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National Telecommunications Regulatory Commission (NTRC)

Annual Report 2007

1. Mission Statement

To efficiently regulate the Telecommunications Sector in collaboration with the Eastern Caribbean Telecommunications Authority (ECTEL) and provide advice and direction to the Minister of Telecommunications on policy and regulatory issues relating to Telecommunications.

2. Vision Statement

To ensure that the demand for existing and future telecom services is met in order to support economic growth and diversification, by providing a suitable environment for the tourism, information and financial sectors through a liberalized and competitive telecom environment.

3. Functions

The NTRC in collaboration with ECTEL is responsible for carrying out a variety of functions that are associated with regulating the telecommunication sector in St. Vincent and the Grenadines. These functions are outlined in detail in the Telecommunication Act of 2001.

4. SWOT Analysis

4.1 Strengths

-Has responsibility for regulating all aspects of the telecommunications sector.

-Knowledgeable and experience staff is dedicated to achieving the tasks at hand.

-Availability of relevant ICT infrastructure and software to efficiently carry out our regulatory functions.

4.2 Weaknesses

-Absence of fines/penalties or other mechanisms necessary to enforce the Telecommunications Act and Regulations.

-Existence of a number of contradictions between the ECTEL Treaty, Telecom Act and Regulations.

-Inadequate pricing control mechanism existing for those services offered by the incumbent operator that are not exposed to sufficient competition at this time.

-Lack of a formal link between the ECTEL organizational structure and that of the various NTRCs.

-Absence of an appropriate funding mechanism to cover possible litigation costs.

4.3 Opportunities

-Commencement of Telecom Skills Project in 2006 thereby allowing access to funds from the European Union to facilitate further capacity building through various training modules. This project will come to an end in 2008.

-Implementation of a Universal Service Fund mechanism in 2008 resulting from the work being done under the ECTEL ICT project being funded by the World Bank. This would facilitate the development and implementation of a number of universal access projects.

-Continued review and updating of the regulatory framework that exists in the region as part of the ECTEL TICT project.

4.4 Threats

-Possibility of litigation from Licencees.

-Churn of Commissioners and Staff when considering the small staff complement that makes up the NTRC and the resources expended on developing the regulatory skills of both Commissioners and staff.

-Increased competition in the sector from providers based in other countries and who are not licenced in our territory but are providing cross border services. This could have serious implications on licence fee revenue in the medium term as these entities do not pay licence fees.

5. Critical Issues

-Need to have a clear mechanism established on how litigation issues are to be handled by all NTRCs. There are no guidelines as to how matters are to be processed from a legal/procedural standpoint.

-Need to address the issue of cross-border services being offered by unlicenced providers. This issue has arisen in recent times and is closely linked to the technological developments associated with the Internet and other wireless access solutions. It is now possible for providers based in country (A) offering services to citizens of another country (B) but without holding the required licence(s) that a provider based in country (B) would require. This issue has implications on licence fee revenues as well as regulatory compliance in areas such as quality of service.

-The issue of cyber crime and other related ICT security issues are already affecting our society. This area will be one of the biggest, if not the biggest, issue facing the telecommunications/ICT sector in the short term and more specifically any entity connected to the Internet. It has broad reaching implications for the entire society as we become more dependent on communications for our everyday tasks. It should however be pointed out that the Government has noted this threat and has already enacted an Electronics Transactions Act that will try to address a number of the issues that will arise. The NTRC was a member of the select committee that worked on finalizing this Act. What has to be done now is to put in the necessary systems both from a functional and administrative perspective to enable the Act to function effectively. If the necessary resources are not steered in this direction immediately, it can lead to a number of National Security issues.

6. Sector Review

6.1 Revenue Analysis

The NTRC is responsible for the collection of all fees levied under the Telecommunications Act of 2001. These include application fees, licence fees, frequency authorizations fees, and universal service fund fees.

6.1.1 Revenue of the Telecom Operators

The following table and graph illustrate the total revenues earned by providers of telecom services for the period between the years 1998 and 2007.

Note: The years in the table run from April to March 31 e.g. 1998 runs from April 1 1997 to March 31 1998. This coincides with the financial years of Cable & Wireless WI Ltd and Digicel SVG Ltd. There are no revenue amounts for Wireless Ventures St. Vincent Ltd due to the merger with Digicel. All revenue received from Wireless Ventures St Vincent Ltd customers are reported as Digicel's Revenue. For the remaining entities whose financial year are not the same as these two companies, their revenues have been apportioned to the same periods using an average monthly revenue figure calculated by dividing its total revenue for its financial year by 12 .

Total Revenue earned by providers of telecommunications services 1998 to 2007:

	Cable and Wireless WI Ltd (St. Vincent Business Unit)			**Cable and Wireless Caribbean Cellular St. Vincent Ltd**	**Digicel St. Vincent Ltd**	**Wireless Ventures St. Vincent Ltd**	**Kelcom Int'l**	**Caribbean Business Machines Ltd**	**Vincy Comm Ltd**	
	Inter. Revenue (EC$)	Domestic Rev (EC$	Total Revenue (EC$)	Total Revenue (EC$)	Total Revenue (EC$)	Total Revenue (EC$)	Total Revenue (EC$)	Total Revenue (EC$)	Total Revenue (EC$)	Grand Total (EC$)
Year										
1998	xx, xxx,xxx	xx, xxx,xxx	xx, xxx,xxx	xx, xxx,xxx	x	x	xxx,xxx	x		xx, xxx,xxx
1999	xx, xxx,xxx	xx, xxx,xxx	xx, xxx,xxx	xx, xxx,xxx	x	x	x, xxx,xxx	x		xx, xxx,xxx
2000	xx, xxx,xxx	xx, xxx,xxx	xx, xxx,xxx	xx, xxx,xxx	x	x	x, xxx,xxx	x		xx, xxx,xxx
2001	xx, xxx,xxx	xx, xxx,xxx	xx, xxx,xxx	xx, xxx,xxx	x	x	x, xxx,xxx	x		xx, xxx,xxx
2002	xx, xxx,xxx	xx, xxx,xxx	xx, xxx,xxx	xx, xxx,xxx	x	x	x, xxx,xxx	x		xx, xxx,xxx
2003	xx, xxx,xxx	xx, xxx,xxx	xx, xxx,xxx	xx, xxx,xxx	xxx,xxx	x	x, xxx,xxx	x		xxx,xxx,xxx
2004	xx, xxx,xxx	xx, xxx,xxx	xx, xxx,xxx	xx, xxx,xxx	xx, xxx,xxx	x, xxx,xxx	x, xxx,xxx	x		xxx,xxx,xxx
2005	xx, xxx,xxx	xx, xxx,xxx	xx, xxx,xxx	xx, xxx,xxx	xx, xxx,xxx	x, xxx,xxx	x, xxx,xxx	x	xxxx	xxx,xxx,xxx
2006	xx, xxx,xxx	xx, xxx,xxx	xx, xxx,xxx	xx, xxx,xxx	xx, xxx,xxx	x, xxx,xxx	x, xxx,xxx	xxx,xxx	xxxxx	xxx,xxx,xxx
2007	xx, xxx,xxx	xx, xxx,xxx	xx, xxx,xxx	xx, xxx,xxx	xx, xxx,xxx	x	x, xxx,xxx	xxx,xxx	x	xxx,xxx,xxx
			xxx,xxx,xxx	xxx,xxx,xxx	xxx,xxx,xxx	xx, xxx,xxx	xx, xxx,xxx	xxx,xxx	**xxxxx**	xxx,xxx,xxx

Table # 1

Source: The information received on the Annual Data request forms were used for Cable & Wireless WI Ltd and Cable & Wireless Caribbean Cellular SVG Ltd, while audited financials statements were used for Digicel. These documents are for the financial year ending March 31, 2007.

Vincy Communication Ltd indicated that due to its inactivity there is no data to be submitted.

CBMC gross revenue for 2006 and 2007 is based on gross revenues breakdown for these years which were submitted to the NTRC. For previous years, the figures are based on Gross revenue as per audited statements. Note that the revenues outlined for 2006 and 2007 in relation to Karib Cable/Kelcom International are conservative estimates based on trends from the previous years.

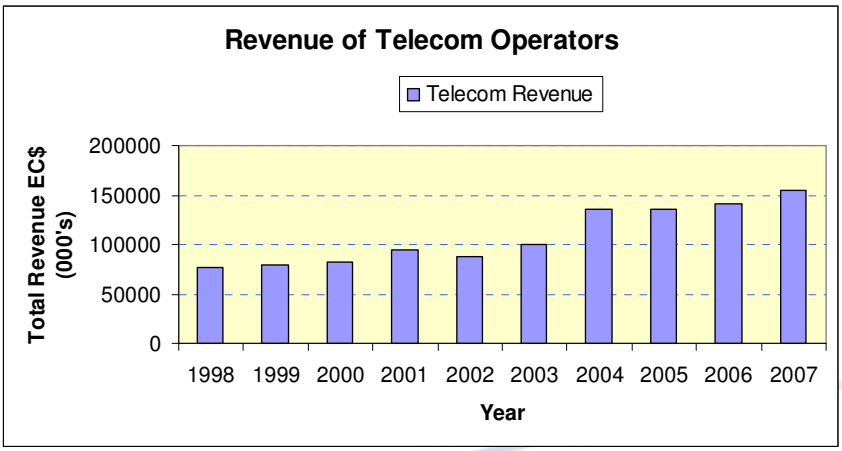


Fig:#1

It should be noted that total revenue for telecom operators fell in 2002 by 2%. This was due primarily to a $12 million (34%) drop in Cable & Wireless WI Ltd's, domestic revenue in that year.

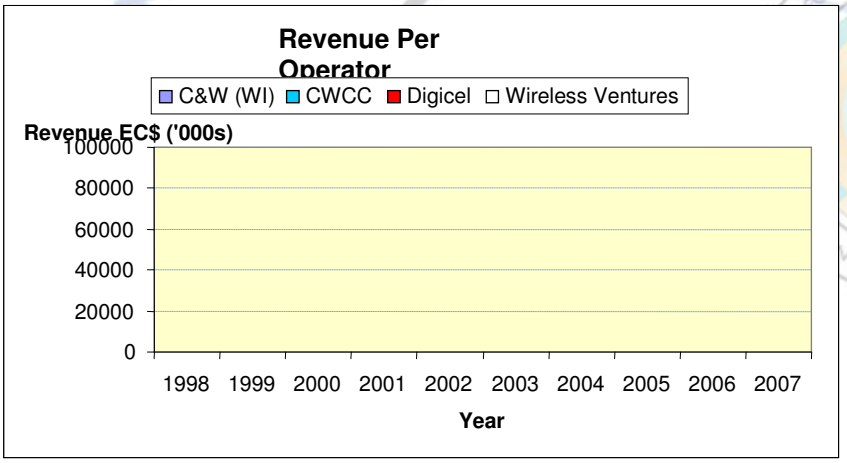


Fig #2

Mobile revenue continues to show growth in 2007. However revenue on the fixed line services is roughly the same in 2007.

6.1.2 Revenue of the NTRC and ECTEL for the period 2002 to 2007

Frequency fees are shared between the National Telecommunication Regulatory Commission (NTRC) and the Eastern Caribbean Telecommunication Authority (ECTEL).

In 2007, there was an approximate doubling of the application fees received. This increased activity directly related to processing of applications related to Cricket World Cup and requests for additional spectrum from existing providers. The lower frequency revenue for 2007 is due to prepayments for the 2007.

Table # 2

Revenue of NTRC and ECTEL 2002 to 2007				
	NTRC Application fees	Percent increase	NTRC & ECTEL Frequency Fees	Percent increase
'02	$107,036		$607,600	
'03	$5,100	-95%	$1,366,604	125%
'04	$8,800	73%	$1,577,400	15%
'05	$10,300	17%	$1,539,669	-2%
'06	$11,275	9%	$1,681,560	9%
'07	$22,725	101%	$1,245,183	-25%
	$165,236		$8,018,016	

6.1.3 Revenue received by the Government for the period 1998 to 2007

Note: Calendar year was the period used in this table.

Government of St. Vincent and the Grenadines				
	Royalties	License Fees	Total	Percent Increase
'98	1,303,189	15,001	1,318,190	
'99	1,286,342	31,119	1,317,461	0%
'00	1,450,800	43,529	1,449,329	13%
'01	639,000	61,143	700,143	-53%
'02	0	3,365,391	3,365,391	381%
'03	0	2,803,927	2,803,927	-17%
'04	0	3,329,145	3,329,145	19%
'05	0	3,421,159	3,421,159	3%
'06	0	3,850,955	3,850,955	5%
07	0	4,301,521	4,301,521	11%
		16,651,369	**21,330,700**	

Table #3

As the data shows, there was an increase in licence fees collected by the NTRC on behalf of the Government over the period shown. This is an important point when noting that the cost of international calls has been reduced substantially from around the time of planned market liberalisation. In short total revenue from the sector has not decreased since the market was liberalized.

Before the enactment of the Telecom Act 2001 fees paid by Cable & Wireless to the government were called Royalties. After that date the companies are required to pay an annual licence fee that is 3% of gross annual revenue.

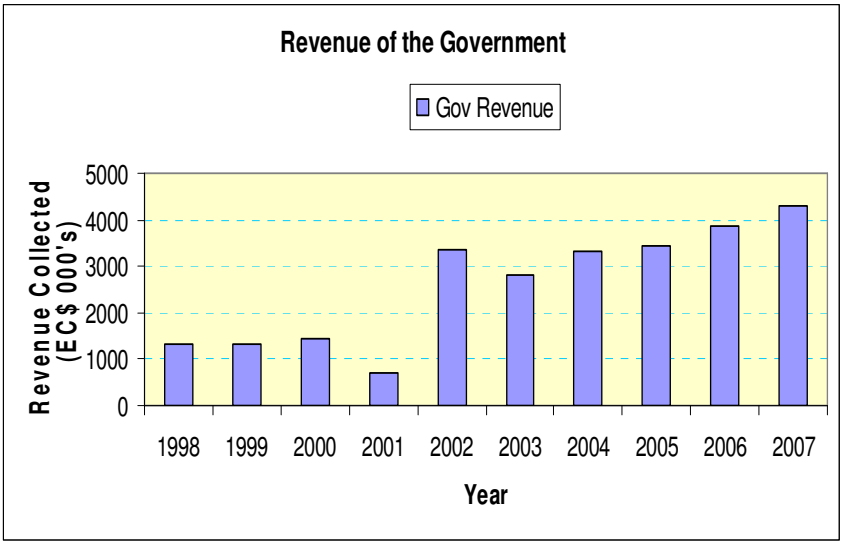


Fig #3

In 2007, license fees collected by the NTRC on behalf of the Government increased by 11%.

The Government has seen sustained growth in licence fees revenue received starting from about 2003 up to 2007.

6.2 Projected Revenue for 2008:

For the fiscal year 2008, the NTRC has projected to collect $1,790,000.00 in revenue from frequency fees. This is a decline of twenty percent compare to the projected amount of 2,237,450.00 in 2007. This significant projected amount in 2007 was due to the new fee structure implemented in January of 2007 (S.R.O #2 2003). The new fees regulations S.R.O. # 3 of 2007 implemented in the first quarter of 2007 would have resulted in the increase to a single licencee (Karib Cable) annual frequency fees in excess of $400,000.00. This figure would have placed a significant burden on the above-mentioned licensee. The NTRC is working with ECTEL to have the issue resolved via an amendment of the regulations.

Application fees also showed a significant increase in 2007 over 2006 as $11,650 (101%) more were collected in 2007 than received in 2006. However, this trend is not expected to continue in 2008 since this increase in 2007 was mainly due to activities related to World Cup cricket.

6.3 Capacity building in 2007:- The NTRC participated in a number of training activities and workshops over the past year. These were usually short and lasted less than a week. The particular areas covered in these courses were as follow: Costing Models for Interconnection; National ICT Policies and Plans; Use of Open Source Software; Telecommunications Regulation; Mobile Broadband for Developing countries. Others included: Costing Methodologies in Telecommunications; Management of Regulatory Affairs; Telecommunications Management;

Universal Service and Spectrum Management These activities were mainly held regionally but there were some held in the United States and the UK that were made possible under the EU funded Telecom Skills Project.

6.4 Regulations: The following regulations were Gazetted in 2007:

- Telecommunications (Licensing and Authorization) Regulations S.R.O. #1 of 2007.
- Telecommunications (Dispute Resolution) Regulations S.R.O # 2 of 2007.
- Telecommunications (Fees) Regulations S.R.O # 3 of 2007
- Telecommunications (Spectrum Management) Regulations S.R.O # 4 of 2007.

6.5 Staff: The NTRC continues to experience some turnover in staff positions as the Accountant position became vacant at the end of the year. The NTRC continues to look at ways of reducing the rate of churn of its staff noting its small staff complements, however in some cases there is little that could be done. These staff changes do affect the smooth operation of the NTRC (maybe the smallest of any statutory institution in the state). As such there is considerable lag time for new employees to come up to speed with their duties as they are to do considerable on the job training as the expertise required is not readily available as required on the job market. This applies both to professional as well as clerical positions.

6.6 ECTEL: The NTRC continues to provide the necessary support to ECTEL as required by the ECTEL Treaty. However, there continue to be issues that exist and which have to be resolved so as to reap the benefits of a harmonized regulatory regime in the contracting states. The NTRC is optimistic that improvements could be realized with the current work being done under the ECTEL TICT project on updating the Legislative framework.

6.7 Numbering: - Draft numbering regulations to replace the existing numbering regulations have been developed. It is expected that these regulations would be implemented in 2008

6.8 Spectrum Management: - Weekly monitoring of the spectrum is being done with the mobile monitoring system. This has resulted in better policing of the radio spectrum especially emissions from all broadcasting stations which continue to be an area where most compliance issues arise. We hope to see a reduction in incidents as the operators are now aware of our continuing monitoring activities. Of great concern, however, is the continued absence of fines/penalties under the act which would go a long way in curbing repeat offenders. The NTRC is planning to facilitate interference training for its staff in 2008 using funds from the EU funded Telecom Skills project

The NTRC is also exploring the possibility of obtaining additional spectrum monitoring equipment to deal with technical issues associated

with new wireless technologies that are outside the scope of our current equipment.

6.9 Internet Access: This issue continues to be one of utmost importance for the further development of our country. While we have seen some improvement in the numbers of subscribers having access to the Internet mainly via their mobile phones the penetration figures for Broadband access is still too low. It is the view of the NTRC that the main barriers to improved Broadband penetration is the high entry level prices for Broadband access and the high cost of terminal equipment(Computers, mobile devices). It is also the view of the NTRC that that there is little interest for current providers to lower the entry level price for broadband access. This is due to the fact that there main revenue stream is still voice communications. This issue is also related to the cost of the terminal equipment. If the providers are not willing at this time to lower the entry level for broadband prices they would not be willing to provide the subsidies on the costs of broadband terminal equipment as was done with mobile phones.

The access to broadband service is too important an issue for our country to leave it to the providers to resolve it at their pace. It is an issue that would need to have intervention by the regulators and Government. As such the NTRC would need to utilize the Universal Service Fund (USF) in coordination with other initiatives from the Government to improve the penetration levels of Broadband Access.

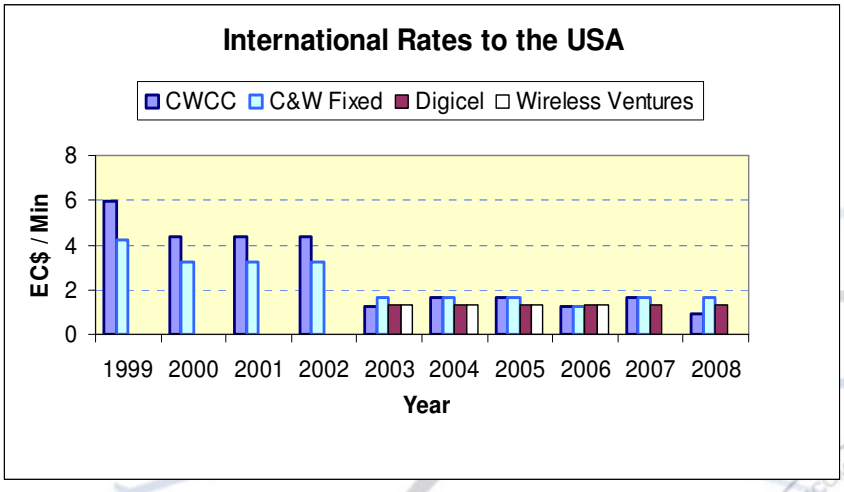
6.10 Policy Development/Public Consultation: - The NTRC worked closely with ECTEL in the development of a number of draft policy and technical documents. These were in the following areas:

- **Exemption Regulations**
- **Long Run Incremental Cost Models**
- **Quality of Service (QoS) Regulations**
- **Policy on Convergence and Related Matters**
- **Dispute Resolution Resource Manual**
- **Universal Service Fund Regulations**
- **Licensing of Amateur Radio Operators**
- **Telecommunication Universal Service Fund Guidelines**

The consultations were carried out in different formats. They were done in written format via the web in direct correspondence with stakeholders, as well as sit down meetings.

6.11 Litigation: The NTRC was not involved in any litigation for 2007.

6.12 Statistics: The NTRC continued in 2007 with the provisioning of statistical data from the Telecommunications sector to a number of local, regional and international entities. The following graphs depict some of the more relevant information on the sector.



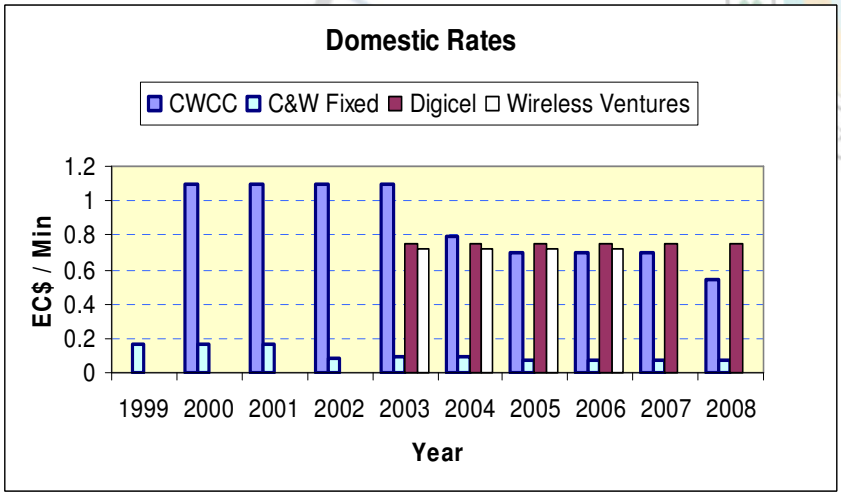
Graph 1

The rates depicted in Graph 1 are not regulated.

Note the steep drop in C&W's rates after competition started in 2003.

No rates are included for Wireless Ventures since the company has merged with Digicel since 2007.

Graph 2

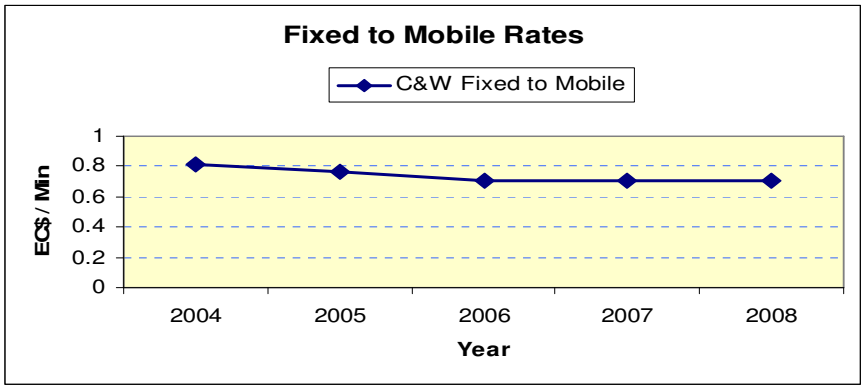


The domestic rates in Graph 2 are the daytime rates for calls made to customers on the same network.

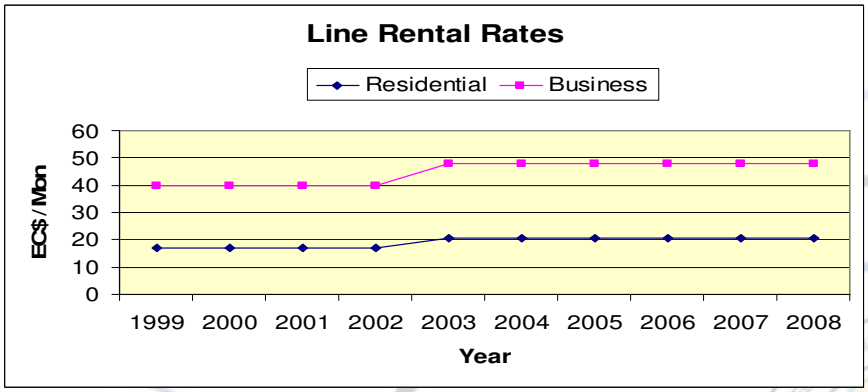
The Cable & Wireless fixed line rate from 1999 to 2001 was EC$0.17 for 2 minutes; however the subscriber also paid EC$0.17 for a 1 minute call.

The 2005 to 2008 C&W Fixed rates are set by the Price Cap Regime. An important point to note from the above graph is the large difference between the domestic rates on the mobile networks to that of the C&W fixed network. This is far different from what exist with the international rates. The issue is dealt with in more detail within the annual report. Additionally, Cable and Wireless's rate between 2007 and 2008 was noticeably reduced from the average rates that consumers (from all networks) were accustomed to paying since 2005.

Graph 3

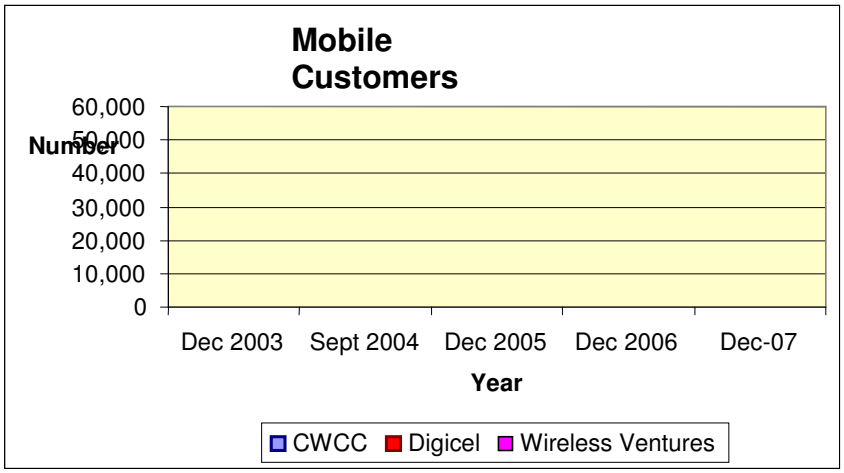


The 2005 to 2008 fixed to mobile rate in Graph 3 is the rate prescribed by the Price Cap regime.



The 2005 line rental rates depicted in Graph 4 includes 60 free minutes of fixed to fixed calling on nights and weekends per month. For subsequent years, the rates include 80 free minutes.

Graph 4



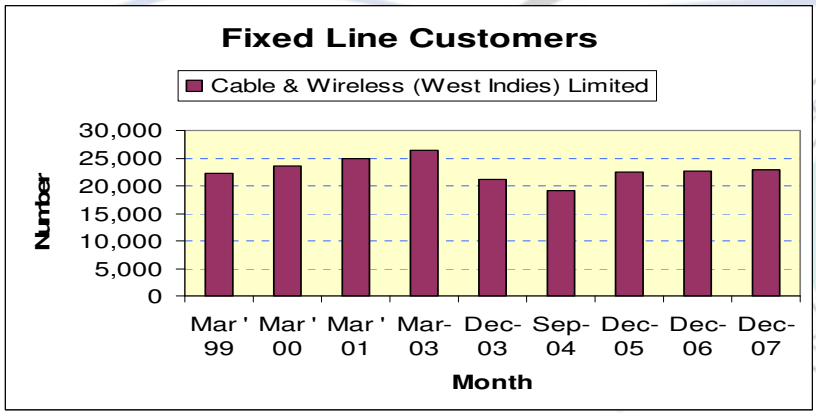
Graph 5

The data submitted for 2003 (the year that competition started) possibly reflected the number of handsets sold and not the number of subscribers being active on the network for a specific time period.

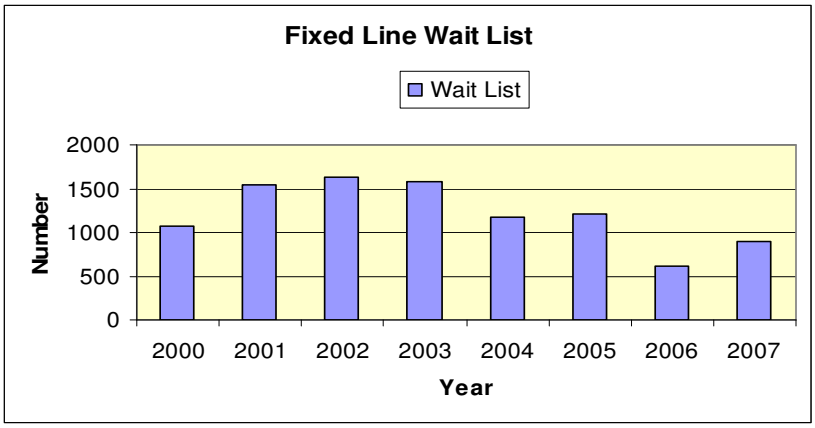
Graph 5 shows a drop in the number of mobile subscribers between 2003 and 2004, but is likely to be a result of improper data being submitted.
The major drop in numbers was in the figures submitted by Digicel. Noting that there was not an increase in the numbers of the other providers over the same period, it could be safe to say that the drop was not a result of customers changing providers.

In 2007, Cable and Wireless reported more subscribers than Digicel for the first time since the liberalization. This is perhaps due to the reduced cost of mobile-to-mobile calls which Cable and Wireless implemented during the same period.

Graph 6



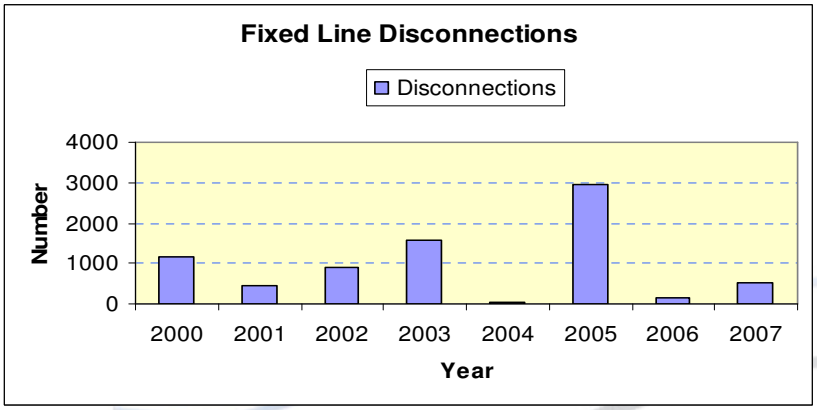
Graph 6 shows the numbers of connected fixed line customers from March, 1999 to December 2007.



Graph 7

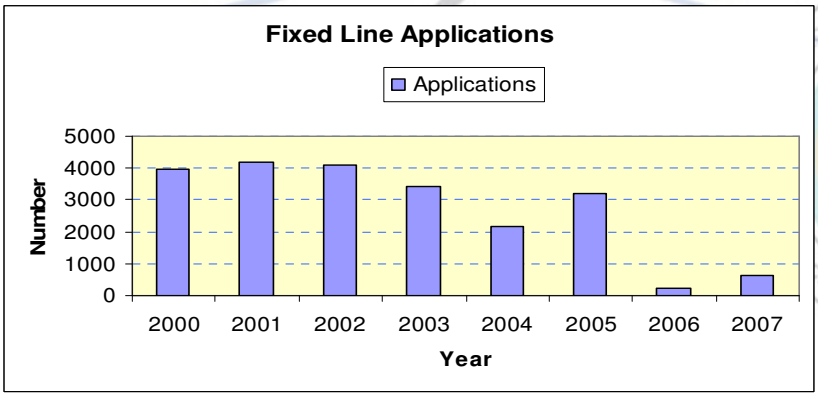
Graph 7 shows the number of persons on Cable & Wireless's waiting list for fixed line telephones.

It should be noted that persons on the waiting list are not just located in rural and undeveloped areas but in suburban areas that are well developed. The reason for being on the waiting list in suburban areas is due to limited line plant capacity.



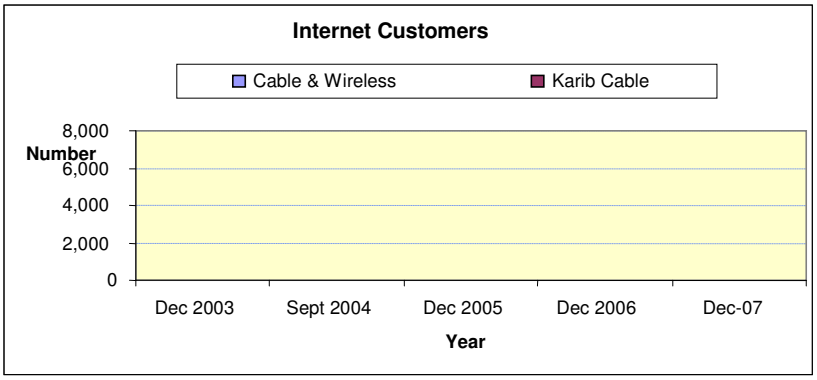
Graph 8

Graph 8 shows the number of fixed line customers disconnected during each year between 2000 and 2007.



Graph 9

Graph 9 shows the number of applications made for fixed line service.



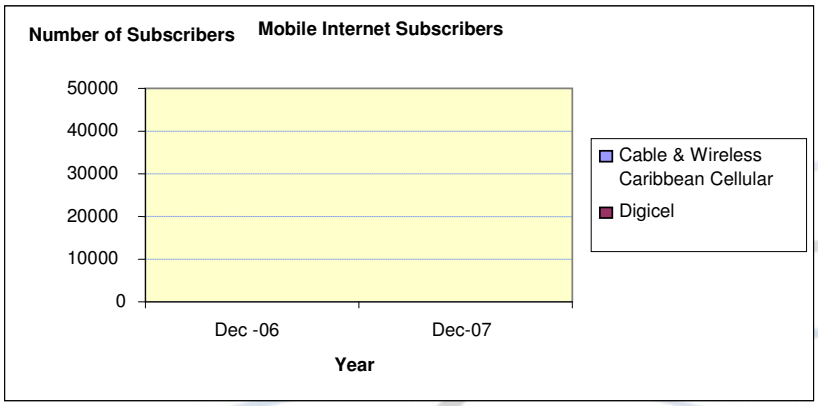
Graph 10 shows the number of fixed line internet customers by provider.

The number of mobile internet customers has greatly outweighed these figures (see notes below).

Graph 10

Cable and Wireless has experienced a slight surge in its internet customers over the past two years, possibly due to new promotions and expected competition.

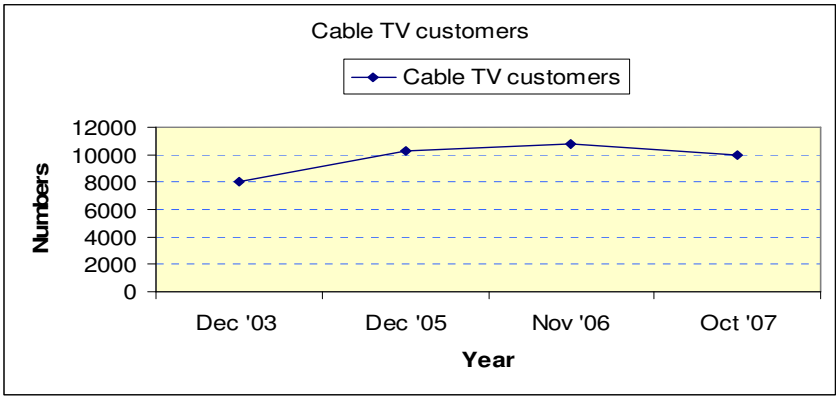
Karib Cable has recently completed an upgrade of its network and is currently offering greatly increased speeds at more affordable rates. We therefore expect an increase in Karib cable numbers in 2008 noting that the company now has access for International bandwidth through Southern Caribbean Fiber.



Graph 11

Note: The number of mobile internet subscribers for Cable and Wireless as at December 2007 is estimated.

It should also be noted that there were over 7,000 mobile customers as of December 2006 with various forms of internet access capabilities (GPRS, Wi-Fi, Edge). This was a trend that the NTRC had predicted would have continued over the next few years, noting the lower cost of entry into the mobile market with data capable mobile phones as compared to that of the fixed network with standard computers. This trend has so far been confirmed, with a total of approximately 90,000 mobile customers reported to have some form of internet access capabilities as of December 2007.



Graph 12

Graph 12 shows the number of Cable TV subscribers.

It is unclear what is responsible for the small decline in Cable TV subscribers between Nov 06 and Oct 07.

Detailed Customer Statistics

Cable & Wireless (West Indies) Limited		**Dec '03**	**Sept '04**	**Dec '05**	**Dec '06**	**Dec '07**
Fixed line Customers						
	Residential	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
	Business	xxxx	xxxx	xxxx	xxxx	xxxx
	Total	**xxxxx**	**xxxxx**	**xxxxx**	**xxxxx**	**xxxxx**
Internet Customers						
	Dialup	xxxx	xxxx	xxxx	xxx	xxx
	ISDN	xx	x	xx	x	x
	ADSL	xx	x	xxxx	xxxx	6785
	Total	**xxxx**	**xxxx**	**xxxx**	**xxxx**	**7,315**
Cable & Wireless Caribbean Cellular						
Mobile Customers						
	Post paid	xxx	xxxx	xxxx	xxxx	xxxx
	Prepaid	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
	Total	**xxxxx**	**xxxxx**	**xxxxx**	**xxxxx**	**xxxxx**
	Data - Post Paid				xxx	
	Data - PrePaid				xxxx	

					xxxx	
Digicel						
Mobile Customers						
	Post paid	xxxx	xxxx	xxxx	xxxx	xxxx
	Prepaid	40,083	xxxxx	xxxxx	xxxxx	xxxxx
	Total	**xxxxx**	**xxxxx**	**xxxxx**	**xxxxx**	**xxxxx**
	Data (pre & post)				**xxxx**	**xxxx**
Wireless Ventures(AT&T)						
Mobile Customers						
	Post paid	xxx	xxx	xxx	NA	
	Prepaid	xxxx	xxxx	**xxxx**	**NA**	
	Total	**xxxx**	**xxxx**	**xxxx**		
Karib Cable						
Cable TV customers		xxxx		xxxx		xxxxx
Internet customers		xxx		xxx		xxxx
				Table #7		

Licenses issued				
	2005	2006	2007	
Individual type			New	Renewed
Fixed Public	0	1	1	N/A
Internet Networks	0	0	1	N/A
Subscriber Television	0	0	0	N/A
International simple voice resale	0	0	0	N/A
Mobile Cellular	0	0	1	N/A
Public Radio paging	0	0	0	N/A
Submarine cable	0	1	0	N/A
Class type				
Private network/services	0	0	2	N/A
Internet services	0	1	1	N/A
Radio Broadcast	10	0	0	N/A
Community radio	0	1	1	N/A
Television Broadcast	0	0	0	N/A
Maritime mobile	21	3	4	30
Land mobile	301	3	2	451
Aeronautical radio	0	0	0	0
Aircraft station	17	1	1	15
Amateur Radio station	18	8	13	6
Citizen Band radio	6	0	0	3
Family Radio Band	0	0	0	0
Ship Station	125	125	49	228
Miscellaneous				
CPE Dealers registration fee	18	18	0	10
Examination Fees for Rad. Oper	0	0	2	N/A
Type Approval fee	8	8	0	N/A
Ship station Operators lic	15	15	25	32
Aircraft Station Operators lic	0	0	0	0

Table #8

6.13 Licensing:

The NTRC continues to facilitate the application process for new licenses under the Telecommunications Act. Individual type applications were forwarded to ECTEL to be evaluated while Class type applications were evaluated by the NTRC. The NTRC also evaluated and made recommendations to the Minister on a number of frequency applications.

Table 8 outlines the number of licences issued since 2005. In recognition of the fact that not all issued licences are new licences but may be renewals of existing licences issued in a previous year, the table 8 outlines the new licences and the existing licences renewed in the year 2007.

6.14 Policy Recommendations:

There are still a number of issues that the NTRC continues to view, as needing some form of regulatory intervention in the sector. Currently the mobile market has 90% penetration as compared to the fixed line market with about 20% penetration. In other words the majority of our population depends on their mobile phone for their sole means of communication yet the market is the least regulated. At the time of liberalizing the market in the period (2000-2003), a lot of attention was paid on regulating the fixed line market which at the time had the highest penetration (a ratio of 12:1), when compared with mobile penetration at that time. However, the market has undergone a dramatic change over the last five years whereby this ratio is now (5:1) with the mobile market being the higher of the two. But while one may argue that there are two mobile entities in the market and one should leave the market to regulate itself via the competition that exists, this would be a flawed strategy. Studies have shown that to have competitive forces regulate a market; you need about six players in the market. We have only two players with approximately the same market share of about 50/50. It is time for the regulator to examine certain issues in the mobile market that are affecting the mobile consumers and make the necessary interventions.

Considering the above, the NTRC wishes to comment on the following issues that we believe are important to the sector at this time:

Why do we regulate the Telecom sector on a whole?

The NTRC's view on the reason for regulating the sector is to provide certain legal and regulatory certainty for the investors in the sector (providers). The sector requires high capital outlay and persons would not invest if they have no assurance of how the sector would be managed on an ongoing basis (level of competition, setting of rates, etc). The sector also requires certain public resources to function. This is applicable to both wireline and wireless (numbers, spectrum, right of way, etc). Lastly, but not the least important, is quality of service to the customers. All of these could be handled by one agency or a number of agencies. However, the bottom line is that it should be done. Otherwise, it is to the detriment of the country on a whole. If the Government policy objectives are not met, the providers cannot operate successfully nor the consumers get value for their money.

Why do we regulate specific areas of the sector more as compared to other areas?

The areas that should be regulated and the level at which they should be regulated should depend on the specific state of the sector at a particular time keeping into consideration the policy of the Government and the needs of all stakeholders. It should not be based on what the state of regulation is at a particular time in other countries. We have to always look at our particular situation and what we want to achieve at the specific time.

Why have we been regulating the fixed line services and not the mobile services?

Up to this time, the regulatory regime in the ECTEL member states have been regulating the fixed line services but not the mobile services. It is the belief of some that the mobile sector is subject to competition and as such, there is no need to regulate it as compared to the fixed line services that is subject to no (or little) competition. The NTRC's view is that there should always be some form of regulation in all areas of the sector and the levels should depend on how the market is performing. As such, the regulation should be used to push the sector in a particular direction to meet the objectives of our policy makers. To date, this has not occurred. We would now outline how things have changed over the last five years and how they have not changed and maybe see what are the reason(s) for this.

How many fixed line customers are there in the country?

Below is a table showing the fixed line customers in SVG over the last nine years:

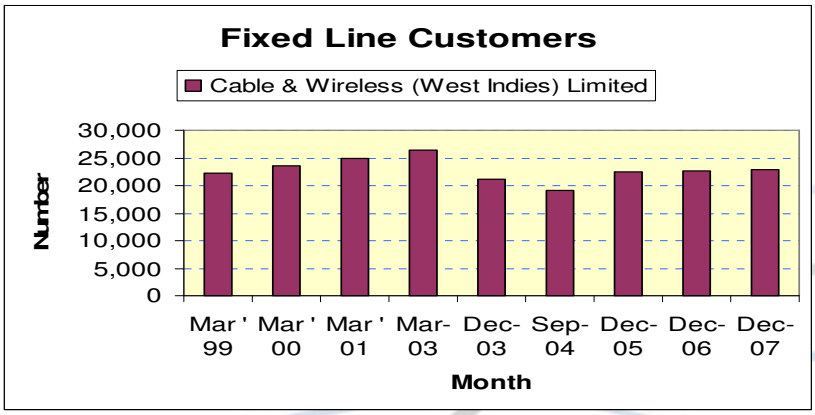


Fig #4

As you have seen the market has not changed much since liberalization. There was an initial dip after the market opened up (could not confirm this dip) and a slight increase which has been attributed to increase use of ADSL Internet service.

How many mobile customers are there in the country?

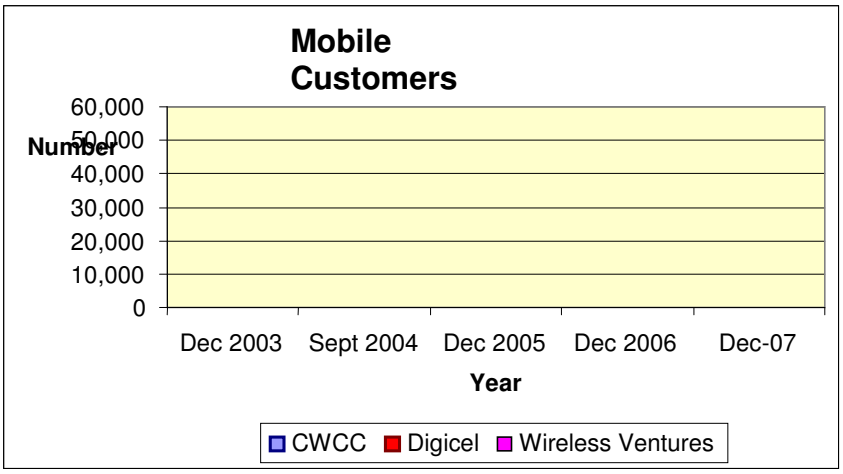


Table showing the number of mobile customers in SVG over the last five years

Fig #5

What are the demographics of the fixed line market (income level, etc)?

It would be safe to say that those persons/households who did not have a fixed line phone prior to the liberalization did not have one mainly due to the reason that no circuits were available in their neighborhood or they could not have afforded to have one due to the fixed cost (monthly rental and deposit). As seen from the statistics below from our 2001 census there are some 30,000 households in the country with only 16,000(53%) having a telephone. From the distribution it is easily seen that the rural districts had the fewer phones per household:

Census Division	No. of H/hold	Household Appliance									
		Computer		Internet Connection		Cable/ Satellite		Cellular Telephone		Telephone	
		No.	%	No.	%	No.	%	No.	%	No.	%
Kingstown	3983	553	22	345	21.8	1399	21.1	278	21.6	2674	16.4
Suburbs	3378	252	10	135	8.5	763	11.5	136	10.5	1690	10.4
Calliaqua	6562	955	37.9	687	43.4	2077	31.3	533	41.3	4111	25.3
Marriaqua	2206	128	5.1	82	5.2	376	5.7	67	5.2	1151	7.1
Bridgetown	1849	77	3.1	43	2.7	307	4.6	36	2.8	931	5.7
Colonarie	1993	62	2.5	22	1.4	299	4.5	22	1.7	875	5.4
Georgetown	1921	52	2.1	28	1.8	186	2.8	22	1.7	693	4.3
Sandy Bay	622	10	0.4	0	0	2	0	2	0.2	124	0.8
Layou	1861	110	4.4	60	3.8	325	4.9	52	4	885	5.4
Barrouallie	1577	39	1.5	19	1.2	129	1.9	19	1.5	710	4.4
Chateaubelair	1603	49	1.9	27	1.7	4	0.1	14	1.1	722	4.4
N/Grenadines	1721	127	5	83	5.2	529	8	47	3.6	1033	6.4
S/Grenadines	1242	103	4.1	52	3.3	238	3.6	62	4.8	662	4.1
Total	**30518**	**2517**	**100**	**1583**	**100**	**6634**	**100**	**1290**	**100**	**16261**	**100**

Table #4

What are the demographics of the Mobile market separated into post and prepaid?

Before the sector was liberalized, the mobile sector was a post-paid market (harder to obtain than a fixed line account, extra cost of handsets). These would have been persons who would most likely have a fixed line as well. It was not until the introduction of prepaid in 2000/2001 that persons in the lower income bracket started obtaining mobile phones (as their first and only phone). This take-up accelerated in 2002 with competition on the horizon whereby the incumbent began subsidizing the handsets and "calling party pays" was introduced. This take-up continued when competition was introduced in 2003. The result being that the vast majority of the mobile markets are customers who were getting their first and only phone (low income customers). Also the mobile market is a greater percentage of the total telephone market (5 to 1) ratio when compared with fixed. In other words there are more mobile customers (whose only phone is a mobile) than fixed customers and their rates are higher than the fixed line customers.

What are the current rates for calls: Fixed to fixed, fixed to mobile, mobile to mobile, mobile to fixed, fixed to international(USA) and mobile to international(USA)?

Following is a table outlining the current rates recorded by the NTRC. Note that under the new retail tariff regulations, the providers have no obligations to inform the regulator when they change rates or run promotions.

	Cost /min
Fixed to Fixed	$0.07
Fixed to Mobile	$0.70
Mobile to Mobile	$0.70
Mobile to International (USA)	$1.65

Table #5

How do the above rates compare to those prior to the liberalization of the sector?

Below is another table comparing the current rates with the rates prior to the liberalization process. As seen, while there is some drop in the mobile rates they are still way too high. A fixed network is more costly to deploy than a mobile network - this is a proven fact and not merely an opinion. Noting this, there is no justification for mobile rates to be higher that the fixed rates. Even the current LRIC models (costing models being developed by ECTEL) have higher rates for mobile. We have to keep in mind that one of the main reasons for high mobile rates in most developed countries (USA, UK and Europe) was due to the high initial cost of acquiring mobile spectrum (billions of dollars upfront) which is not the case in our islands.

One has to now ask the question of "why should the regulator be regulating the rates of the calls made by a smaller group of customers but not the rates of a larger group that has higher rates?" This is what is currently being done with the Price Cap Pan for fixed line customers of a mostly higher income bracket, but no regulation of the rates which are higher for the 70,000 customers of mostly lower income bracket.

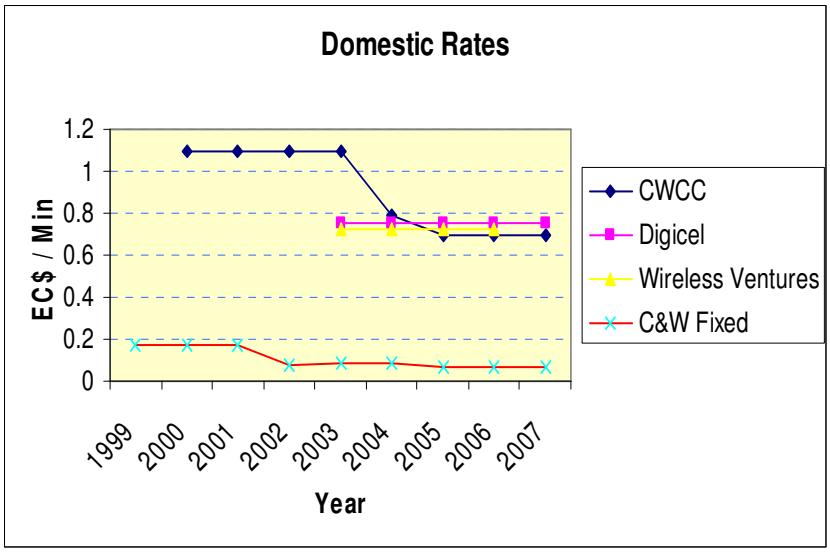


Fig #6

Domestic rates currently offered by providers. Note that a mobile call costs about ten times as much as a fixed line call.

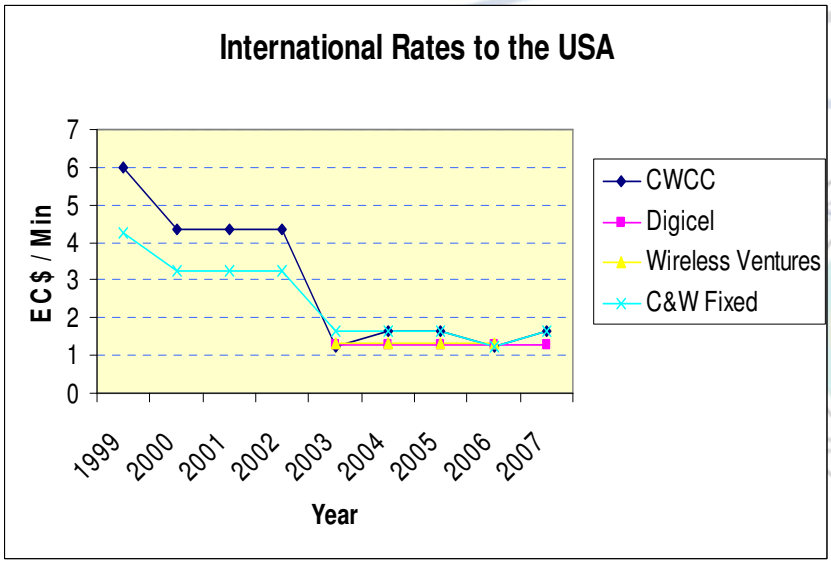


Fig #7

International rates currently offered by providers. An international call currently costs about twice as much as a mobile domestic call.

1. ***What are the rates associated with roaming: (1) Roaming with the same provider in another Caribbean state. (2)Roaming with a different provider in another Caribbean state. Roaming with a different provider in the USA.***

There is no regulation at this time on roaming rates. As a regulator, we have no idea of the roaming rates. Also what redress do these roaming customers have if they have issues with the rates charged, etc? Below are the roaming rates that customers from SVG would be exposed to when traveling to these specific countries.

Digicel	**US**	**US**	**Cable & Wireless**	**US**	**US**
Barbados	Prepaid rates	Post Paid rates	**Barbados**	Prepaid rates	Post Paid Rates
Receive calls	49 cents	29 cents	Receive calls	Free	Free
Call Home	49 cents	29 cents	Call Home	49 cents	29 cents
Call Locally	49 cents	0	Call Locally	49 cents	29 cents
Other Calls	49 cents	29 cents	Other Calls	3	3
Receive SMS	free	free	Receive SMS	Free	Free
Send SMS	15 cents	15 cents	Send SMS	15 cents	15 cents
Martinique			**Martinique**		
	no prepaid			***no prepaid***	
Receive calls		29 cents	Receive calls		75 cents
Call Home		29 cents	Call Home		1.25
Call Locally		29 cents	Call Locally		75 cents
Other calls		0	Other Calls		3
Receive SMS		free	Receive SMS		Free
Send SMS		15 cents	Send SMS		30 cents
US			**US**		
Receive calls	99 cents	99 cents	Receive calls	75 cents	95 cents
Call Home	2.49	1.99	Call Home	1.25	1.45
Call Locally	1.25	99 cents	Call Locally	75 cents	95 cents
Other calls	3.5	0	Other calls	3	3.2
Receive SMS	Free	Free	Receive SMS	30 cents	30 cents
Send SMS	35 cents	35 cents	Send SMS	30 cents	30 cents

Table #6

Should intra-country roaming be allowed; even only if it is to reduce the requirement for more cell sites and permit off-net calls?

At present intra-country roaming is not available in the ECTEL states. If this is made a requirement it could result in fewer cell sites as service could be had from another local provider especially in areas that are not economically viable at present to install a cell site just for the use of that provider's customers. In addition intra-country roaming would allow customers to get service from another local provider in the event their network is out of operation due to a Disaster(natural or otherwise) .

Are dropped calls a problem? If so, are customers of any one provider more affected than others?

Dropped calls are an issue in the mobile industry. This could be due to a number of different factors including lost of signal coverage due to movement from one cell site to another or due to problems on the network itself . Perhaps there should be quality of service (QoS) parameters for this issue so as to monitor the performance of providers.

Who takes responsibility for a phone card sold that is not functioning?

There are a number of issues surrounding the use of vendors by providers to sell their cards/minutes. These include the issue of responsibility when a card does not work. Is the vendor responsible or is it the provider?

Should companies be allowed to lock handsets that are not being sold at a subsidized rate?

This issue has been around for some time but has actually been taken to a higher level with the introduction of the iPhone recently. In the past you can have the same model phone locked to separate networks. However, with the iPhone you have one phone locked to one network and it was not being subsidized. There is litigation on this issue currently being undertaken in some European countries.

Should providers restrict certain services available on their handsets?

Some providers restrict what features are enabled on the phones they sell. Also some providers restrict the access to some mobile websites. These are usually sites that require additional subscription charges. As such, the issue is what access is being given and at what price. There is no current regulation on these issues.

What happens to the unused credit on SIM cards that have expired?

The issue of SIM cards expiring in a short time frame has been raised by our NTRC previously. A related issue is what happens to the unused credit on such SIM cards. How much does this amount too annually per provider? This is money collected for which no service has been provided.

The NTRC believes the above issues are important to our country and need to be addressed through various regulatory interventions.

7. Broad Response Strategies:

As the Telecom Sector continues to function within a liberalized environment, the NTRC in collaboration with ECTEL has to respond to the requirements of a competitive sector so as to protect the interests of both the providers and the consumers.

The NTRC has to operate within the harmonized framework of the ECTEL Treaty and the Telecommunications Act of 2001. Most of its objectives cannot be accomplished on its own due to the mandate given to ECTEL in relation to certain functions under the Telecommunications Act of 2001.

Recognizing the limitations outlined above, the NTRC would seek to do the following in response to the critical issues that need to be addressed:

- Continue with our lobbying efforts both at the ECTEL level and at the policy level for the drafting and implementation of other necessary regulations under the Telecommunications Act of 2001.

- Work closely with the Consultants engaged in the different components of the ECTEL TICT project so as to ensure that the revised regulatory framework is capable of addressing the critical issues that currently exist. The NTRC will continue to analyse the feedback from the stakeholders via public consultation and apply its expertise both at the staff and Commissioners levels to guide the polices being developed. These policies will then be manifested in a new regulatory framework for the Telecommunications sector by 2008.

8. Result Indicators 2006 and 2007

1. **Dispute Resolution:** The Dispute Resolution regulations were enacted in January 2007 via publication in the Government Gazette. The consultants with the TICT project have completed the Dispute Manual as per their TOR. The NTRC implemented the necessary electronic and manual systems in the fourth quarter so as to fulfill the legal requirements of the regulations and allow the effective handling of disputes/complaints by consumers and licencees.

2. **Establish the Universal Service Fund**: The draft Universal Service Regulations has been completed and were forwarded by ECTEL to member Government for adoption and Gazetting.

3. **Re-licensed all existing licencees under the Telecommunications Act of 2001:** In relation to the Cable TV operator (Karib Cable) the NTRC has completed its discussion with the company and is awaiting Cabinet's decision in relation to the termination of the existing licence before the new licence could be issued.

4. **Wholesale Rates:** The draft Wholesale regulations have been completed and were

forwarded by ECTEL to member Government for adoption and Gazetting.

5. **International Access:** Southern Caribbean Fiber has started operations and at least one telecom provider is using their services.

6. **Statistics:** The NTRC adopted a harmonized format (developed in collaboration with ECTEL) for collection of certain telecommunications statistics in 2007.

7. **Quality Service Obligations:** The NTRC is awaiting the Gazetting of the Quality of Service Regulations before commencing its planned monitoring activities. The draft regulations were submitted to member Governments in 2007 by ECTEL for adoption and Gazetting.

8. **Work closely with consultants involved with various components of the ECTEL TICT project:** The NTRC has given full support to the consultants working on the TICT project as follows:

- Facilitated a number of public consultations involving the consultants and local stakeholders.
- Provided advice and comments to the Consultants on a number of working documents.
- Held meetings with the Consultants, Commissioners and senior staff to discuss various issues surrounding the work of the Consultants.
- Attended a number of regional workshops involving the consultants, ECTEL and other NTRCs to discuss various issues surrounding the work of the consultants and which require a harmonized approach.

9. **Pursue cooperation with the Ministry of Telecommunications on the issue of further developing the ccTLD country code for St. Vincent and the Grenadines:** The NTRC held discussions on this matter with the Ministry of Telecommunications during 2007 and also participated in a regional meeting held in St. Lucia to discuss the matter from a harmonized standpoint. A clear position should be arrived at in early 2008 on the way forward after completion of the work being carried out by the regional consultants.

10. **Seek authorisation from Inmarsat for the NTRC to be a Point of Service (PSA). This would allow the NTRC to activate Inmarsat terminals for ships registered under our flag among other services. There are currently no PSA's located in the Caribbean for St. Vincent and the Grenadines registered ships.** Having reviewed the matter in detail the NTRC decided that it was not feasible to pursue this objective at this time taking into account the resources required and the benefits that could be derived.

11. **Relicense SVG broadcasting under the Telecommunications Act of 2001 in relation to their Television broadcasting operations.** Cannot proceed with this task until ECTEL completes its work on the over the air television broadcasting licence template.

12. **Prepare and publish a procedural manual covering all functions currently carried out by the NTRC:** The NTRC continued to work on this manual and is expected to complete it in 2008.

13. **Seek to settle matter relating to the disputed licences fees from Cable & Wireless covering the period April to September 2001.** The NTRC plans to move forward on this matter in 2008 having sought and received advice from its legal counsel on the matter during 2007.

14. **Seek a solution on the issue of cross border Telecommunication services offered by unlicenced providers.** This

issue was also put on the agenda of the ECTEL/NTRC forum and discussed in detail. We have also brought the issue recently to the attention of the area representative at the ITU regional office located in Barbados.

15. **Continue to work closely with the consultants involved with various components of the ECTEL TICT project with the aim of maximizing all possible benefits that could come to the citizens of St. Vincent and the Grenadines and those of the other ECTEL states.** The NTRC continues to provide assistance and direction where possible to the consultants. However there are issues that arise from time to time due to ECTEL having a different view of how to proceed on certain issues.

16. **Conduct a study to document the location of all transmitters/Towers in St.Vincent and the Grenadines and the possible changes/implications that could occur within the next five years taking into consideration the entry of new entrants and technology into the market.** Substantial work was completed on this task during 2007 and it should be completed in 2008.

17. **Conduct a study of the present telecommunications coverage of our maritime areas with the aim of making recommendations for improvements.** This study was completed with assistance from the SVG coast Guard. The results would be used in deriving possible projects to improve coverage where required/needed.

18. **Redesign and deploy an updated NTRC website with the objective of having more information more easily available to interested parties locally, regionally and internationally.** The new website is 85% completed and is expected to be completed and launched in 2008.

19. **Implement relevant systems both electronic and manual to facilitate the work of the NTRC as it responds to the requirements of the Dispute Resolution Regulations.** The relevant systems where developed in house and has been implemented.

20. **Seek to find a legislative solution as part of the ECTEL TICT project that will help to reduce the churn of the NTRC staff.** The NTRC has made recommendations to the consultants on this issue.

21. **Seek to have a harmonized approach developed on the following issues that might require regulatory intervention to be effectively addressed**:

- Directory Services for telecommunications services other than fixed line.
- Expiration timeframes for Sim cards and prepaid minutes.
- Assignment of numbers to customers outside jurisdiction of issue.
- Facilitation of in country roaming.
- Levels of radiation from telecom transmitters.
- Carrier selection option available to customers.
- Licence Revenue verification mechanisms.

9. New Objectives for 2008

1. Start facilitating the requirements of the Universal Service Fund as soon as the Universal Service Fund Order and Regulations are implemented.

2. Have Telecom providers begin complying with the provisions of the Dispute Resolution regulations as it relates to customer complaints.

3. Facilitate the relocation of the NTRC offices to the new NIS building.

4. Establish the Universal Service Fund Guidelines.

5. Increase the public awareness of the NTRC in coordination with the dispute resolution services now available to citizens under the Dispute Resolution regulations.

6. Ensure that the regulatory needs of St. Vincent and the Grenadines are met under the revised ECTEL Treaty and Telecommunications Act being executed under the TICT project.

7. Facilitate the early implementation of new draft regulations by liaising with the ECTEL, Ministry of Telecom and the Ministry of Legal Affairs.

8. Develop new systems or revise existing systems to improve the productivity and efficiency of the NTRC and its service.

9. Start identifying potential projects that could be funded from the Universal Service Fund.

10. # Annex A

10.1 ## *Technical Definitions/Terminology*

CANTO: - *"Caribbean Association of National Telecommunication Organizations"*

CANTO provides a platform for all Caribbean telecommunications operators to speak with one voice to policy makers, regulators and other stakeholders in the sector in influencing the creation of a favorable business environment for all stakeholders.

CIDA:- *"Canadian International Development Agency"*

CIDA supports sustainable development in developing countries in order to reduce poverty and to contribute to a more secure, equitable and prosperous world.

CITEL:- *"Inter-American Telecommunication Commission"*

CITEL is an entity of the Organization of American States, it is the main forum in the hemisphere in which the governments and the private sector meet to coordinate regional efforts to develop the Global Information Society. CITEL endeavors to make telecommunications a catalyst for the dynamic development of the Americas by working with governments and the private sector.

CTO:- *"Commonwealth Telecommunications Organization"*

The (CTO) is a partnership between Commonwealth governments and telecommunications businesses to promote ICT in the interests of consumers, businesses and social and economic development. It's Program for Development and Training (PDT) is a unique program of training and expert assistance in every aspect of telecommunications for Commonwealth developing countries.

CTU: - "*Caribbean Telecommunications Union"*

CTU is the major Telecommunications policy organ in the Region, directed by Inter-Governmental specialised action under a special Agreement establishing the Union.

Frequency: - *"The rate of a repetitive event. The standard unit for frequency is the hertz (Hz), defined as the number of events or cycles per second. The frequency of electrical signals is often measured in multiples of hertz, including kilohertz (kHz), megahertz (MHz), or gigahertz (GHz)."*

GMDSS: - "*Global Maritime Distress and Safety System"*
The GMDSS provides for automatic distress alerting and locating in cases where a radio operator doesn't have time to send an SOS or MAYDAY call.

ITU: - *"International Telecommunication Union"*

ITU works closely with all standards organizations to form an international uniform standards system for communication.

Land Mobile: - *"A mobile service between base stations and land mobile stations, or between land mobile stations."*

Maritime Mobile: - *"A mobile service between coast station and ship stations, or between ship stations, or between associated on-board communication stations; survival craft stations, and emergency position-indicating radio beacon stations may also participate in this service."*

MMSI: - "*Maritime Mobile Service Identity"*

MMSI are formed of a series of nine digits which are transmitted over the radio path in order to uniquely identify ship stations, ship earth stations, coast stations, coast earth stations, and group calls. These identities are formed in such a way that the identity or part thereof can be used by telephone and telex subscribers connected to the general telecommunications network principally to call ships automatically.

Radio frequency spectrum: - *"that part of the electromagnetic Spectrum used for communications; includes frequencies used for AM-FM radio and cellular phones and television etc"*

Ship Station: - *"A Mobile station in the maritime mobile service Located on board a vessel which is not permanently moored, other than a survival craft station."*

Spectrum:- *"(Electromagnetic Spectrum) is an ordered array of the components of an emission or wave. Sound, Radio Frequency Spectrum, Infra Red, Visible Light, Ultraviolet Rays, X-Ray etc are all part of the Electromagnetic Spectrum in that order."*

Stations:- "*One or more transmitters or receivers or a combination of transmitters and receivers, including the accessory equipment, necessary at one location for carrying on a radio communication service, or the radio astronomy service.*

Telecommunications:- *"Any transmission, emission or reception of signs, signals, writings, images and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic systems.*

Universal Service:- *"universal service" includes the provision of –*
(A) Public voice telephony;
(B) Internet access;
(C) Telecommunications services to schools, hospitals and similar institutions and the disabled and physically challenged; or
(D) Other service by which people access efficient, affordable and modern telecommunications.

USAID:- *"The US Agency for International Development"*

11. **Annex B**

11.1 Audited Financial Statements 2007