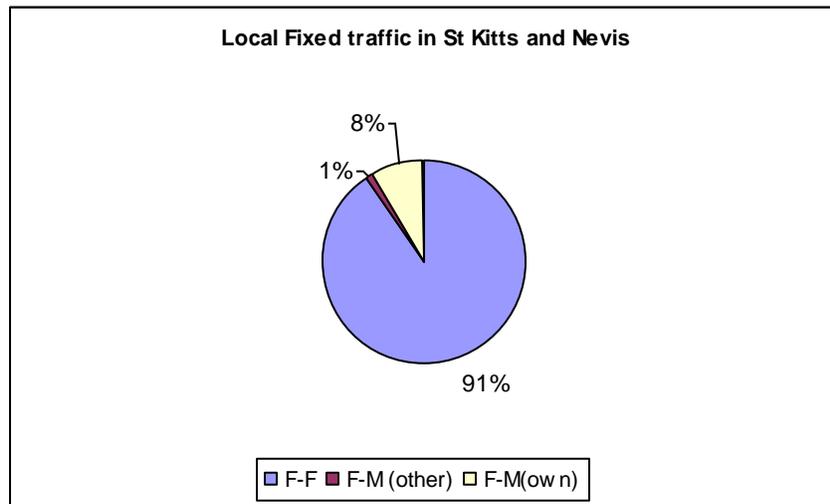
Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

Prices for domestic fixed line calls, which are currently regulated under the Price Cap Plan, remained unchanged from the previous period with the peak rate for local fixed to fixed calling at \$0.07 and off-peak rates at \$0.04. Peak rate for fixed to mobile calling was \$0.71 and off-peak rate was \$0.69. Cable & Wireless also offered an unlimited fixed to fixed calling package to residential consumers at \$25 per month.

More than 73 million minutes of local fixed calls were made in St Kitts and Nevis in the review period representing growth of 9 per cent over the previous period. This was due to an increase in fixed to fixed calling which grew 9 per cent and accounted for 90 per cent of local fixed call volumes while fixed to mobile call volumes remained flat. Overall local calls originating from the fixed network accounted for 44 percent of total local calls as mobile calling has outpaced local fixed calling.

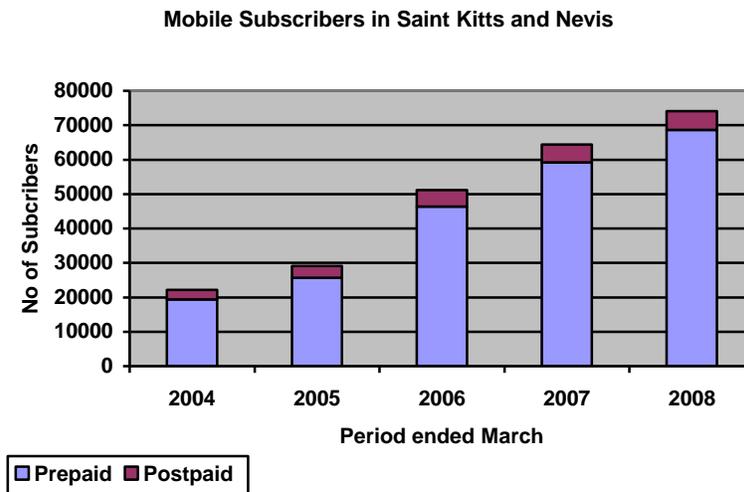
Figure 30: Local Fixed Traffic in St Kitts and Nevis



Source: ECTEL/ operators
Includes estimates where ECTEL did not receive data from operators

6.3.2 Domestic Mobile Service

Mobile penetration in St Kitts and Nevis surpassed the 100 per cent mark in 2006, however the mobile market continued to experience robust growth of 25 per cent in the review period following similar growth in the previous period. At March 2008, the total number of active mobile subscribers was approximately 74,100 representing a 146 per cent penetration or 1.46 mobile connections per person. This high penetration is a result of consumer use of multiple SIM cards but may also be a result of the possible overestimation of the number of active prepaid customers by providers.

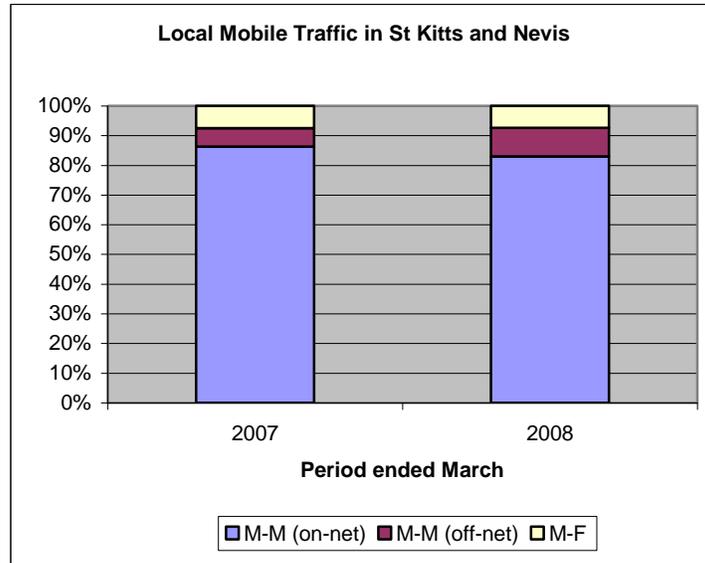
Figure 31: Mobile Subscribers in Saint Kitts and Nevis

Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

The rates for mobile calls remained unchanged in the review period with on-net calls being offered at a discount of up to 39 cents to off-net rates encouraging on-net calling. Rates for on-net calls ranged from 50 to 65 cents while the rate for calls between networks was 89 cents per minute and mobile to fixed calls at 85 cents per minute.

Increasing mobile penetration and use of mobile phones have contributed to continued growth in local mobile call volumes. At March 2008 an estimated 94 million minutes of mobile calls were made in St Kitts and Nevis, an 18 per cent increase over the previous period. However with growth in calls from the fixed network, local calls originating from a mobile network's share of total local calls remained at 54 per cent of total local traffic. The majority of calls originating from a mobile network, 92 per cent, also terminated on a mobile network, with 8 per cent terminating on fixed network.

Figure 32: Local Mobile Traffic in St Kitts and Nevis

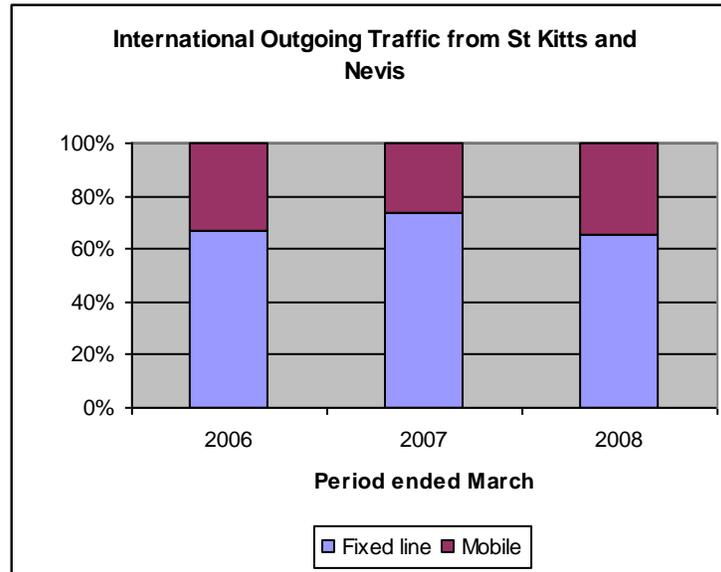
Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

The use of SMS messaging has accelerated in St Kitts and Nevis; SMS messaging is far more popular in St Kitts and Nevis than any other ECTEL Member State. During the review period, more than 63 million SMS messages were sent in St Kitts and Nevis up 20 per cent over the previous period. MMS service is also available but data on the number of messages sent was not available for the review period. The popularity of SMS is due in part to its ease of use and the rates which remain attractive relative to the rate for voice calls. The rates for local SMS text messaging ranged from 10 to 20 cents while the rate to send a message internationally was 40 cents. Rate for MMS from one provider is 50 cents per message.

6.3.3 International Voice Service

Total international outgoing traffic was estimated to have remained relatively flat at 21 million minutes following a 32 per cent increase in the previous period. Calls from the fixed line network are estimated to have outperformed calls originating from mobile networks to account for 65 of outgoing international calls. The total number of incoming international calls approximated 34 million minutes with 23 per cent terminating on a mobile network.

Figure 33: International Traffic in Saint Kitts and Nevis

Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

For the review period, the rates for calls to the Caribbean were unchanged from the previous period and ranged from 50 to 85 cents. The rates offered by Cable & Wireless for calls United States and the United Kingdom were reduced 30 per cent bringing the range of rates to between \$0.99 and \$1.30. In addition to the traditional fixed and mobile providers, two cable companies and the incumbent Cable & Wireless also offer international service using VOIP with one operator offering rates to the United States as low as 27 cent per minute.

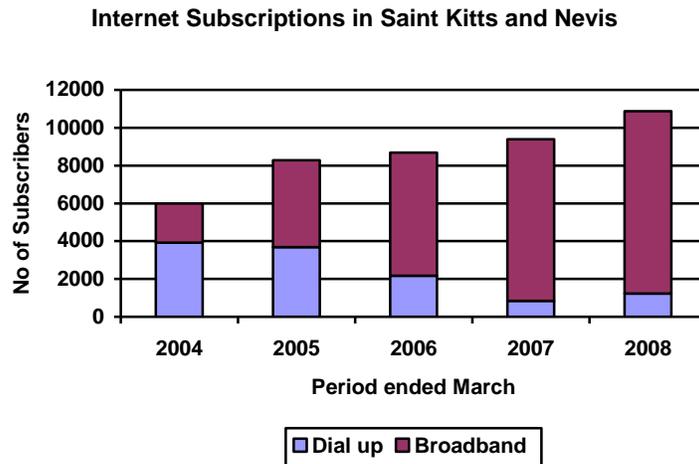
6.3.4 Internet and Broadband Services

Activity in the Internet market accelerated as providers continue to offer more attractive broadband packages. For the review period the total number of fixed Internet subscribers increased 16 per cent, up from 8 per cent in the previous period. At March 2008, total number of Internet subscribers was in excess of 11,000 with 89 per cent of subscribers having broadband access. Overall growth in number of subscribers was due to growth in both dial-up and broadband subscribers. The growth in dial-up subscribers in St Kitts and Nevis bucks the trend of a relentless decline in narrowband access seen the other ECTEL Member States. Internet penetration increased to 21.5 per cent up from 18.8 per cent in the previous period.

In St Kitts and Nevis Internet service is provided by Cable & Wireless, which offered dial-up and ADSL broadband service, and two cable companies, The Cable and Caribbean Cable Communications, which offer high speed Internet access as part of a triple play offering.

The increased activity in the Internet Market was associated with a re-pricing and re-branding of the ASDL broadband service offered by Cable & Wireless. The lowest speed offered to residential consumers increased fourfold to 2Mbps for a monthly subscription fee of \$99. The rates for dial-up access remained at \$79 for unlimited access.

Figure 34: Internet Subscribers in Saint Kitts and Nevis



Source: ECTEL/ operators

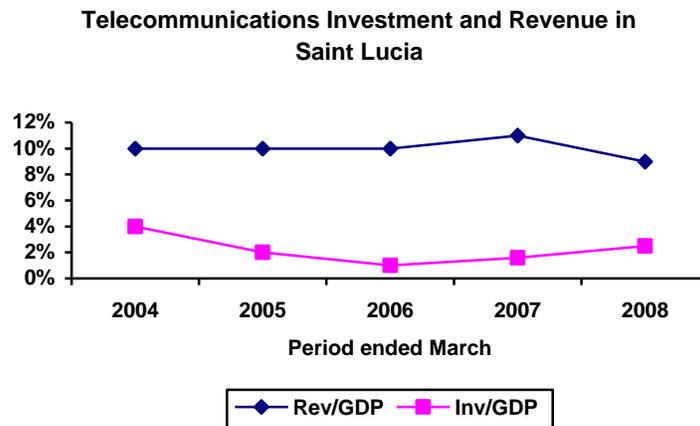
Includes estimates where ECTEL did not receive data from operators

7.0 Trends in Telecommunications - Saint Lucia

7.1 Overview

Real GDP growth in Saint Lucia was estimated, by the ECCB, at 1.68 per cent for 2007. Value added for the communications sector, which contributed 11.1 per cent to real GDP, was estimated to have increased 3 per cent, up from 1 per cent in the previous period. In the telecommunications sector, investment by individual licensees grew an estimated 70 per cent to in excess of \$66 million or 2.5 per cent of GDP; this follows similar robust growth of 77 per cent in the previous period. Growth in investment was due in large part to infrastructure build out by providers, in particular the expansion of mobile voice coverage and upgrade of network for fixed and mobile broadband service to encourage uptake in both remote and urban areas. Direct employment in the sector also grew 11 per cent to in excess of 700 for the review period.

Figure 35: Telecommunications Revenues and Investment in Saint Lucia



Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

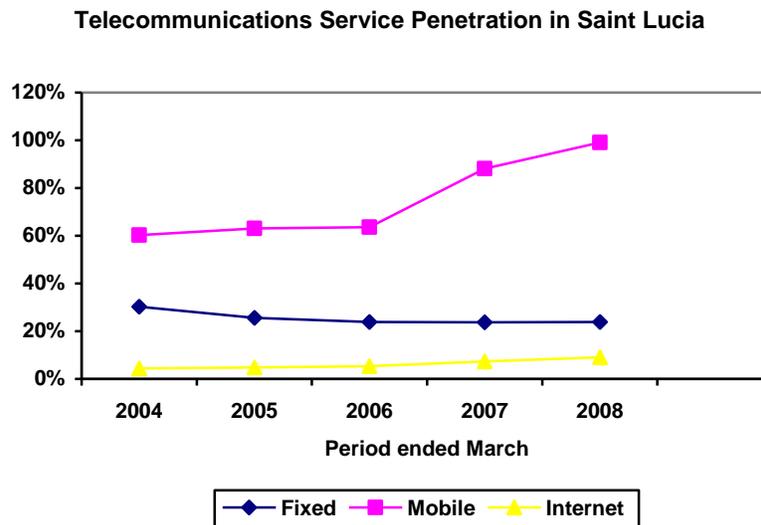
All telecommunications service markets experienced subscriber growth in the review period. However, despite the increase in subscriptions, total revenue declined by 15 per cent to an estimated \$240 million or 9 per cent of GDP. In keeping with industry trends, the decline in total revenue was driven by reductions in revenue from fixed line services. Mobile services are now the main source of revenue accounting for 67 per cent of revenue up from 54 per cent in the previous period. Fixed line services

accounted for 25 per cent of total revenue with revenue from Internet services increasing 38 per cent to account for 8 per cent of total revenue.

During the review period two new individual licences were issued, one Public Mobile Telecommunications and one Submarine Cable. In terms of active operators, Tele-St Lucia launched its operations in the fixed market offering domestic and international private lease circuits mainly to other providers and commercial customers.

The market for Internet access proved to be the most vibrant growing some 28 per cent with penetration reaching 9 per cent. The mobile market has started showing signs of slowdown as it reaches maturity. For the review period, the number of mobile subscribers increased 15.4 per cent to 99.1 per cent, this following very robust 41 per cent growth in the previous period. The decline in the fixed line market has abated as the number of subscribers increased a modest 3.2 per cent, this following a 0.8 per cent increase in the previous period. The increase in subscribers was due to increased subscription by business consumers. At March 2008 fixed line penetration stood at 23.9 per cent.

Figure 36: Telecommunications Service Penetration in Saint Lucia



Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

7.2 Market Players

For the review period two new individual licences were awarded to new entrants in Saint Lucia. This brings to ten the total number of individual licences issued since 2001. The number of active players in the fixed and mobile voice markets however remained unchanged during the period. Cable & Wireless was still the sole provider of fixed line voice services while Cable & Wireless and Digicel offered mobile voice and data services. For the period under review, Cable & Wireless was the sole provider of fixed Internet services; however by the end of 2008, two new service providers had launched operations. Karib Cable launched cable TV and high speed Internet service while Tele-St Lucia offer Dedicated Internet Access and domestic and international private leased circuits mainly to business customer in the first instance.

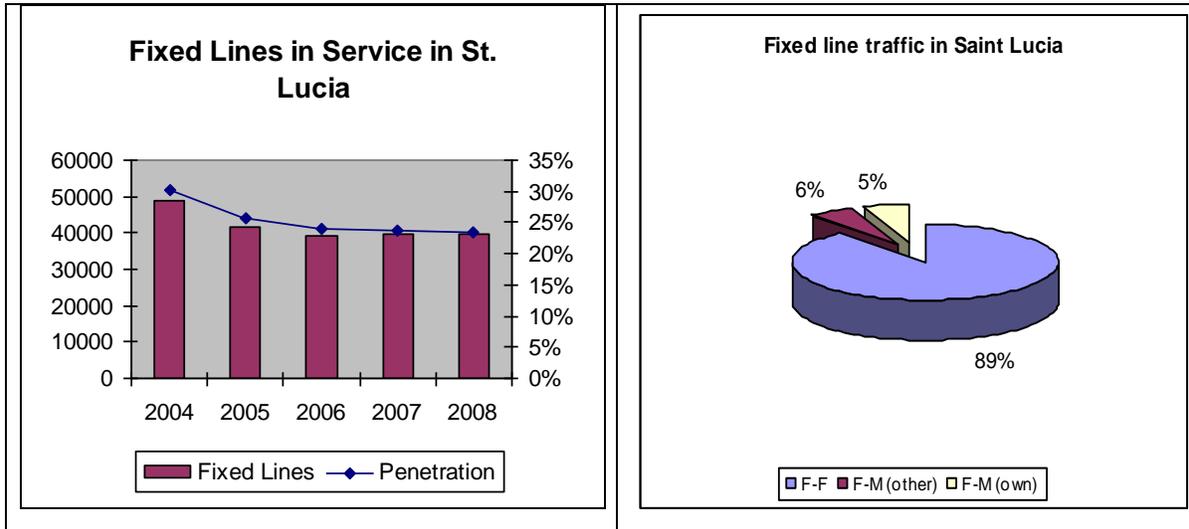
7.3 Market Trends

7.3.1 Domestic Fixed Voice Service

Total fixed lines in service increased to roughly 40,940 or 3.2 per cent over the previous period, with penetration remaining flat at 23.9 per cent. More than 173 million minutes of local calls were made from fixed lines, an increase of 68 per cent over the previous period. This increase was due in large part to an 87 per cent increase in fixed to fixed calls which accounted for 89 per cent of total local calls from the fixed network. In contrast fixed to mobile calls fell 8 per cent.

Notwithstanding the slight up tick in subscriptions and increased call volumes, revenue from fixed line services registered a decline for the review period. One reason for this anomaly may be that the increase in local fixed to fixed calling is linked to customers choosing the option of an unlimited fixed to fixed calling package introduced for residential consumers in the previous period.

Figure 37: Fixed Lines in Service and Traffic in Saint Lucia



Source: ECTEL/ operators
 Includes estimates where ECTEL did not receive data from operators

Prices for domestic fixed line calls, which are currently regulated under the Price Cap Plan, remained unchanged from the previous period with the peak rate for local fixed to fixed calling at \$0.07 and off-peak rates at \$0.04. Peak rate for fixed to mobile calling was \$0.71 and off-peak rate was \$0.69. Cable & Wireless also offered an unlimited fixed to fixed calling package to residential consumers at \$25 per month.

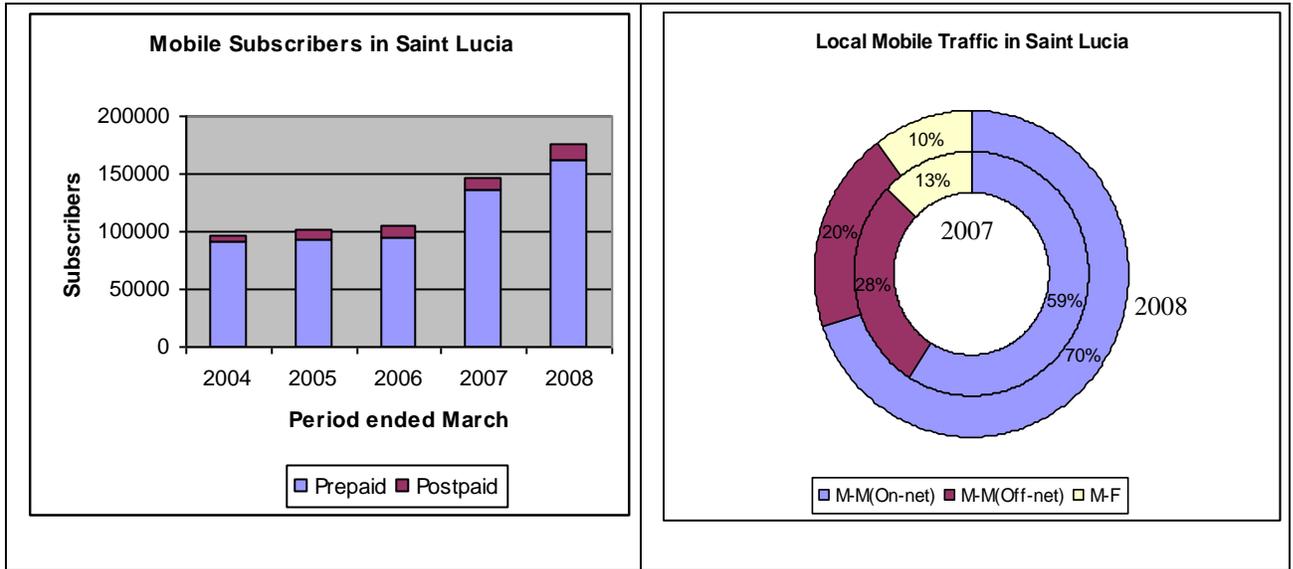
7.3.2 Domestic Mobile Service

At March 2008, there were more than 169,600 mobile subscribers in Saint Lucia. This represented a 15 per cent increase in subscribers compared to a 40 per cent increase in the previous period. This slowdown in growth comes as mobile penetration nears 100 per cent and the market matures. For the review period, mobile penetration increased 10.9 percentage points to 99.1 per cent.

The increase in the subscriber base contributed to significant growth in local mobile call volumes. Local mobile call volumes increased 72 per cent reflecting a more than doubling of mobile to mobile traffic. Mobile on-net call volumes increased 40.3 per cent while off-net call volumes grew some 24.5 per cent. Mobile to mobile traffic accounted for 89.6 per cent of local mobile traffic of which on-net traffic was 69.5 per cent. Overall calls originating from the mobile network constituted 55 per cent of all

local calls. The increased activity in the mobile market resulted in a modest 4 per cent increase in revenues.

Figure 38: Mobile Subscribers and Traffic in Saint Lucia



Source: ECTEL/ operators
 Includes estimates where ECTEL did not receive data from operators

There was little movement in the rates for calls originating from a mobile network over the review period. The rate for on-net calls ranged from 69 to 75 cents, off-net rates ranged from 79 to 85 cents while the rates for calls to the fixed network was between 69 and 85 cents.

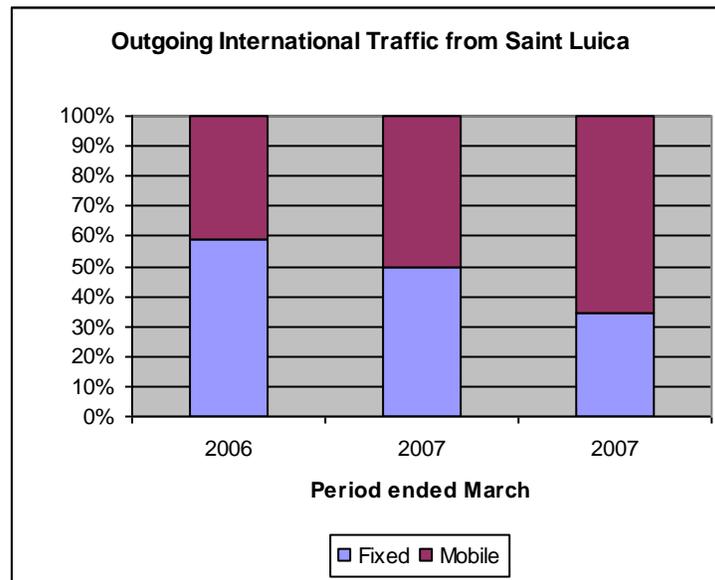
SMS text messages is still an important communications tool however, voice communication still dominates in Saint Lucia. The number of SMS messages sent is estimated to have decreased some 15 per cent to roughly 18 million messages. MMS messaging is also available, however data on the number of messages sent was not available for the review period. The rates for SMS messaging ranges from 10 to 15 cents for on-net messages; to 20 to 25 cents for off-net messages; and 30 to 40 cents for international messages. MMS messaging is offered at a flat 50 cents per message by one provider.

7.3.3 International Voice Service

Outgoing International call volumes totaled an estimated 41 million minutes, representing a 27 per cent growth, this following a one per cent decline in the pervious period. The increased activity was due to growth in call volumes on both fixed and mobile networks. Calls originating from a mobile network increased some 40 per cent and accounted for 56 per cent of outgoing calls.

Incoming international calls continued to outpace outgoing calls though there was a significant reduction in the number of calls terminating on the fixed network. Total incoming international call volumes decreased 50 per cent to an estimated 61 million minutes. This reduction was owing to an estimated 70 per cent drop in calls to the fixed network even as call to the mobile network increased 20 per cent. Fifty-six per cent of incoming calls terminated on the mobile network up from 23 per cent in the previous period.

Figure 39: International Traffic from Saint Lucia



Source: ECTEL/ operators

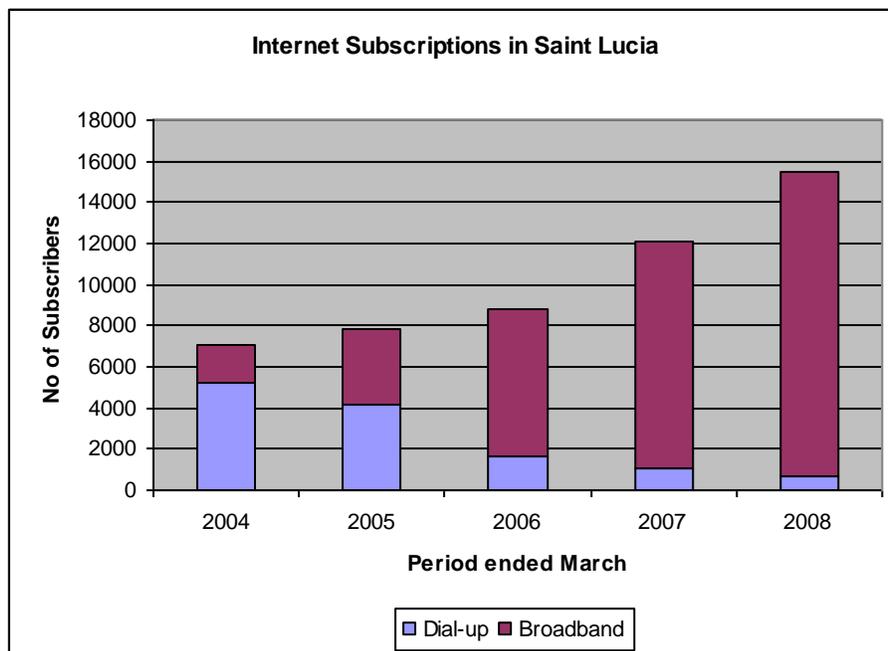
Includes estimates where ECTEL did not receive data from operators

During this period of increased activity, the rates for international calls remained largely unchanged. The rates for calls to the Caribbean ranged from 50 to 85 cents and the rates for calls to the United States ranged from \$1.25 to \$1.30 per minute.

7.3.4 Internet and Broadband Services

For the review period, Internet subscribers in Saint Lucia totaled more than 15,480 with broadband representing 96 per cent of the subscriptions and increasing steadily. The Internet market experienced growth of 28 per cent, outpacing growth in the mobile market. This increase in Internet subscription was driven by continued growth in broadband subscribers even as the number of dial-up subscribers continues its downward spiral. At March 2008, Internet penetration stood at 9 per cent up 1.8 percentage points from the previous period.

Figure 40: Internet Subscribers in Saint Lucia



Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

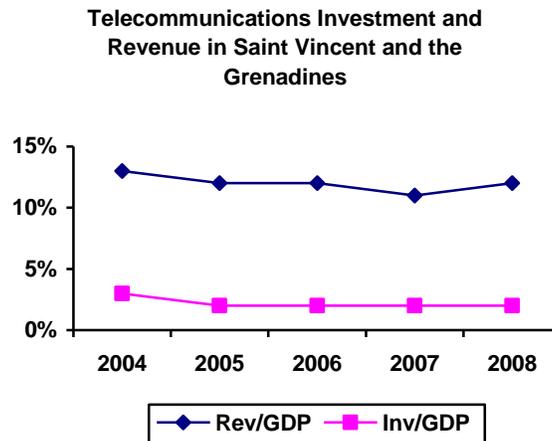
The continued activity in the broadband market was accompanied by the re-pricing and re-branding of the ADSL broadband packages offered by Cable & Wireless, the sole provider of Internet access in the review period. The lowest speed offered to residential consumers was increased fourfold to 1Mbps, while the monthly subscription fee fell 20 per cent to \$79. The rates for dial-up packages were left unchanged at \$129 for unlimited access, thus making broadband offerings more attractive to consumers.

8.0 Trends in Telecommunications - St. Vincent and the Grenadines

8.1 Overview

Value added for the communications sector, which accounted for 10.6 per cent of real GDP, was estimated to have increased 8 per cent, following growth of 10 per cent in 2006. The ECCB estimated real GDP growth in St Vincent and the Grenadines of 7 per cent for 2007. Investment in the telecommunications sector is estimated to have remained relatively flat at just over \$26 million or 2 per cent of GDP. A modest gain of 3 per cent was projected for direct employment in the sector to bring total number of employees to just over 160. Subscriber growth was experienced in all telecommunications service markets in the review period. Despite gains in all markets segments, overall sector revenue contracted 5 per cent to an estimated \$148 million or 12 per cent of GDP.

Figure 41: Telecommunications Revenues and Investment in St. Vincent and the Grenadines



Source: ECTEL/ operators

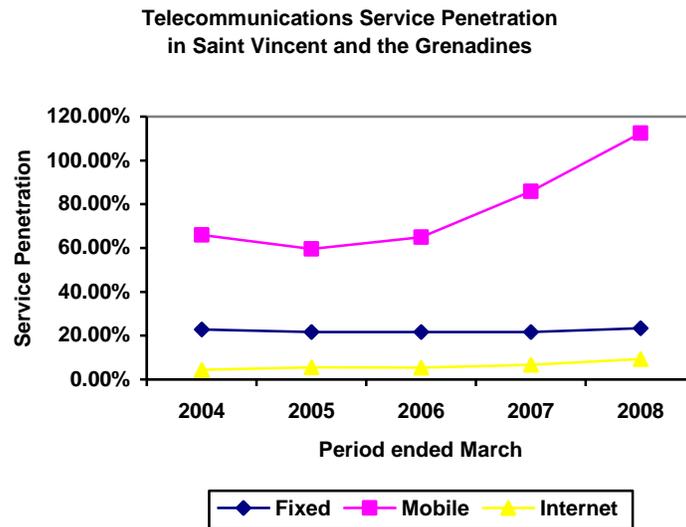
Includes estimates where ECTEL did not receive data from operators

The contraction in sector revenue was led by reductions in revenue from fixed line and mobile operations even as revenue generated by Internet access accelerated. Mobile services however, remained the main source of sector revenue accounting for 55 per cent with Internet service's share of revenue increasing 2.5 percentage point to 7.8 per cent.

For the period under review, two new individual licences were issued, one for Public Mobile Telecommunications and one Internet Network and Services.

The market for Internet access proved the most active expanding 30 per cent, outpacing activity in the mobile sector which has been the main engine of sector growth. The mobile sector registered growth of 22 per cent even as penetration exceeded the 100 per cent mark to reach 112 per cent. The market for fixed line has stabilized since its dramatic decline in 2005 and posted one per cent growth with penetration at 23.4 per cent.

Figure 42: Telecommunication Service penetration in St. Vincent and the Grenadines



Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

8.2 Market Players

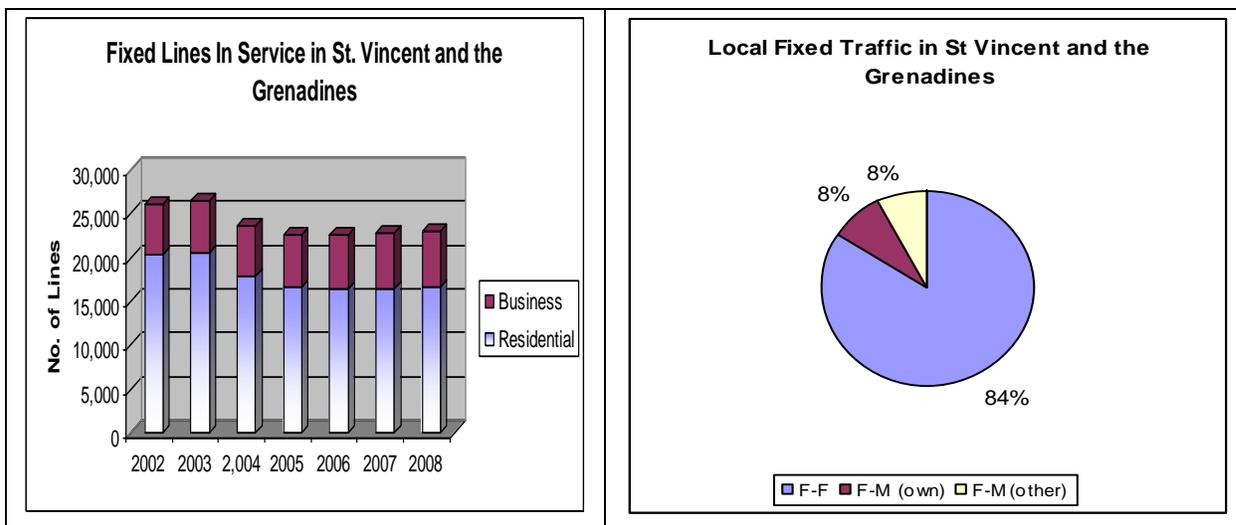
For the review period two new individual licences were awarded to a new entrant in St Vincent and the Grenadines as 21st Century Telecom Network (Caribbean) Ltd was granted Public Mobile Telecommunications and Internet Network and Services licences. This brings to ten the total number of individual licences issued since 2001. The number of active players in the sector however remained unchanged during the period. Cable & Wireless was still the sole provider of fixed line voice services, Cable & Wireless and Digicel offered mobile voice and data services and Cable & Wireless and Karib Cable offered Internet access.

8.3 Market Trends

8.3.1 Domestic Fixed Voice Service

There were just over 22,950 fixed lines in service in St Vincent and the Grenadines at March 2008, a marginal increase of 0.7 per cent over the previous period. Fixed line penetration rose 0.9 of a percentage point to 23.4 per cent, with residential lines accounting for more than 70 per cent of the lines in service.

Figure 43: Fixed Line Subscribers and Traffic in St. Vincent and the Grenadines



Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

Local fixed call volumes were just over 88 million minutes, an increase of 4 per cent over the previous period. The upsurge in call volumes were due in most part, to an increase in fixed to fixed calling which rose some 6 per cent and accounted for 84 per cent of local fixed calling. On the other hand, fixed to mobile call volumes experienced an 8 per cent decline. One factor which may have impacted fixed to fixed calling was the introduction of an unlimited fixed to fixed calling package for residential consumers. Notwithstanding the very modest growth in subscription and growth in fixed line traffic, there was a drop in revenues generated by fixed line services which accounted for 38 per cent of sector revenue.

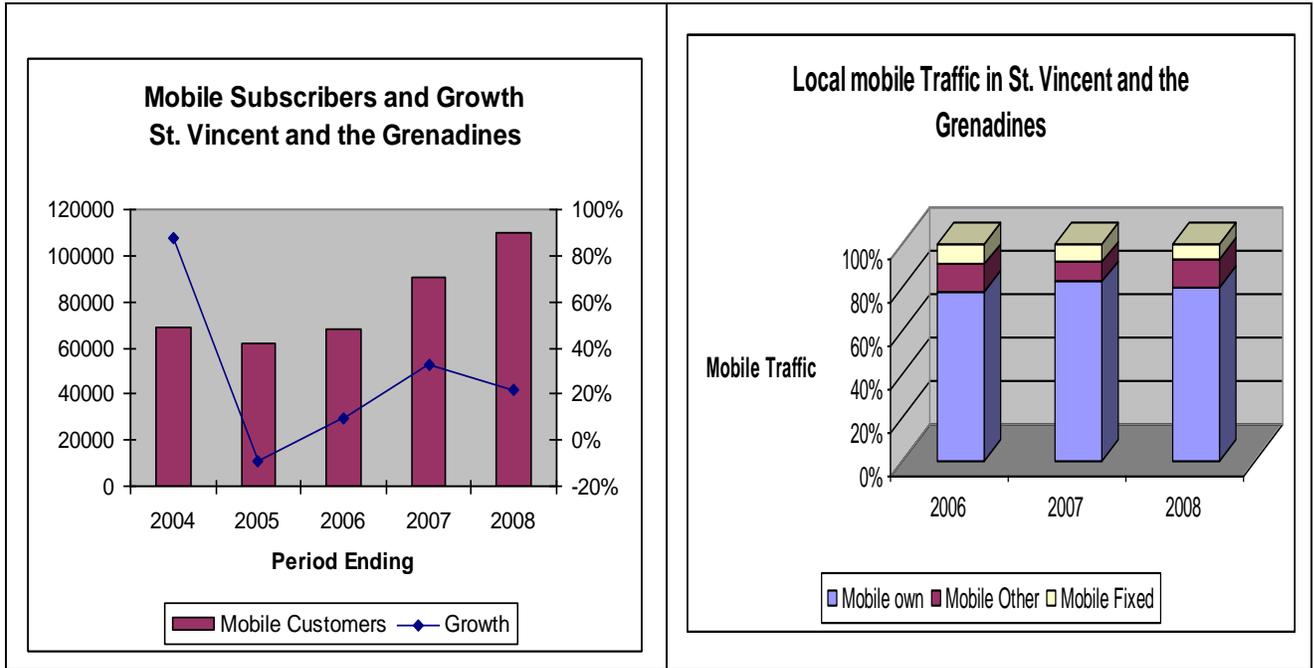
Prices of domestic fixed line calls, which are currently regulated under the Price Cap Plan, remained unchanged from the previous period with the peak rate for local fixed to fixed calling at \$0.07 and off-peak rates at \$0.04. Peak rate for fixed to mobile calling was \$0.71 and off-peak rate was \$0.69. However, Cable & Wireless introduced an unlimited, fixed to fixed calling package to residential consumers at \$25 per month.

8.3.2 Domestic Mobile Service

The accelerated demand in the mobile market from previous years continued even as mobile penetration surpassed the 100 per cent mark in the review period. By March 2008, the number of mobile subscribers in St Vincent and the Grenadines had reached more than 110,180 a 22 per cent increase over the previous period. St Vincent and the Grenadines joined St Kitts and Nevis and Dominica with mobile penetration in excess of 100 per cent as penetration increased 23.2 percentage points to 112.5 per cent. Revenue generated by mobile services fell 4.4 per cent but still remained the main source of sector revenue accounting for 55 per cent of total revenue.

Local traffic originating on mobile phones was in excess of 118 million minutes an 18 per cent increase over the previous period. This was mainly due to 28 per cent rise in on-net traffic even as off-net traffic fell 14 per cent. Mobile to mobile traffic accounted for 92 per cent of local mobile calls with on-net traffic at 80 per cent. Local traffic originating from mobile network outpaced fixed traffic and accounted for 57 per cent of all local traffic.

Figure 44: Mobile Subscribers and Traffic in St. Vincent and the Grenadines



Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

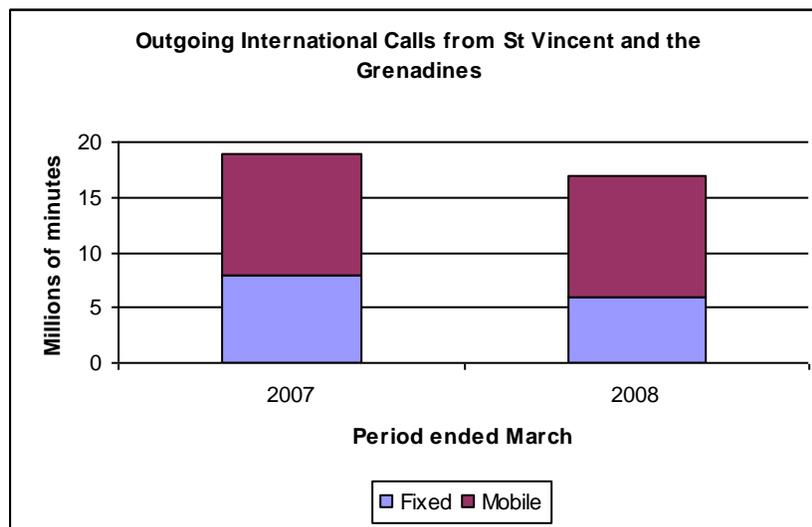
The number of SMS messages sent was estimated to have more than doubled to in excess of 14 million messages. The ease of use and affordable rates makes SMS an important communications tool. The increase in SMS messaging volumes corresponded to a reduction in rates for on-net messaging. Rates on on-net messaging fell more than 25 per cent and ranged from 10 cents to 15 cents, while rates for off-net messaging remained unchanged at between 20 and 25 cents. Messages to international destinations ranged from 30 to 40 cents. MMS messaging is also available from mobile operators but data on the number of messages sent was not available for the review period. One provider offers MMS messaging at 50 cent per message.

8.3.3 International Voice Service

Outgoing international call volumes have declined over the past three periods. For the review period outgoing international call volumes fell 8 per cent to an estimated 17 million minutes, this follows a 13 per cent drop in the previous period. The fall off in international calls resulted from contractions in calls originating from both fixed

and mobile networks. The downward trend in outgoing international calls also coincided with a significant increase in the reported number of VOIP uses, the number of subscribers increased 60 per cent in the review period. Mobile originating traffic accounted for 63 per cent of international call volumes up from 53 per cent. Incoming international traffic which outpaced outgoing traffic by a ratio of 4:1 was estimated at more than 61 million minutes. In contrast to outgoing traffic, 43 per cent of incoming traffic terminated on a mobile network.

Figure 45: International Traffic from St. Vincent and the Grenadines



Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

For the review period, the rates for calls to the Caribbean were unchanged from the previous period and ranged from 50 to 85 cents. The rates offered by Cable & Wireless for calls United States and the United Kingdom were reduced 40 per cent bringing the range of rates to between \$0.90 and \$1.30.

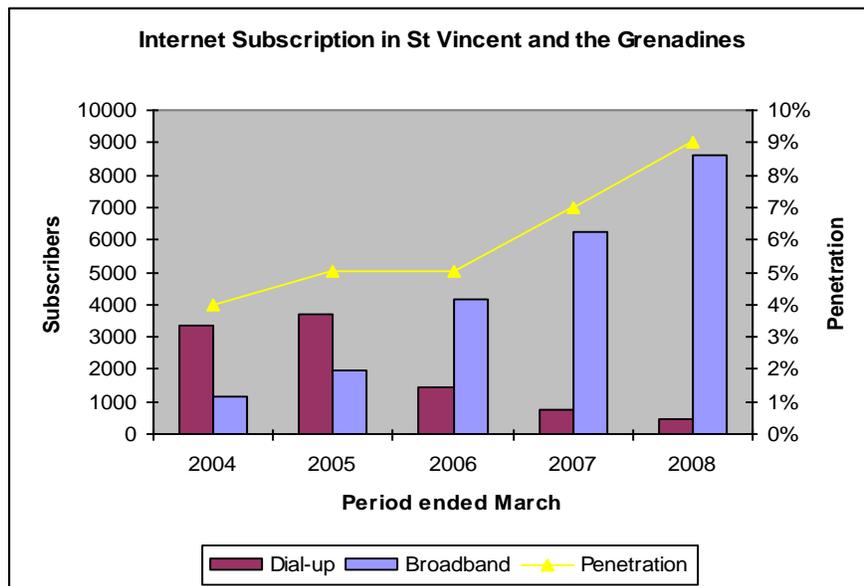
8.3.4 Internet and Broadband Services

Activity in the market for Internet services expanded 30 per cent as the number of subscribers surpassed 9,000. This increased activity follows growth of 25 per cent in the previous period. Growth in the market was fueled by a 40 per cent increase in broadband subscribers who now account for 92 per cent of total subscribers. Meanwhile the unrelenting decline in the number of dial-up subscribers continued as

the number so subscribers fell 30 per cent. Internet penetration increased to 11.5 per cent up from 6.9 per cent in the previous period.

In St Vincent and the Grenadines Internet service is offered by Cable & Wireless, which offers ADSL broadband access and dial-up access, and cable TV provider, Karib Cable also offers high speed Internet access via cable modem.

Figure 46: Internet Subscribers in St. Vincent and the Grenadines



Source: ECTEL/ operators

Includes estimates where ECTEL did not receive data from operators

Expansion in the Internet market coincided with the re-pricing and re-branding of the ADSL broadband service offered by Cable & Wireless. The lowest speed offered to residential consumers increased fourfold to 1Mbps while rates for monthly subscription fell 20 per cent to \$79. Similar packages are also available to businesses. The rates for dial-up packages were left unchanged at \$129 per month for unlimited access, making broadband offerings more attractive to consumers.

9.0 Notes and Statistical Tables

9.1 Notes on Statistical Tables and Data

1. All figures have been rounded to the nearest million, thousand, and whole number or to the second decimal place.

- -- denotes 'nil'
- 0.0 denotes 'negligible'
- n.a. denotes 'not available'
- ** denotes 'not applicable'

All dollar amounts are in Eastern Caribbean dollars (EC\$). Where it was necessary to convert from another currency to Eastern Caribbean dollars the following exchange rates were used:

JA\$1 = EC\$0.0328

TT\$1 = EC\$0.4209

BD\$1 = EC\$1.35

US\$1 = EC\$2.70

The telecommunications statistics in this report are subject to revision from time to time to ensure accuracy. Some data in this report has been restated from previous Telecom Sector Reviews to reflect updated information.

2. Telecommunications revenues are the revenues received from providing telecommunications services.
3. Fixed line penetration is obtained by dividing the number of fixed line subscribers by the population and multiplying by 100.
4. Mobile penetration is obtained by dividing the number of cellular subscribers by the population and multiplying by 100.
5. Internet penetration is obtained by dividing the number of Internet subscribers by the population and multiplying by 100.
6. Outgoing international traffic is the total telephone traffic measured in minutes that originated from a fixed or mobile phone in the specified state with a destination outside the state. Local and international traffic does not include traffic for Cingular Wireless, this was not available at the time of publication.)
7. Residential fixed line access charge is the recurring fixed charge for subscribing to the Public Switched Telephone Network (PSTN).

8. Telecommunications investment is the expenditure associated with acquiring ownership of plant and property used for telecommunications service and includes land and buildings.
9. Employment refers to the total number of staff employed by a telecommunications provider. This does not include sub-contract staff.
10. The data for populations are the mid-year estimates from the Eastern Caribbean Central Bank.
11. Gross Domestic Product (GDP) data is based on the Eastern Caribbean Central Bank's estimates.
12. Rates for services were obtained from company websites and are peak rates except where stated otherwise. There is a 50 cent surcharge on international calls to mobile phones in the Caribbean region.

9.2 Statistical Tables

Table 3: Telecommunications Revenues (EC\$ Million)

	Mar-04	Mar-05	Mar-06	Mar-07	Mar-08
Dominica	\$68	\$82	\$89	\$56	\$75
Grenada	\$114	\$142	\$157	\$173	\$161
St Kitts and Nevis	\$88	\$98	\$91	\$123	\$125
Saint Lucia	\$204	\$218	\$233	\$282	\$239
St Vincent and the Grenadines	\$137	\$135	\$143	\$155	\$148
	\$611	\$676	\$712	\$790	\$747

Source: ECTEL/operators

Note: Includes estimates where ECTEL did not receive data from the operators

Table 4: Fixed Line Penetration

	Mar-04	Mar-05	Mar-06	Mar-07	Mar-08
Dominica	34%	27%	27%	25%	25%
Grenada	27%	24%	28%	26%	27%
St Kitts and Nevis	49%	42%	41%	41%	40%
Saint Lucia	30%	26%	24%	24%	24%
St Vincent and the Grenadines	23%	22%	22%	22%	23%

Source: ECTEL/operators

Table 5: Mobile Penetration

	Mar-04	Mar-05	Mar-06	Mar-07	Mar-08
Dominica	33%	61%	75%	101%	126%
Grenada	67%	73%	67%	86%	90%
St Kitts and Nevis	46%	60%	104%	129%	146%
Saint Lucia	60%	63%	64%	88%	99%
St Vincent and the Grenadines	64%	60%	65%	86%	112%

Source: ECTEL/operators

Note: Includes estimates where ECTEL did not receive data from the operators

Table 6: Internet Penetration

	Mar-04	Mar-05	Mar-06	Mar-07	Mar-08
Dominica	7%	6%	6%	7%	10%
Grenada	5%	5%	6%	7%	8%
St Kitts and Nevis	13%	17%	18%	19%	21%
Saint Lucia	4%	5%	5%	7%	9%
St Vincent and the Grenadines	4%	5%	5%	7%	9%

Source: ECTEL/operators

Note: Includes estimates where ECTEL did not receive data from the operators

Table 7: Local Traffic Originating from a Fixed Line

(Millions of minutes)

	Mar-04	Mar-05	Mar-06	Mar-07	Mar-08
Dominica	72	60	70	41	40
Grenada	461	248	271	308	313
St Kitts and Nevis	117	110	118	67	73
Saint Lucia	n.a.	n.a.	196	103	173
St Vincent and the Grenadines	113	100	90	85	88
	763	518	745	604	687

Source: ECTEL/operators

Note: Includes estimates where ECTEL did not receive data from the operators

Table 8: Local Traffic Originating from a Mobile Phone

(Millions of minutes)

	Mar-04	Mar-05	Mar-06	Mar-07	Mar-08
Dominica	n.a.	n.a.	n.a.	41	79
Grenada	18	42	74	79	115
St Kitts and Nevis	15	15	n.a.	79	94
Saint Lucia	51	60	82	124	215
St Vincent and the Grenadines	31	42	52	100	118
	115	159	208	423	621

Source: ECTEL/operators

Note: Includes estimates where ECTEL did not receive data from the operators

Table 9: International Outgoing Traffic

(Millions of minutes)

	Mar-04	Mar-05	Mar-06	Mar-07	Mar-08
Dominica	8	10	13	13	22
Grenada	14	19	34	29	20
St Kitts and Nevis	15	15	16	21	21
Saint Lucia	24	25	34	32	41
St Vincent and the Grenadines	9	7	22	19	17
	70	76	118	114	121

Source: ECTEL/operators

Note: Includes estimates where ECTEL did not receive data from the operators

Table 10: International Incoming Traffic
(Millions of minutes)

	Mar-04	Mar-05	Mar-06	Mar-07	Mar-08
Dominica	29	30	31	30	40
Grenada	50	61	35	74	75
St Kitts and Nevis	n.a.	n.a.	34	35	34
Saint Lucia	45	62	59	121	61
St Vincent and the Grenadines	43	54	56	58	61
	167	207	215	318	271

Source: ECTEL/operators

Note: Includes estimates where ECTEL did not receive data from the operators

Table 11: Residential Fixed Line Access Charge
(EC\$)

	Mar-04	Mar-05	Mar-06	Mar-07	Mar-08
Dominica	20.00	24.00	24.00	24.00	24.00
Grenada	54.00	54.00	26.40	26.40	26.40
St Kitts and Nevis	22.00	24.00	24.00	24.00	24.00
Saint Lucia	22.00	26.40	26.40	26.40	26.40
St Vincent and the Grenadines	17.00	20.40	20.40	20.40	20.40

Source: ECTEL/operators

Table 12: Local Fixed to Fixed Calling Rate
(EC\$ per minute)

	Mar-04	Mar-05	Mar-06	Mar-07	Mar-08
Day	0.09	0.09	0.07	0.07	0.07
Evening	0.08	0.08	0.05	0.04	0.04
Weekend	0.06	0.06	0.05	0.04	0.04

Source: ECTEL/operators

Table 13: Local Fixed to Mobile Calling Rate
(EC\$ per minute)

	Mar-04	Mar-05	Mar-06	Mar-07	Mar-08
Day	0.81	0.81	0.76	0.71	0.71
Evening	0.80	0.80	0.75	0.69	0.69
Weekend	0.78	0.78	0.75	0.69	0.69

Source: ECTEL/operators

Table 14: Outgoing International Rate from a Fixed Line
(EC\$ per minute)

	Mar-04	Mar-05	Mar-06	Mar-07	Mar-08
ECTEL States	0.50	0.50	0.50	0.50	0.50
C&W Caribbean	0.66	0.66	0.66	0.66	0.66
Non C&W					
Caribbean	0.99	0.99	0.99	0.84 - 0.99	0.84 - 0.99
US and Europe	1.65	1.65	1.65	0.90 - 1.65	0.90 - 1.65
Rest of World	2.20	2.20	2.20	1.25 - 2.20	1.25 - 2.20

Source: ECTEL/operators

Note: Includes estimates where ECTEL did not receive data from the operators

Table 15: Telecommunications Investment
(EC\$ million)

	Mar-04	Mar-05	Mar-06	Mar-07	Mar-08
Dominica	26	46	16	21	18
Grenada	51	26	30	40	44
St Kitts and Nevis	17	38	23	22	23
Saint Lucia	78	35	22	39	66
St Vincent and the Grenadines	34	20	20	27	26
	205	164	111	148	177

Source: ECTEL/operators

Note: Includes estimates where ECTEL did not receive data from the operators

Table 16: Employment in Telecommunications

	Mar-04	Mar-05	Mar-06	Mar-07	Mar-08
Dominica	278	288	294	273	301
Grenada	190	183	207	216	204
St Kitts and Nevis	120	140	159	157	178
Saint Lucia	408	428	541	557	621
St Vincent and the Grenadines	147	169	159	158	162
	1143	1208	1360	1361	1466

Source: ECTEL/operators

Note: Includes estimates where ECTEL did not receive data from the operators

Table 17: Mid-year Population
(Thousands)

	2003	2004	2005	2006	2007
Dominica	70	70	71	71	71
Grenada	104	105	106	107	107
St Kitts and Nevis	48	49	49	50	51
Saint Lucia	161	162	165	167	171
St Vincent and the Grenadines	104	105	105	101	98

Source: ECCB National Accounts Statistics 2008

10.0 Individual Licensees in the ECTEL Member States

Table 18: Individual Licensees in the ECTEL Member States as at March 2008

Licence	Fixed Public network	Public Mobile telecoms	Internet Network and services	SUBMARINE Cable
Dominica	Cable & Wireless Marpin Telecoms and Broadcasting Sat Telecommunications†	Cable & Wireless Orange Dominica Digicel	Cable & Wireless Marpin Telecoms and Broadcasting Sat Telecommunications†	Middle Caribbean Network
Grenada	Cable & Wireless Global Network Partners† Trans-World Telecoms Caribbean† Grenada Cable Vision† Digicel†	Cable & Wireless Digicel Global Network Partners† Trans-World Telecoms Caribbean†	Cable & Wireless Global Network Partners† Grenada Cable Vision† Digicel† Grencomm†	Southern Caribbean Fiber
St Kitts and Nevis	Cable & Wireless The Cable† Caribbean Cable Communications†	Cable & Wireless UTS-CariGlobe Wireless Ventures 21 st Century† Telecoms	Cable & Wireless The Cable Nevis Communication Corporation† Caribbean Cable Communications	Southern Caribbean Fiber
Saint Lucia	Cable & Wireless Antilles Crossing	Cable & Wireless Digicel 21 st Century Telecoms†	Cable & Wireless Antilles Crossing† Link Technologies† 21 st Century Telecoms†	Antilles Crossing Southern Caribbean Fiber
St Vincent and the Grenadines	Cable & Wireless Digicel† Karib Cable†	Cable & Wireless Digicel 21 st Century Telecoms†	Cable & Wireless Digicel Karib Cable 21 st Century Telecoms†	Southern Caribbean Fiber

Source: ECTEL/NTRCs

† Were not operational at March 2008

EASTERN CARIBBEAN TELECOMMUNICATIONS AUTHORITY

ECTEL Mission Statement

“To create a fully liberalized telecommunications environment by promoting competition amongst service providers for the delivery of efficient and affordable telecommunications services to the people of the ECTEL Member States, by implementing applicable laws, treaties and agreement through fair transparent and Independent processes

— The Eastern Caribbean Telecommunications Authority (ECTEL) was established on 04 May 2000 by Treaty signed in St. George’s, Grenada, by the Governments of five Eastern Caribbean States— Commonwealth of Dominica, Grenada, St. Kitts and Nevis, Saint Lucia, St. Vincent and the Grenadines.

ECTEL is the regulatory body for telecommunications in its Member States It is made up of three components - A Council of Ministers, a regional directorate and a National Telecommunications Regulatory Commission (NTRC) in each Member State.

The ***Council of Ministers*** made up of the Ministers responsible for Telecommunications in the ECTEL states, and the Director General of the OECS as an ex-officio member. Responsibilities include giving directives to the Board of Directors on matters arising out of the Treaty, and ensuring that the Board is responsive to the needs of the Member States in the implementation of telecommunications policy.

The ***Board of Directors*** comprises one member and an alternate from each Member State and the Managing Director of ECTEL as an ex-officio member. Responsibilities include making recommendations to the Council on any matter relating to telecommunications, and establishing rules and procedures consistent with the Treaty for the management and operation of the ECTEL Directorate.

The NTRCs – National Telecommunications Regulatory Commissions – are the Telecommunications regulators at the national level in each Member State. They are responsible for the processing of applications and advising the Minister on the award of licences.

Also available from ECTEL – www.ectel.int :

1. Annual Telecommunications Sector Review 2005 – 2006
2. Annual Telecommunications Sector Review 2006 – 2007
3. Socio-Economic Impact – Liberalization of the Telcoms Sector 2007
4. Fifth Anniversary Magazine- 2005
5. ECTEL News – quarterly newsletter

Upcoming in 2009:

Study of Telecommunications and ICT Usage by Small and Medium Size Enterprises in the ECTEL Member States



EASTERN CARIBBEAN TELECOMMUNICATIONS AUTHORITY (ECTEL)

Annual Telecommunications Sector Review 2007 – 2008

www.ectel.int