

Table of Contents

| | |
|---|----|
| <i>1. Mission Statement</i> | 1 |
| <i>2. Vision Statement</i> | 1 |
| <i>3. Functions</i> | 1 |
| <i>4. Photo of Commissioners</i> | 2 |
| <i>5. Photo of Staff Members</i> | 3 |
| <i>6. SWOT Analysis</i> | 4 |
| 6.1 Strengths..... | 4 |
| 6.2 Weaknesses | 4 |
| 6.3 Opportunities..... | 4 |
| 6.4 Threats..... | 5 |
| <i>7. Critical Issues</i> | 5 |
| <i>8. Sector Review</i> | 6 |
| 8.1 Financial Data Review | 6 |
| 8.1.1 Telecommunications Sector Revenue..... | 6 |
| 8.1.2 Financial Performance of the Telecom Operators | 7 |
| 8.1.3 Revenue of the NTRC and ECTEL for the period 2002 to 2011..... | 15 |
| 8.1.4 Licence fees received by the Government for the period 1998 to 2011 | 16 |
| 8.1.5 Financial Performance of the NTRC | 18 |
| 8.2 Projected Revenue for 2012:..... | 19 |
| 8.3 Human Resource Development for 2011..... | 19 |

| | |
|--|-----------|
| 8.4 Regulations | 19 |
| 8.5 Staff..... | 19 |
| 8.6 Policy Development..... | 20 |
| 8.7 Numbering | 20 |
| 8.8 Spectrum Management | 20 |
| 8.9 Internet Access..... | 20 |
| 8.10 Public Consultation..... | 21 |
| 8.11 Telephone Rates..... | 21 |
| 8.12 Public Awareness..... | 21 |
| 8.13 Universal Service Fund..... | 22 |
| 8.14 Digital Cable TV | 23 |
| 8.15 Recognition..... | 23 |
| 8.16 Statistics | 24 |
| 8.17 Licensing..... | 39 |
| 8.18 Policy Recommendations: | 39 |
| 9. Broad Response Strategies | 41 |
| 10. Result Indicators 2011 | 41 |
| 11. Major Objectives for 2012..... | 43 |
| 12. Annex A..... | 43 |
| 12.1 Technical Definitions/Terminology..... | 43 |
| 13. Annex B..... | 46 |
| 13.1 Audited Financial Statements 2011 | 46 |



**National
Telecommunications
Regulatory Commission
(NTRC)**

Annual Report 2011

1. Mission Statement

To monitor efficiently, the operations of Telecommunications Services under the laws of St. Vincent and the Grenadines whilst providing an open market to all Telecommunications Providers, ensuring fair treatment for consumers and providing Universal Service to all Vincentians.

2. Vision Statement

To ensure that the demand for existing and future telecommunications 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 telecommunications 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 Telecommunications Act (CAP 418) of the Revised Law of St. Vincent and the Grenadines of 2009.

4. Photo of Commissioners



5. Photo of Staff Members



Back Row (Left to Right): Rohand Charles (Accountant), Kyron Duncan (USF Administrator), Apollo Knights (Director),
Front Row (Left to Right): Keisha Gurley (Office Assistant II), Andra Keizer (Administrative Officer), Ashell Forde (ICT Officer),
Nadine Hull (ICT Manager), Mishka L. Quashie (Office Assistant I)

6. SWOT Analysis

6.1 Strengths

- The NTRC has responsibility for regulating most aspects of the telecommunications sector.
- Availability of ICT infrastructure and software to efficiently carry out our regulatory functions.
- Diversity of relevant skills and experience among current staff and Commissioners.
- Staff members are keen to participate in capacity building programmes in line with the needs of the organization

6.2 Weaknesses

- 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 relationship between the ECTEL organizational structure and that of NTRCs.
- Absence of an appropriate Fund to cover potential litigation costs.
- Lack of regulatory oversight on retail pricing and promotional activities of mobile service providers.

6.3 Opportunities

- Ability to develop projects under the universal service fund that can fill the current gaps that exist within our communities as it relates to data communication and knowledge sharing.
- Changes in technology and services being offered within the sector present a perfect opportunity for updating our legislative framework.

6.4 Threats

- Continued possibility of litigation from Licencees.
- Churn of Commissioners and Staff when considering the small staff complement of the NTRC and the resources expended on developing the regulatory skills of both Commissioners and staff.
- The inability of the current fee structure to maintain an adequate funding source for the regulatory system (ECTEL and the NTRCs) in the short term.
- The issue of Cyber crime and Cyber security is a threat facing not only the NTRC but our country and the region.

7. Critical Issues

Currently, there are three critical areas that need to be addressed in the sector: (1) Cyber Security (2) Broadcast standards (3) Broadband penetration levels. The first two issues were highlighted in detail in our 2009 annual report and remains as relevant today. There is potential for assistance in these areas from the International Telecommunications Union (ITU) under their current ITU-D development programme for the period 2010-2014. Such issues however have to be addressed on a regional scale to be successful. The deadline for submission of potential projects under the ITU development programme is April 30, 2012. Ideally they should be addressed at the level of Caricom but if this may not be possible, ECTEL should take the lead as a matter of urgency. Additionally, both areas should be addressed in our new Telecommunications Regulatory framework so that our legislative provisions would guide the actual work that would need to be done by our respective regulatory agencies.

As it relates to the third issue, it is critical that as a country we look to increase our penetration levels of broadband access to our consumers, if our country is to be able to compete on the global market in any serious fashion irrespective to the sectors targeted. Broadband is now seen as an essential service that is comparable to that of electricity, telephone and water. In these later three, we are well into the 90% penetration levels at the household level. While we have made good strides in broadband penetration over the last decade, it is still less than 50% at the household level. Imagine our country still being below 50 % in electricity or water penetration! We have to develop a national strategy to bring our broadband penetration above 90% by 2015.

8. Sector Review

8.1 Financial Data Review

8.1.1 Telecommunications Sector Revenue

Note: The years in the table run from April 1 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. For the remaining entities whose financial years are not the same, 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.

| Year | Cable and Wireless (SVG) Ltd | | | | Cable and Wireless Mobile | Digicel St. Vincent Ltd | | | Kelcom Int'l | | | Caribbean Business Machines Ltd | Grand Total (EC\$) |
|------|------------------------------|---------------------|--------------------------|----------------------|---------------------------|-------------------------|-------------------------|----------------------|----------------------------------|-------------------------|----------------------|---------------------------------|--------------------|
| | Inter. Revenue (EC\$) | Domestic Rev (EC\$) | Data/Internet Rev (EC\$) | Total Revenue (EC\$) | Total Revenue (EC\$) | Mobile Rev (EC\$) | Data/Internet Rev(EC\$) | Total Revenue (EC\$) | Cable TV & Fixed Line Rev (EC\$) | Data/Internet Rev(EC\$) | Total Revenue (EC\$) | Total Revenue (EC\$) | |
| 2000 | xxxxx,xxx | xxxxx,xxx | xx, xxx,xxx | xx, xxx,xxx | x | | xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | x | 85,427,143 |
| 2001 | xxxxx,xxx | xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | x | | x, xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xxx,xxx | xx, xxx,xxx | x | 98,971,727 |
| 2002 | xxxxx,xxx | xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | x | | x, xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xxx,xxx | xx, xxx,xxx | x | 93,748,621 |
| 2003 | xxxxx,xxx | xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | x | | x, xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xxx,xxx | xx, xxx,xxx | x | 106,681,224 |
| 2004 | xxxxx,xxx | xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | x | | x, xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xxx,xxx | xx, xxx,xxx | x | 143,593,160 |
| 2005 | xxxxx,xxx | xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xxx,xxx | | x, xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xxx,xxx | xx, xxx,xxx | xxx,xxx | 144,743,690 |
| 2006 | xxxxx,xxx | xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | x, xxx,xxx | x, xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | 152,965,819 |
| 2007 | xxxxx,xxx | xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | x, xxx,xxx | x, xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | 160,767,398 |
| 2008 | xx,xx,xxx | xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | x, xxx,xxx | x, xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | 154,144,846 |
| 2009 | xxxxx,xxx | xxxxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | 156,428,369 |
| 2010 | xxxxx,xxx | xxxxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | 149,677,441 |
| 2011 | xx, xxx,xx | xxxxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xx,xxx,xx | xx, xxx,xxx | x | 146,201,793 |
| | xxxxx,xx | xxxxx,xxx | xx, xxx,xxx | xx, xxx,xxx | xx, xxx,xxx | | | xx, xxx,xxx | xx, xxx,xxx | | xx, xxx,xxx | xx, xxx,xxx | |

Table #1: Total Revenue earned by providers of telecommunications services 1998 to 2011

Source: For 2011, the breakdown of revenue submitted to the NTRC was used for Digicel and Cable & Wireless (SVG) Ltd and Cable & Wireless Mobile.

Caribbean Business Machines (CBM) did not operate in 2011 hence no amounts were submitted. The gross revenue for 2009 and 2010 are based on conservative estimates from the previous year while 2006 to 2008 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 2010 and 2011 in relation to Karib Cable/Kelcom International are based on their audited financial statements. The Internet/Data revenues for the providers are shown in a separate column for 2011. This revenue stream accounts for 15% of the telecom sector revenue received in 2011.

8.1.2 Financial Performance of the Telecom Operators

The following graphs illustrate the financial performances of the local telecommunications providers, along with the comparison of similar providers in the United States and the United Kingdom, for the years 2005 to 2010. The years 2005 to 2010 were used since the data for some of the companies for 2011 is not yet available. In relation to Cable & Wireless in Barbados and Jamaica, comparisons were made based on the availability of data.

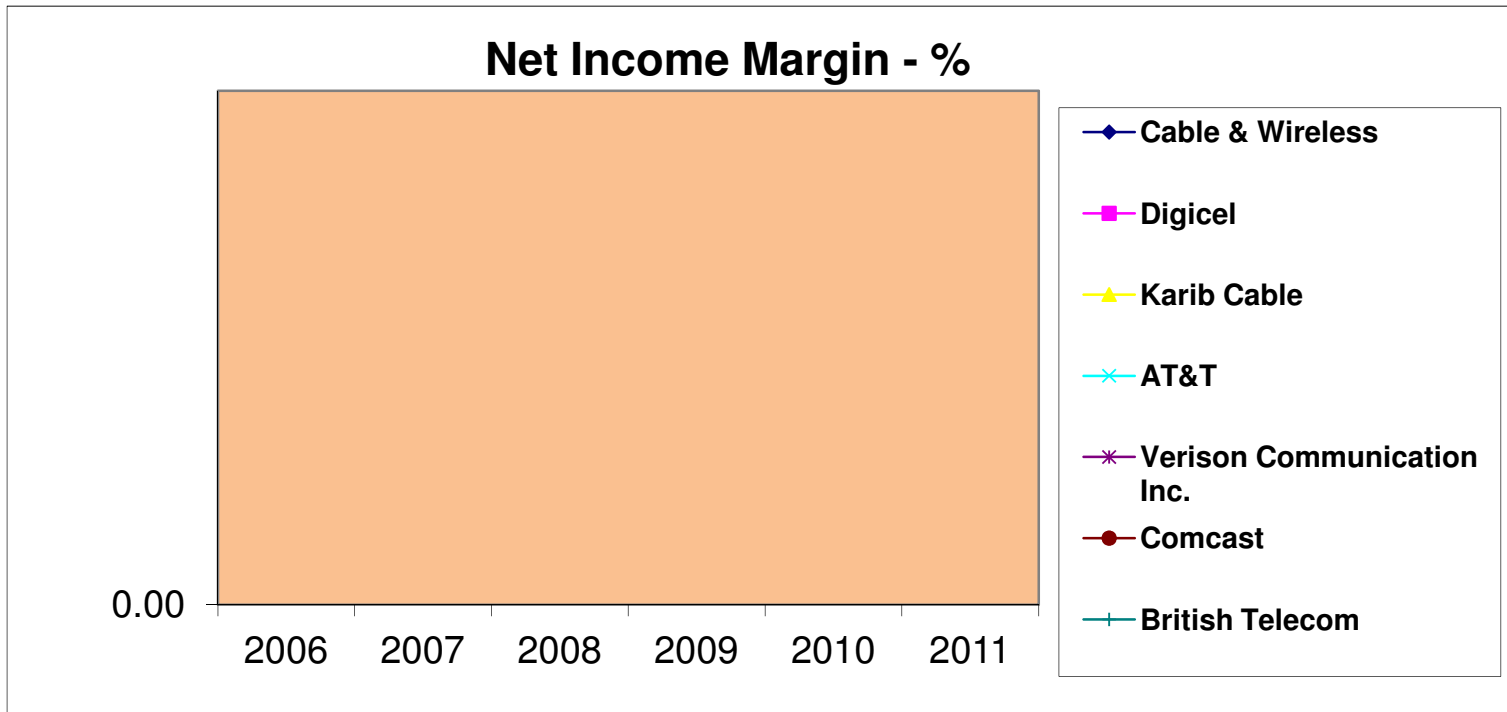


Figure #1

The net income margin of the providers represents the net income as a percentage of total income. All the local telecom providers performed above an average of 8% for 2010 financial year. This is relatively constant compared to the 2009 financial year. Digicel performed the best at with a return of 20%. Although Cable & Wireless and Digicel revenue decreased in the 2010 financial period, the expenses also decreased resulting in a relatively constant return. In the case of Karib Cable, there was an increase in revenue but the expenses also increased resulting in the net income margin remaining relatively constant also. Data that was gathered for Cable & Wireless in Jamaica and Barbados show a negative return for both companies in 2009; and all the international telecom providers' performances ranged from 15% to 1% in 2010. British Telecom recorded a positive return in 2010 after recording a negative return in 2009.

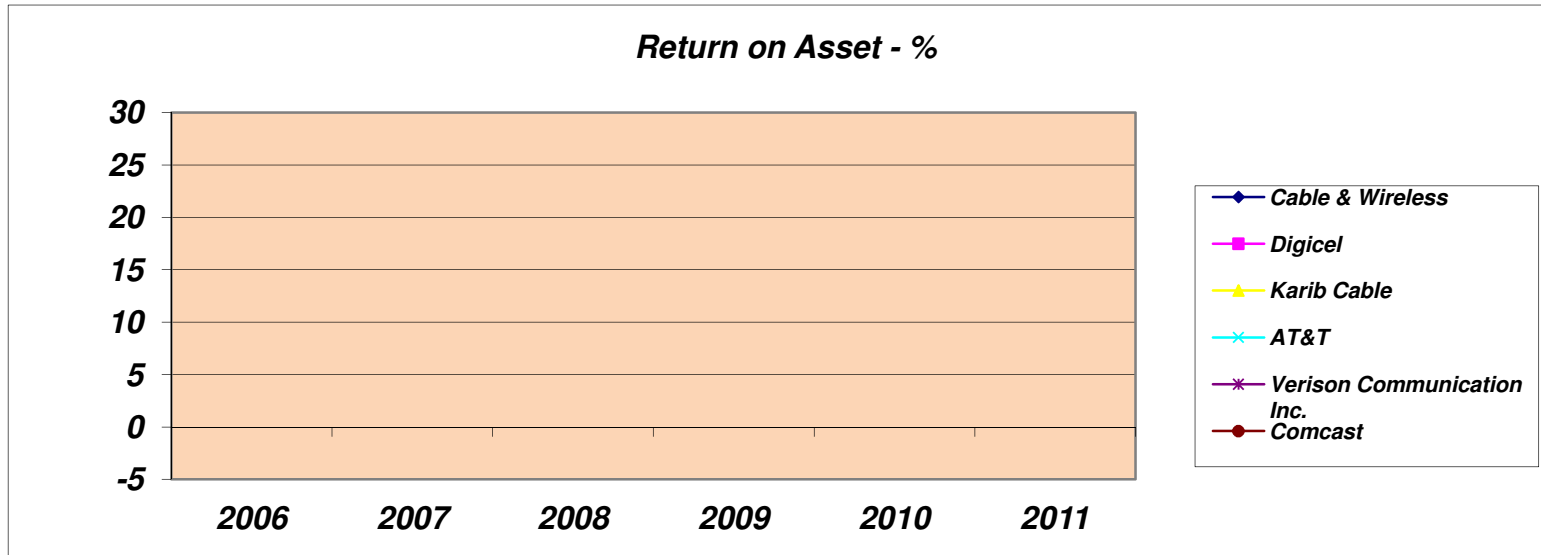


Figure #2

Return on Asset (ROA) is an indicator of how profitable a company is relative to its total assets. ROA gives an idea as to how efficiently management is using its assets to generate earnings. All the local telecom providers' performances were positive with Digicel outperforming the other local competitors with a return of 15.5% in 2010 which is a slim increase. This created a slight increase for Digicel while Cable and Wireless and Karib Cable performed relatively constant. This relatively constant performance is due to the same movements in revenue and expenses for all the companies where Cable & Wireless and Digicel recorded a decrease in revenue and also a decrease in expenses while Karib Cable recorded an increase in revenue and also increase in expenses. Cable & Wireless in Jamaica and Barbados recorded negative returns and in relation to the international providers, they performed at an average of 4.81% except for British Telecom who recorded a negative return in 2009 but recorded a positive return in 2010 of 1%.

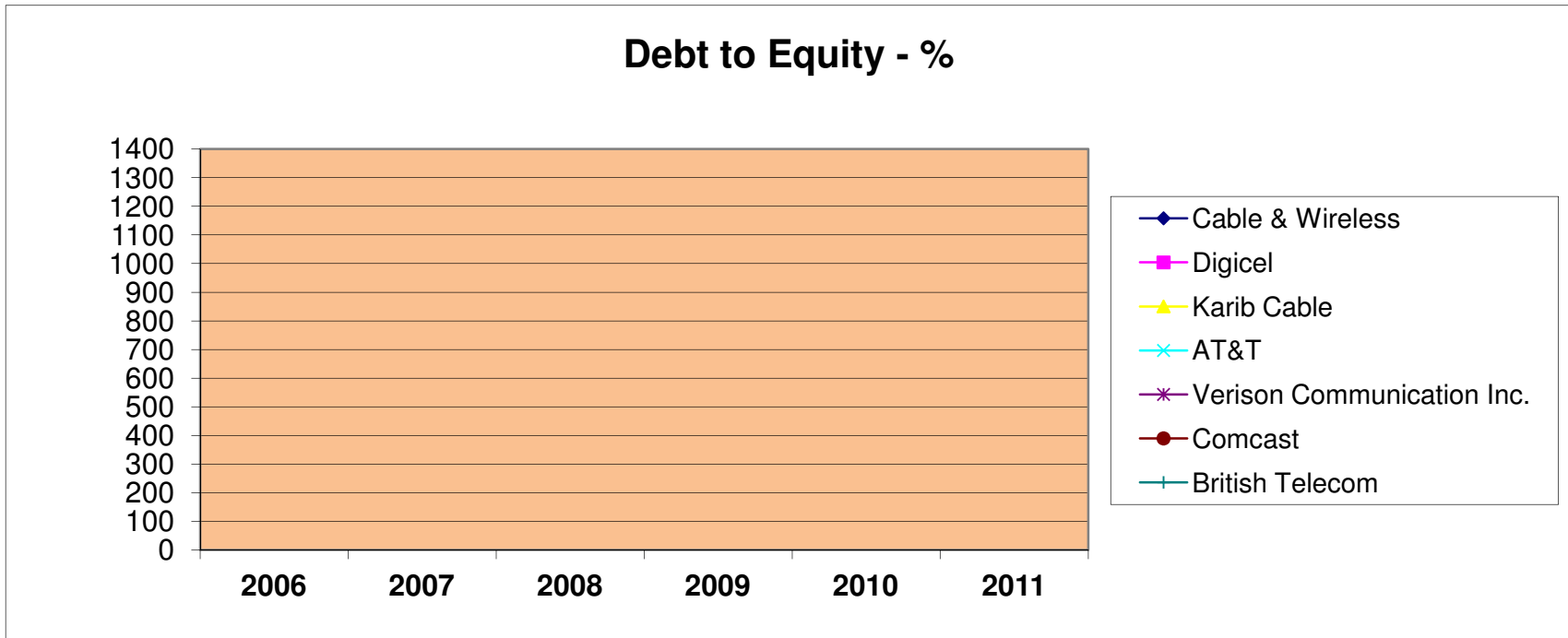


Figure #3

Debt to Equity is a measure of a company's financial leverage calculated by dividing its total debts and liabilities by stockholders' equity. It indicates what proportion of equity and debt the company is using to finance its assets. All the local providers recorded a reduction in debt to equity although the largest decrease was by Karib Cable who recorded a reduction of 137% from 495% to 358% due to the shift of a significant amount of debt to equity and the repayment of loans that were acquired to implement the digital TV service. In relation to Digicel and Cable & Wireless, they recorded a slight decrease in their debt to equity due to the regular repayment of loan. All the other international providers, except for the British Telecom, had a stable debt to equity of an average of 57.33%. British Telecom debt to equity for 2010 was the highest for the international competitors. Cable & Wireless in Jamaica and Barbados had a stable debt to equity of an average of 70%.

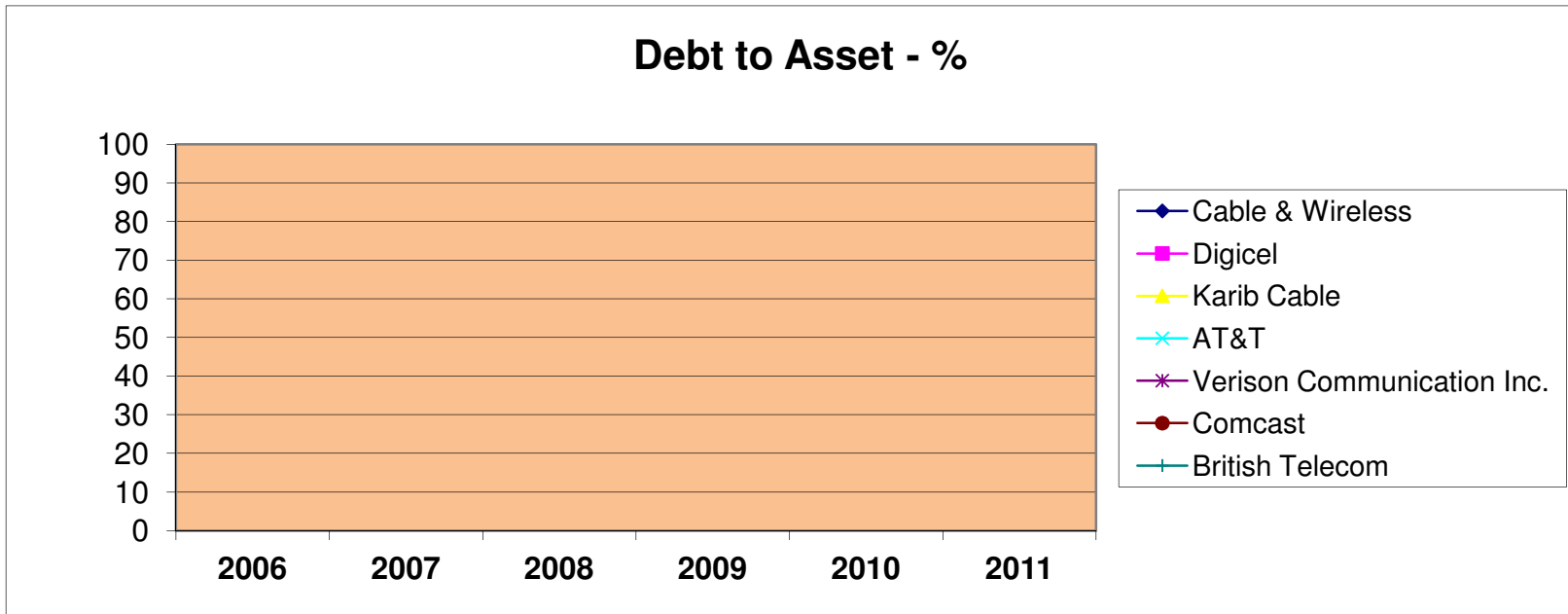


Figure #4

Debt to Asset indicates what proportions of the company's assets are being financed through debt. The Local Telecom providers Debt to Asset remained fairly constant during the 2010 compare to the 2009. For Karib Cable, we saw a slight decrease due to the repayment of debts that were used to finance projects for their fixed line service and Digital TV Service. However 2010 was relatively constant for Digicel and Cable & Wireless had a slight decrease due to the repayments of debts. The international providers, except for British Telecom, have an increase average debt to asset of less than 35% in 2009 to 40.73% in 2010. British Telecom recorded the highest debt to asset for the international provider which is 86.43%.

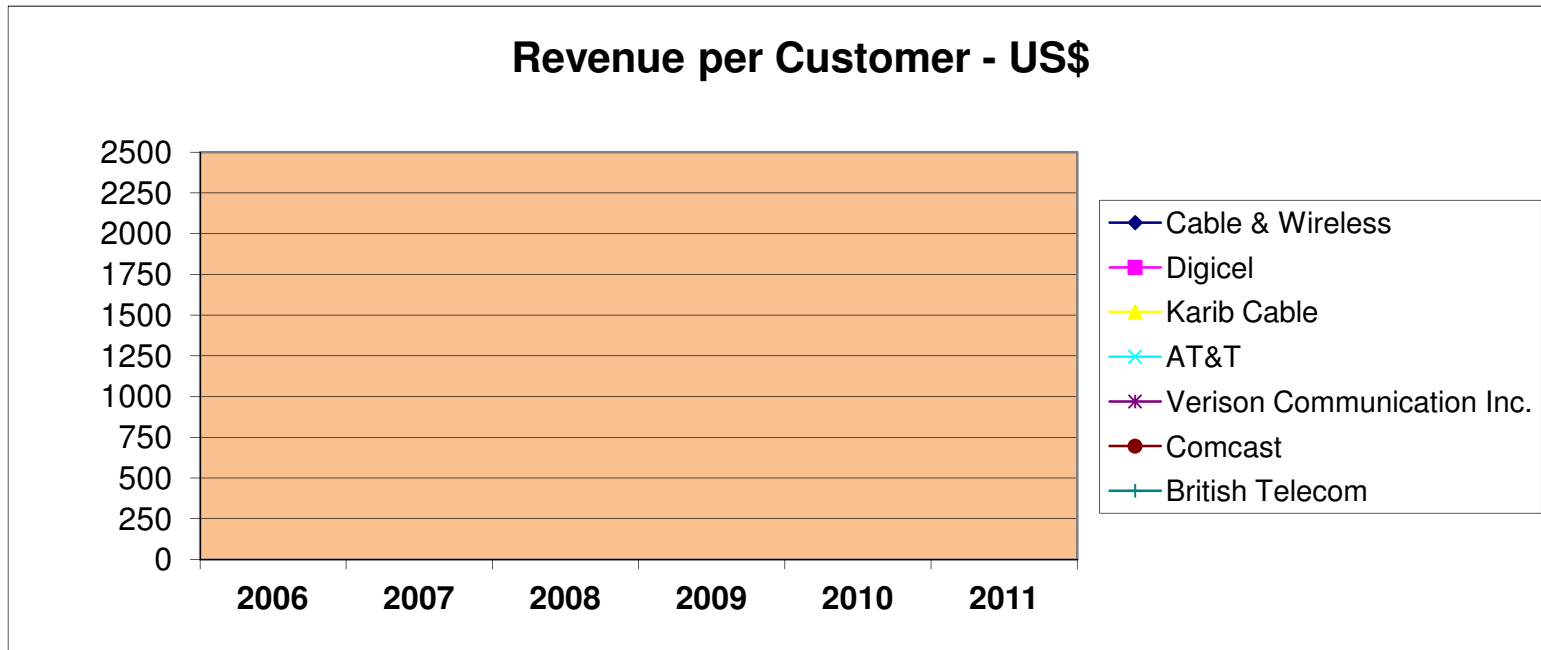


Figure #5

The revenue per customer represents total sales generated per customer for the year under review. Digicel performed the best in this area in 2010 resulting in US\$364.12 in revenue per customer. All the local companies recorded a decrease in revenue per customer in 2010. The decrease for Digicel and Cable & Wireless was due to a decrease in revenue while Karib Cable was due to an increase in bad debts. The international providers saw decreases also in their revenue per customer by slim margins. The customer data for Cable & Wireless in Barbados and Jamaica were not available to make a comparison.

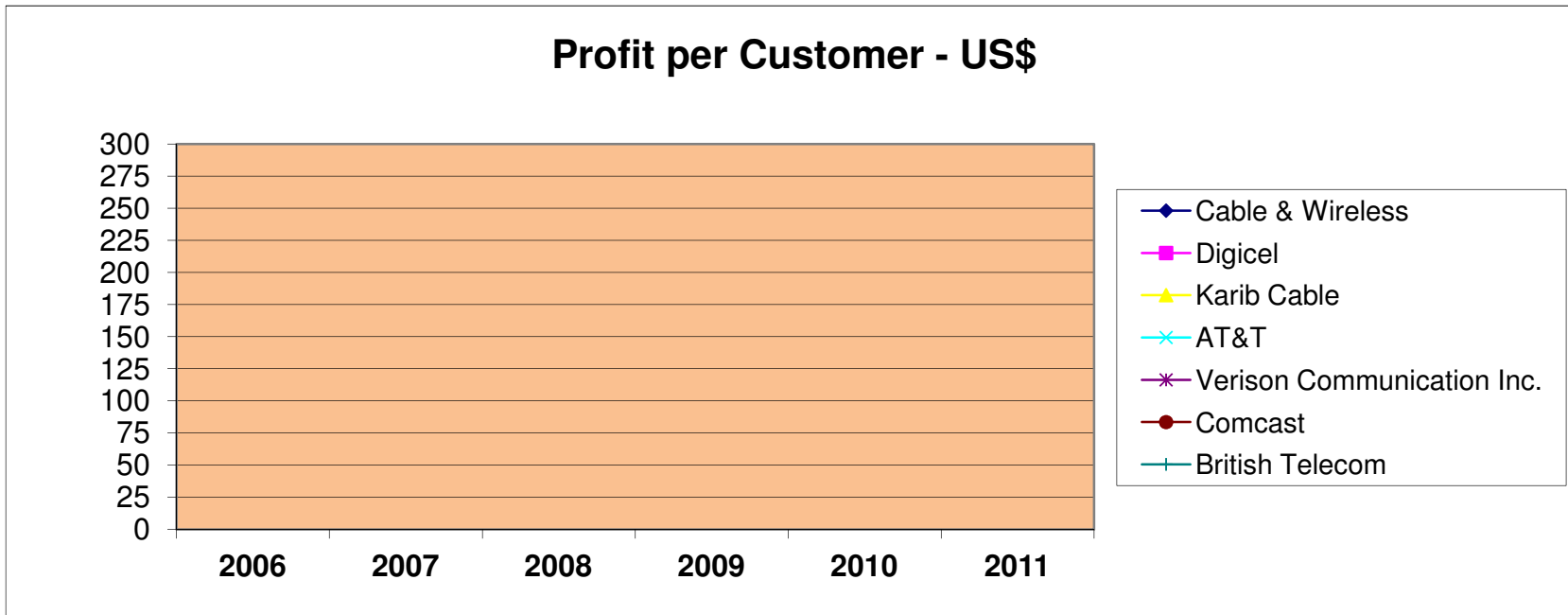


Figure #6

The profit per customer represents total profit generated per customer for the year under review. Digicel performed the best in this area for the year 2010. Although their revenue decreased, the operating expenses also fell. This resulted in a slight increase in the profit per customer. Cable & Wireless and Karib Cable recorded slight decreases in 2010 due to a fall in revenue for Cable & Wireless and an increase in expenses for Karib Cable. British Telecom recorded a positive net income in 2010 compared to a negative in 2009; and all the international providers recorded a relatively stable profit per customer for the 2010 year. The customer data for Cable & Wireless in Barbados and Jamaica were not available to make a comparison.

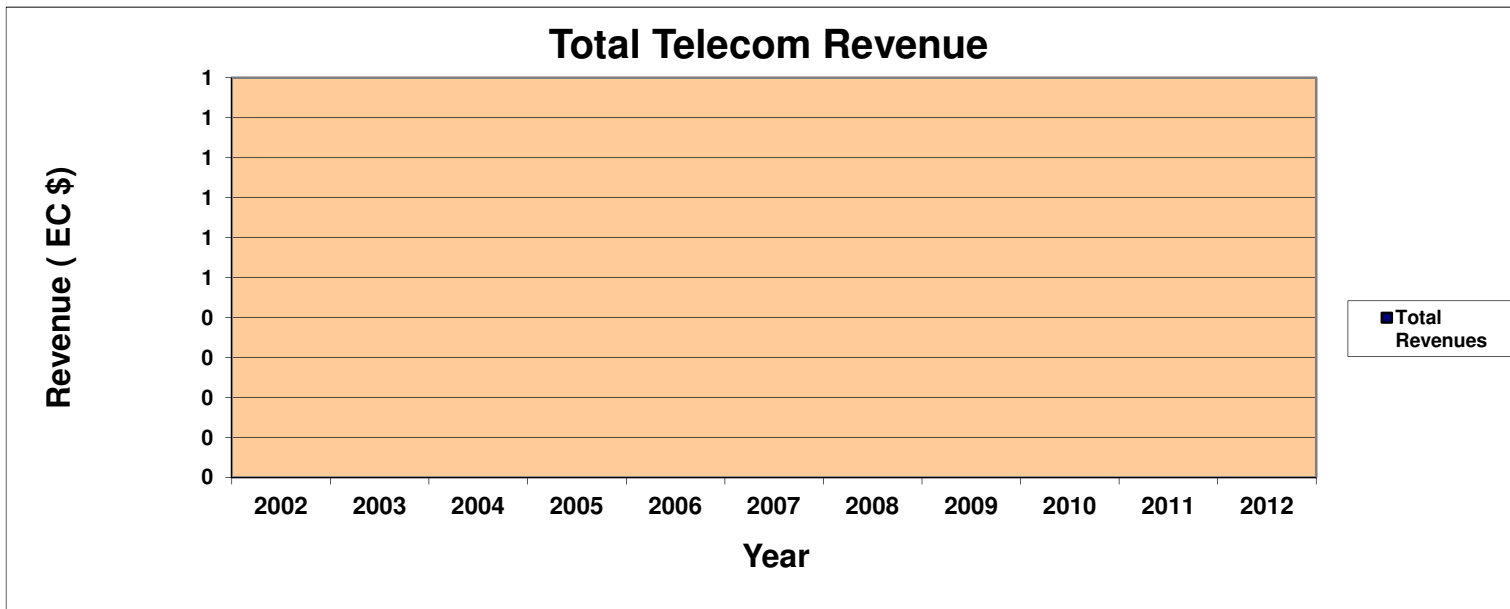


Figure #7

The revenue generated by the telecom operators in 2011 decreased by a small margin. This was due to a decrease in Cable and Wireless' International and Domestic revenue. However, there was a slight increase in their mobile revenue. There was also small decrease in Digicel revenue but the revenue for Karib Cable increased marginally.

8.1.3 Revenue of the NTRC and ECTEL for the period 2002 to 2011

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

In 2011, there was a decrease in the application fees. The reason for this is due to a decrease in applications short codes and Licences in 2011 compared to the year before.

There was a 24 % increase in 2011 for frequency fees which was as a result of the issuing of new frequencies for 3G and 4G networks to telecommunication providers.

| Revenue of NTRC and ECTEL 2002 to 2011 | | | | |
|--|-----------------------|------------------|-----------------------------|------------------|
| | 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% |
| '08 | \$13,325 | -42% | \$1,906,089 | 53% |
| '09 | \$13,225 | -7% | 1,487,390 | -21% |
| '10 | \$23,846 | 80% | 1,392,962 | -7% |
| '11 | \$16,109 | -48% | 1,723,158 | 24% |
| | 231,741 | | 12,804,457 | |

Table #2

8.1.4 Licence fees received by the Government for the period 1998 to 2011

The market has seen a slight drop in revenue for license fees collected by the NTRC on behalf of the Government in 2011 compared to 2010. This is as a result of fall in revenue for the two main Telecom Providers; Digicel and Cable & Wireless since the licence fees for these providers are 3% of revenue, a fall in revenue results in a fall in licence fees.

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.

In 2011, license fees collected by the NTRC on behalf of the Government decreased by 4% compared to 1% in the previous year. The 2011 decline is due to a fall in revenue collect by the two major providers; Digicel and Cable & Wireless.

| 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% |
| '08 | 0 | 4,081,151 | 4,081,151 | -6% |
| '09 | 0 | 4,065,706 | 4,065,706 | -4% |
| '10 | 0 | 4,034,096 | 4,034,096 | -1% |
| '11 | 0 | 3,886,912 | 3,886,912 | -4% |
| | | 33,403,843 | 38,038,174 | |

Table #3

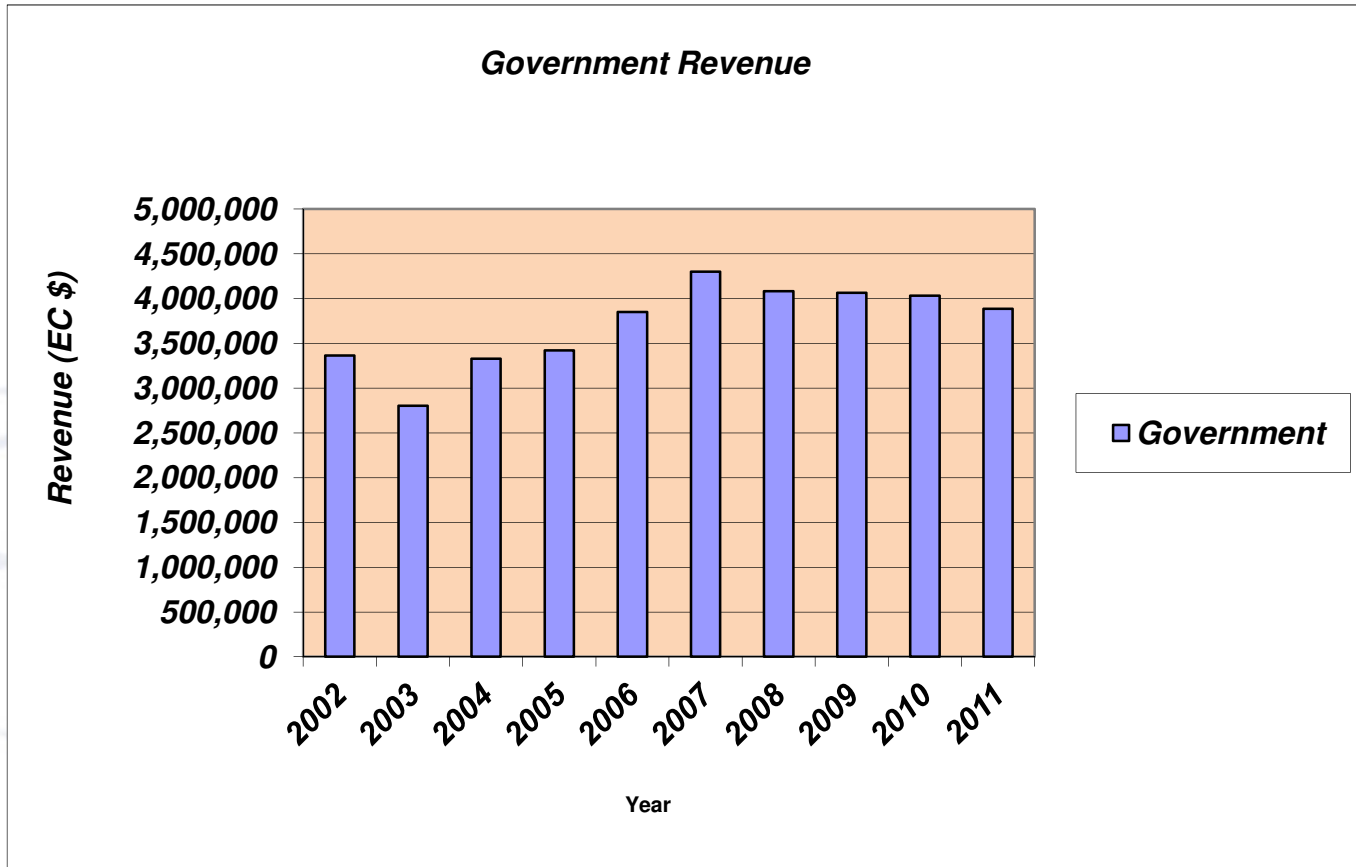


Figure #8

The Government revenue generated from telecom operators in 2011 decreased by a small margin. This was due to a decrease in Cable and Wireless' International and Domestic revenue. However, there was a slight increase in their mobile revenue. There was also small decrease in Digicel revenue but the revenue for Karib Cable increased marginally.

8.1.5 Financial Performance of the NTRC

Revenue

The NTRC budgeted to receive \$981,704.31 for the year ending December 31, 2011; however, \$1,066,663.46 was actually received giving a difference of \$89,759.15, more than the budgeted amount. The main reasons for the difference have to do with the following items:

- Interest Revenue- The amount of \$5,500 had been budgeted; however, the NTRC received \$14,857.07 on its savings accounts.
- Application Fee- The amount for Application fees exceeded its budgeted amount by \$6,108.75. The amount Budgeted was \$10,000.00 and the amount of \$16,108.75 was collected.
- Photocopy & Printing – The Commission provides this cost base service to students as part of its free internet access program to students at its office. The amount budgeted to be collected for 2011 was \$5,000.00 and the actual amount received was \$5,012.15 which created a surplus of \$12.15.
- Numbering Fees- The amount of \$66,330.00 was budgeted to be collected during the year. However, \$95,735.00 was received for annual fees from Central Office and Short Codes issued during the period.
- Other Income – The amount budgeted for Other Income was \$62,684.05 and the actual amount was \$106,373.15 creating a surplus of \$43,689.10. This surplus is due to \$24,200.00 brought forward for specific expenses in 2011, \$13,201.75 from additional surplus that was recorded in the fourth quarter of 2010 to fund the 2011 budget, \$2,000.00 for the Rental of the Conference Room, \$2,846.61 for Training reimbursement and \$1,490.74 for Insurance Reimbursement, Sickness Benefit and Sale of Fixed Assets.

Expenditure

Recurrent

For the year ending December 31, 2011, the NTRC budgeted to spend \$941,137.13 on recurrent expenditure; however, \$970,829.46 was actually spent. The main reasons are that additional amounts were spent on Training for Staff members and NTRC embarked on an Advertisement and Public Relation Campaign to sensitise the public about the NTRC, the dispute regulations and the quarterly mobile rates.

Capital

The amount of \$17,419.45 had been budgeted for capital expenditure for the financial year 2011. However, \$23,715.18 was spent. This difference is due to the replacement of furniture and two Desk Computers, a Server and the accounting software Peachtree.

Conclusion

The NTRC's financial performance over the 2011 financial year was satisfactory. Although we exceeded our budgeted expenditure for the year, this was compensated for by the surplus revenue that was collected. At the end of the 2011 financial year, a gross surplus of \$61,283.11 was recorded, from this amount; \$24,084.40 was paid out under its performance compensation program to staff. This resulted in a net surplus of \$37,198.71.

8.2 Projected Revenue for 2012:

For the fiscal year 2012, the NTRC had projected to collect \$1,452,325 in revenue from frequency fees in the budget that was done in November 2011. Subsequent to the budget, the NTRC issued new frequency authorisations which amounted to \$306,000.00. This shows that the NTRC expects to collect \$1,758,325.00 in 2012. This is an increase of 25% compare to the projected amount of \$1,407,337 in 2011.

8.3 Human Resource Development for 2011

The NTRC continued to expose its staff and Commissioners to relevant courses and seminars that would benefit the organization both in the short and long term taking into account the limited resources available. The particular areas covered during 2011 were as follows:

- Masters in Business Administration at the St. George's University.

- Radio Frequency Spectrum Management at the USTTI in Washington D.C.
- Measuring Telecom Provider Costs at the University of Florida Gainesville, Florida.
- Global Summit and Showcase for Mobile Applications & Services for Senior Citizens with Disabilities. This seminar was held in Washington D.C.
- Canto Accelerating Broadband Development in the Caribbean. This seminar was held in Miami, Florida
- ACP-Europe ICT Roundtable 2011. This seminar was held in Brussels, Belgium.
- Associate Degree in Business Management. This course is currently being undertaken at the SVGCC.
- ACCA professional certification via Association of Chartered Certified Accountants (ACCA).

8.4 Regulations

No new Telecommunications regulations were gazetted during 2011.

8.5 Staff

There was no staff turnover during 2011. This year saw the NTRC recognizing three employees for ten years of service to the organization and two employees with more than five years.

8.6 Policy Development

ECTEL developed policy papers on number portability and pricing for facilities sharing in 2011. These were circulated for public consultation where the NTRC provided its comments and recommendations. ECTEL completed its national consultations on the draft communications bill in all member states during 2011 having begun the process in St. Vincent and the Grenadines in late 2010. ECTEL expects to complete the consultation process with a joint regional workshop in the first half of 2012.

8.7 Numbering

The main issue that still exist in relation to numbering is that of number portability since the mobile and fixed line markets have more than one competitor in each of the market sector. The views of the various stakeholders on the issue were solicited in the second half of 2011 via a public consultation on a draft policy paper. In relation to short codes, a number of regulatory issues surrounding the use of short codes needs to be addressed, as the demand for these codes have increased within recent years. The issue is especially important as it relates to usage of these codes by the business community.

8.8 Spectrum Management

The software and equipment in the NTRC monitoring vehicle remains not functional. The decision has been taken that it would be easier to replace the equipment than to have it repaired. However, the vehicle is still being used in

conjunction with the handheld mobile analyzer to conduct weekly spectrum monitoring. The mobile analyzer was purchased in 2010 as a temporary solution and has proven satisfactory in resolving our main spectrum issues.

8.9 Internet Access

The year 2011 has seen increased penetration of broadband services by both fixed line providers and an increase access to the Internet. As of December 2011, the total number of residential internet subscribers in St Vincent and the Grenadines amounted to twelve thousand, one hundred and fifty five (12,155). This figure is a 36.8% penetration for households with internet access throughout the country.

The Universal Service Fund has been used to provide various communities with free wireless internet access. This was done by the implementation of two Universal Service Fund (USF) projects where persons in rural and underserved areas can now browse the Internet at no cost on a daily basis at a minimum speed of 8Mbps at 135 locations throughout St.Vincent and the Grenadines. These locations range from Fancy to Fitz Hughes on the main land and locations in Bequia, Canouan, Mustique, Union Island and Mayreau in the Grenadines.

This access which is being provided by the USF works in tandem with several other national initiatives such as the one laptop per child program which intends to have each Primary, Secondary and Tertiary level student along with their teachers being a recipient of a laptop. As of 2011, the Government of St Vincent and the Grenadines had received and distributed over Sixteen Thousand (16,000) of these laptops to all Primary

School students and first formers of the various Secondary Schools, along with their teachers.

Another project which benefits persons with increased Internet access is the Improvement of Education through the use of ICT project which saw the distribution of eight hundred and fifty one (851) desktops and three hundred and sixty four (364) laptops to various Primary and Secondary Schools funded through the European Union.

Facilitating the necessary access to the internet, as the USF and other national initiatives are doing, will certainly stimulate advancement in education, health, agriculture and other sectors and ultimately increase our efficiency and productivity as a nation.

8.10 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:

- **Pricing Access to Facilities**
- **Number Portability**
- **Confidential Aspect of the Interconnection Agreements and LIME's Proposed Reference Interconnection Offer (ROI)**
- **New Licence Templates and Revised Fee Schedule**

The consultations were carried out in various formats.

8.11 Telephone Rates

October 2011 saw the final reduction of fixed to mobile retail rates of LIME as part of the Price Cap Plan (PCP) that was implemented in 2010. This rate is now 40 cents per minute VAT exclusive and is equivalent to a 44% reduction since the PCP was introduced 18 months prior. This plan will govern the regulation of certain fixed line services provided by LIME until 2012. This plan is similar to Price Cap Plans (PCPs) implemented in other ECTEL states. While we have seen a reduction in the fixed to mobile rates of LIME which is a regulated service, the company went about raising their mobile to mobile rates in August 2011 and again in October 2011. The net result is an increase from 61 cents to 75 cents per minute. These rates are not regulated and reiterate to point that our NTRC has been propositioning for the last decade that there is a need to regulate mobile retail rates. While we have seen a reduction to wholesale mobile termination rates which are regulated under Interconnection Agreements we have seen the opposite occur with mobile retail rates which are not regulated.

8.12 Public Awareness

The NTRC held five community discussions and four open days in various areas of the country in 2011. In addition, a public drive was held at the Kingstown Post Office; all being done with the objective of informing consumers of the role of the NTRC, as well as to seek feedback on the issues that are of concern to residents across our nation. These events coincided with television and radio advertisements. This initiative will continue in 2012.

8.13 Universal Service Fund

Following the tendering of three initial projects under the Universal Service Fund (USF), the NTRC was able to successfully enter into contracts with LIME for the provision of the projects. A summary of the projects are as follows:

8.13.1 Project #1

The Supply, Installation and Maintenance of Computer Hardware, Software and Internet Connectivity at various locations throughout St. Vincent and the Grenadines

The contract for this project was signed in December of 2010 with LIME for a total of Four Hundred and Twenty Seven Thousand, Six Hundred and Eight Dollars and Ninety Eight Cents (\$427,608.98) and was for a period of five years. This project saw 12 Learning Resource Centers outfitted with interior and exterior wireless high speed Internet connections, nine rural schools were outfitted with exterior high speed wireless Internet connections only, four Community Centers were outfitted with interior and exterior wireless Internet access points with the Chapman's and Orange Hill's Centers being additionally outfitted with five (5) Desktop computers each. Three other Community Centers were outfitted with interior and exterior wireless Internet access points and five (5) Desktop computers each. The NTRC commissioned all of the services and equipment at the 28 community locations under this project on July 6th 2011.

8.13.2 Project #2

The Supply and Installation of a Payphone and Emergency Phone Booth Network in St Vincent and the Grenadines.

After reaching an agreement with LIME, the contract for this project was signed on 2nd December 2011 at a ceremony which was held at the N.I.S conference room. The contract was signed for a total of One Million, Four Hundred Thousand, Five Hundred and Seventy Five Dollars and Forty Five Cents (ECD\$1,400,575.45). Under this project, 12 of the recently established tourism sites, several frequented beaches and selected locations on the Windward and Leeward Highways will be outfitted with payphones. At the tourism sites, there will also be high speed Wireless Internet connectivity installed. Security cameras will also be installed at the Tourism sites and payphone locations. While the cameras main purpose is to minimize the threat of vandalism to the payphones, they will also by default provide some form of security to these locations.

The number of sites under this project has been reduced from 61 to 26 due to the higher than expected bid received for this project and considering the financial constraints of the Universal Service Fund. However, it is envisioned that additional sites will be added in the future under new projects as the core infrastructure would already been installed.

8.13.3 Project #3

Supply, Install, Commission and Maintain a VHF Telecommunication System to Provide Communications to and from Maritime Areas of St Vincent and the Grenadines

This project is being done jointly with the NTRC and ECTEL (via funds made available by the World Bank in the amount of \$200,000.00 USD). The contract for this project as it relates to the capital cost was signed on December 20th 2011, after an agreement was arrived at with LIME who was the only entity to submit a bid. This contract was signed for a total of One Million, One hundred and Twenty Five Thousand, and Seven Hundred and Eighty One Dollars (\$1,125,781.00). The Funds from the World Bank will be used to purchase the equipment under this project. Additionally, a separate contract for the maintenance of the equipment for a period of five years will be signed by April 30, 2012 with LIME for this project. This project will allow for VHF channel 16 and DSC channel 70 (new standard channel for maritime emergency communication).

8.13.4 Project #4

The Supply, Installation and the Maintenance of Hardware, Software and Internet Connections to Facilitate Access to Wireless Internet Service at all One Hundred and Seven (107) Educational Institutions throughout St Vincent and the Grenadines.

The contract for this project was signed on June 7th 2011 for a total cost of Five Million, Two Hundred and Thirty Thousand,

Six Hundred and Twenty Three Dollars (\$5,230,623.00) and will be for a period of five years. Under this project, all Educational Institutions will be outfitted with interior high speeds and such speeds will allow for the easy integration of ICTs within the educational curriculum, especially where video streaming would be utilised. Such speeds and availability will also assist in online/distance learning programmes not just from international sources but also within our State via digital classrooms, etc.

The installation of the equipment commenced on August 30th 2011 and is expected to be completed by April of 2012.

8.14 Digital Cable TV

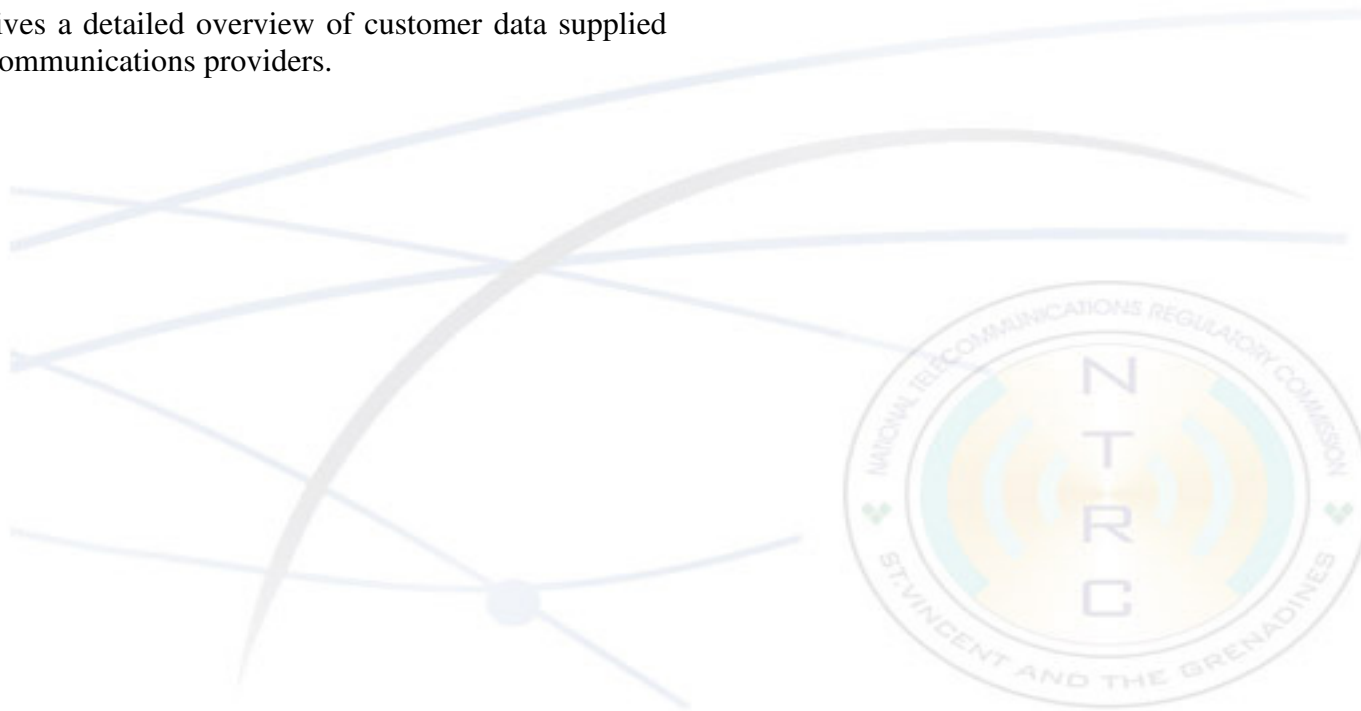
The NTRC continues to have limited oversight on the regulation of the operations of Karib Cable/Kelcom International. The license required to be issued under the Telecommunications Act (CAP 418) of the Revised Law of St. Vincent and the Grenadines of 2009 to the company is still pending.

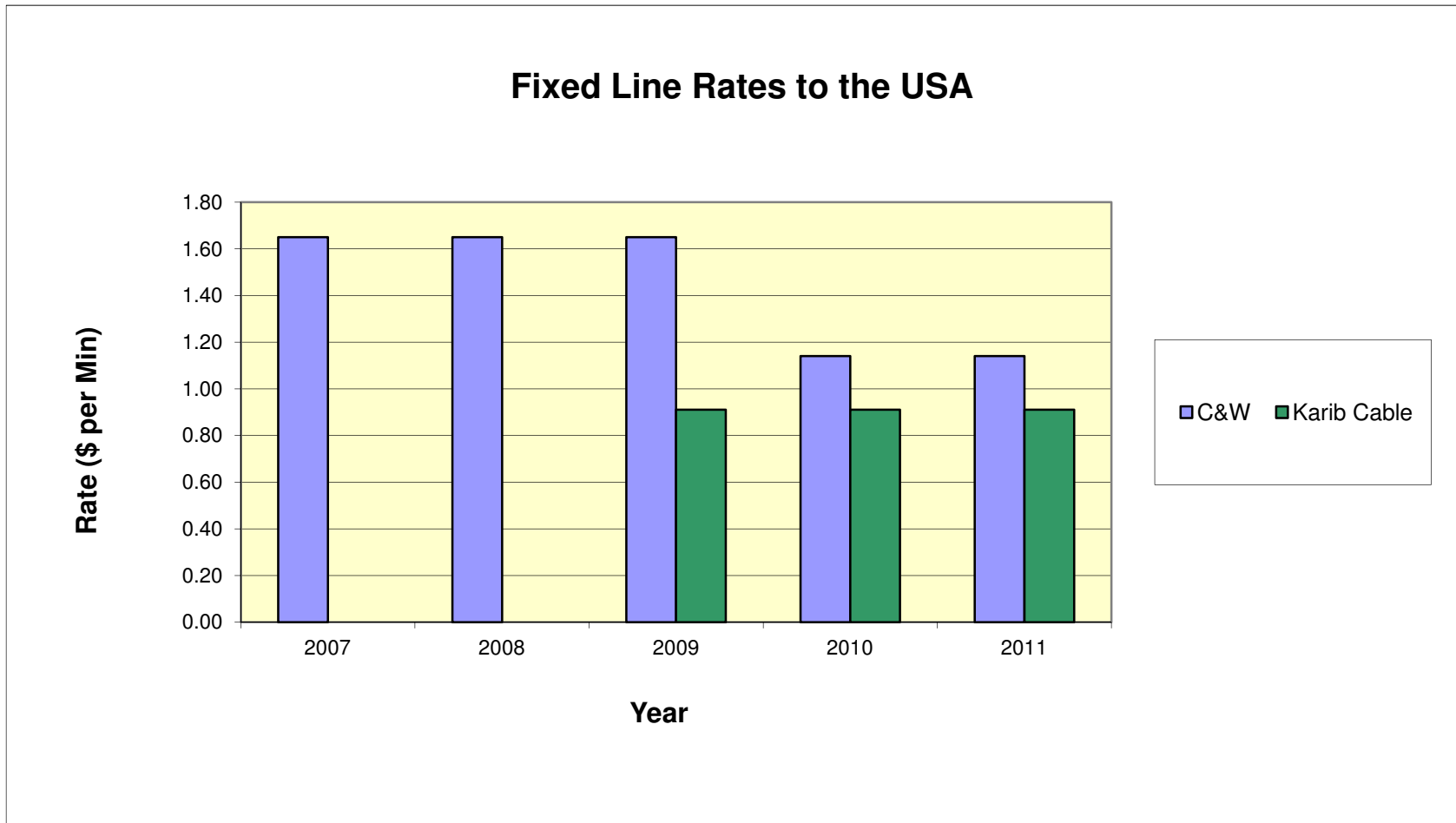
8.15 Recognition

The NTRC received the Global regulators exchange (G-REX) award in 2011 being one of seven ICT regulators recognized globally for their contribution to the sharing of regulatory experiences via the G-REX online platform. The award was announced at the global symposium for regulators held in Columbia in September 2011.

8.16 Statistics

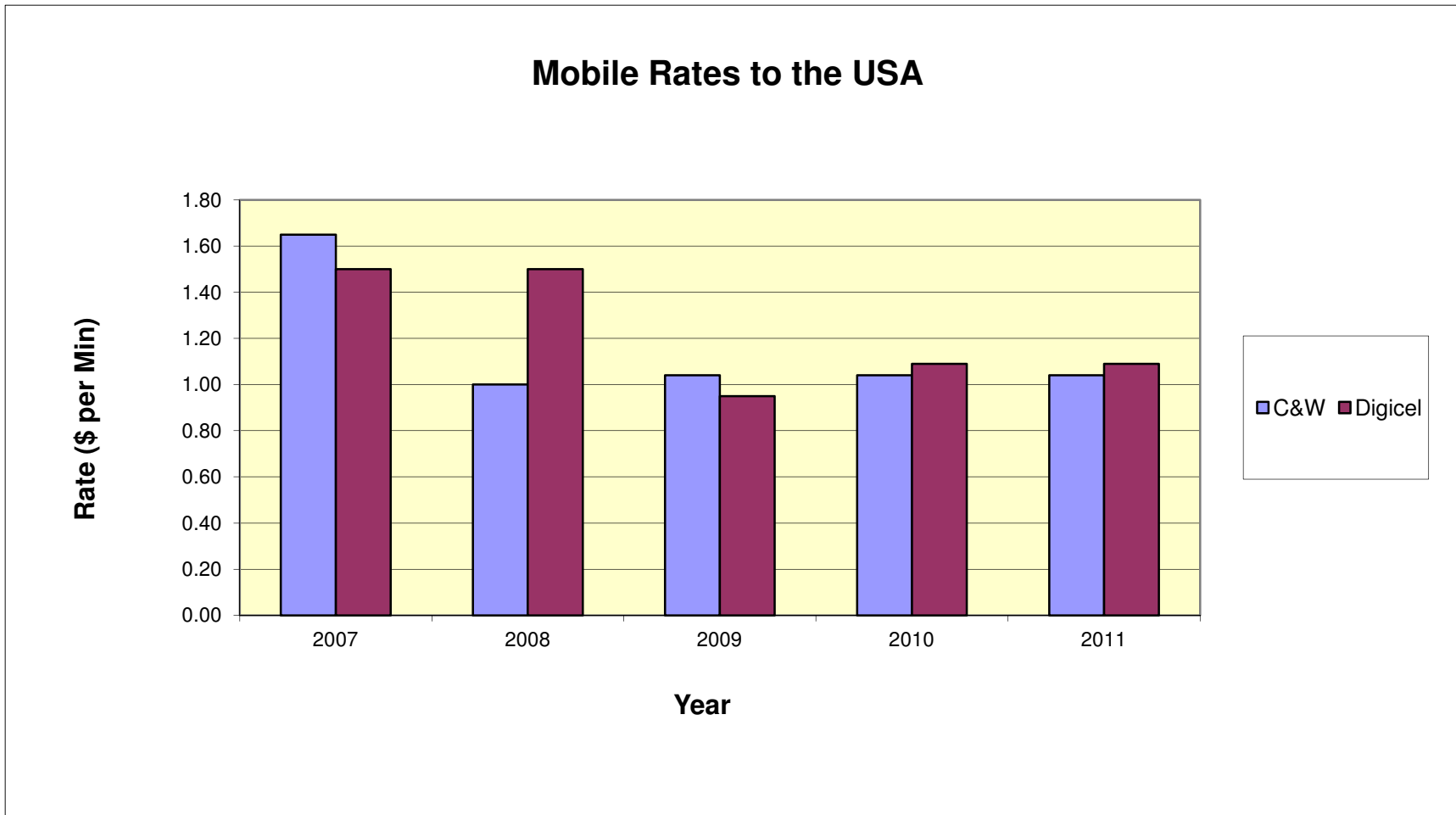
The NTRC continued in 2011 with the provisioning of statistical data from the Telecommunications sector to a number of local, regional and international entities. The NTRC was selected as the focal point for media statistics for the country by UNESCO in 2011. The following graphs depict some of the more relevant information on the sector while Table #4 gives a detailed overview of customer data supplied by the telecommunications providers.





Graph #1

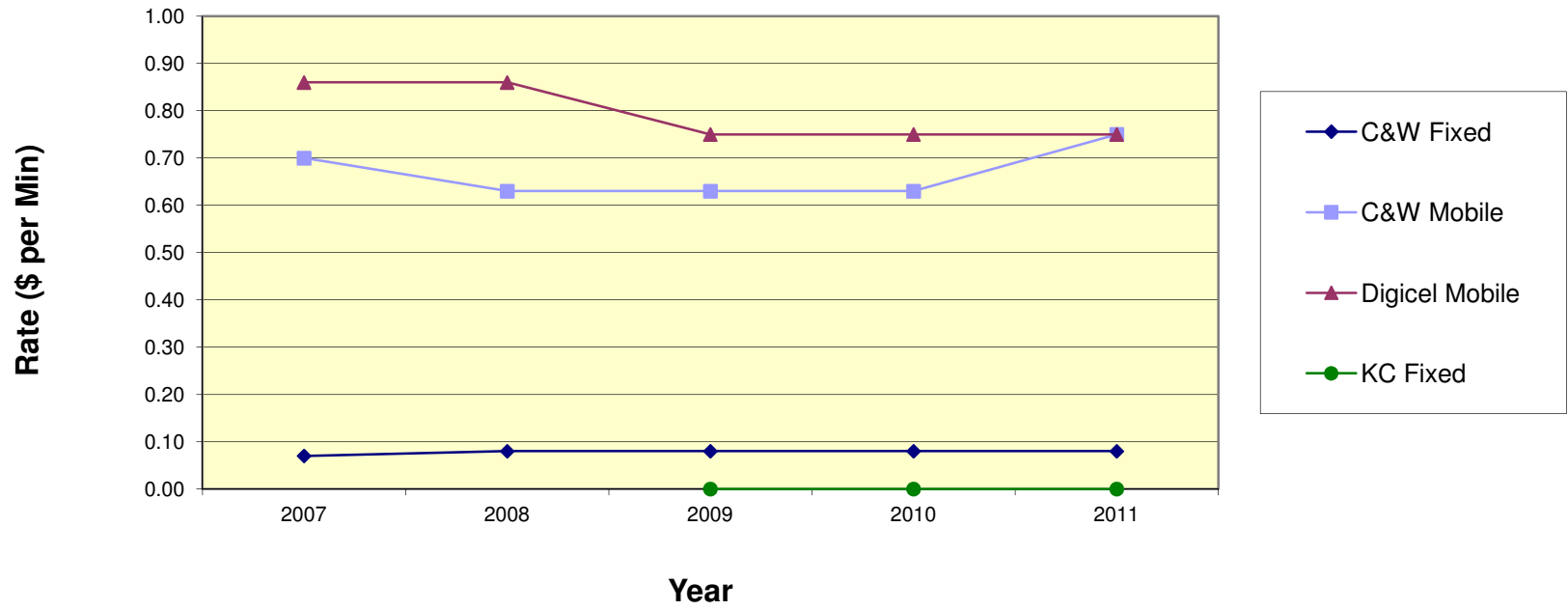
The rates depicted in Graph #1 are not regulated. There was no competition in the fixed line market until Karib Cable entered the market in 2009.



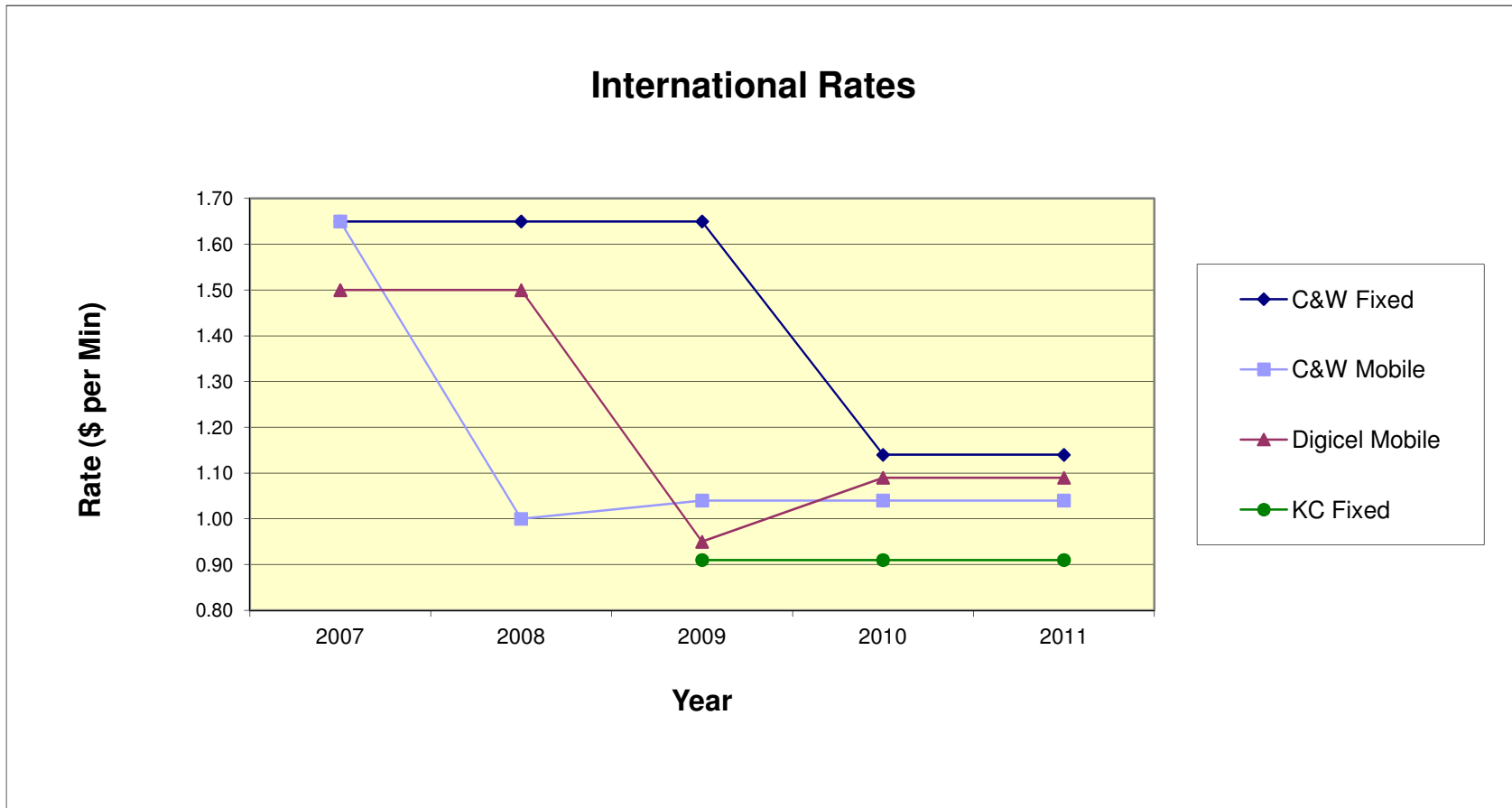
Graph #2

The rates depicted in Graph #2 are also not regulated. In 2009 the rates reached the lowest ever recorded to under \$1.00 EC per minute during peak time.

Domestic Rates



Graph #3

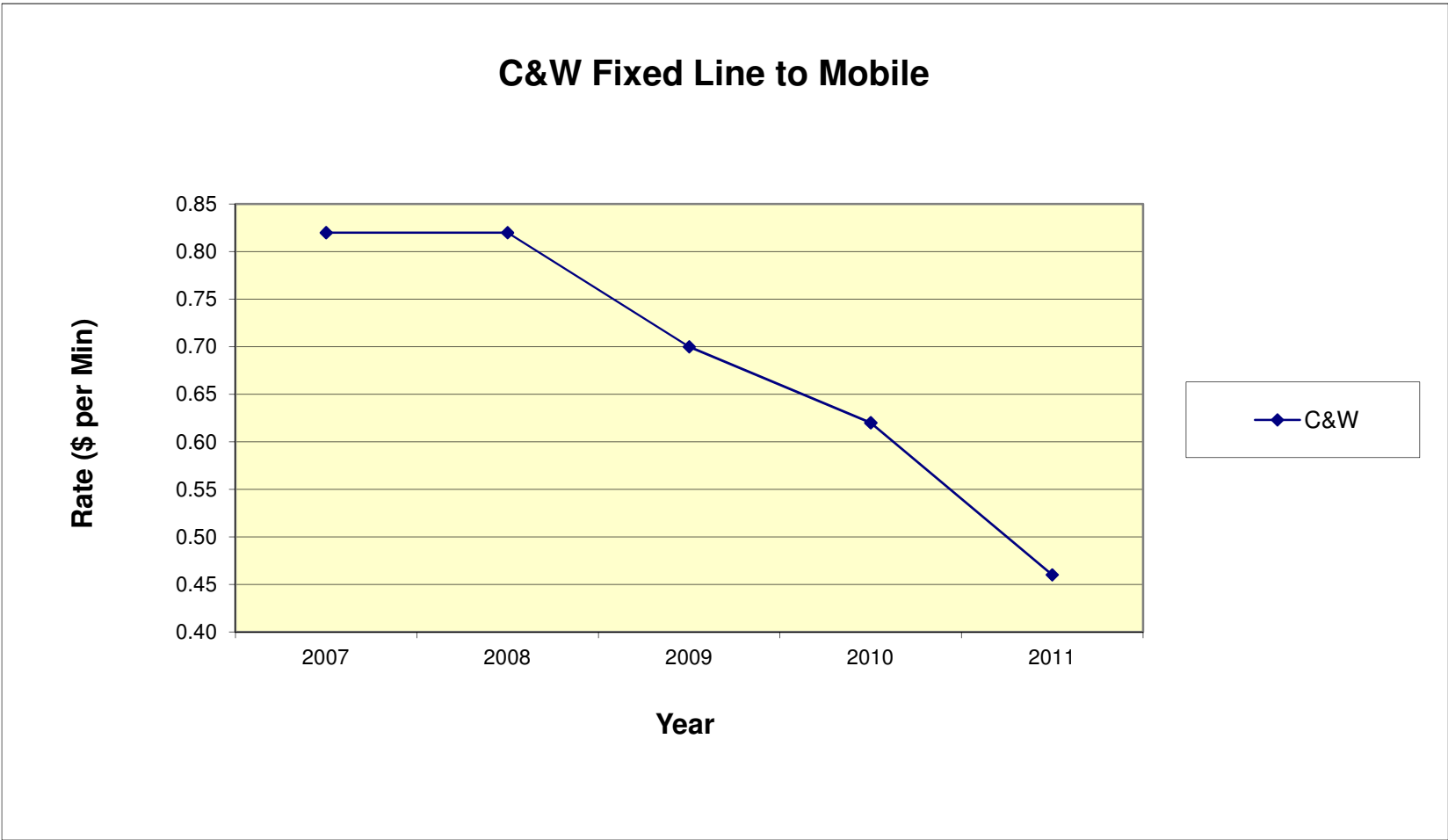


Graph #4

The domestic rates in Graph #3 are the daytime rates for calls made to customers on the same network.

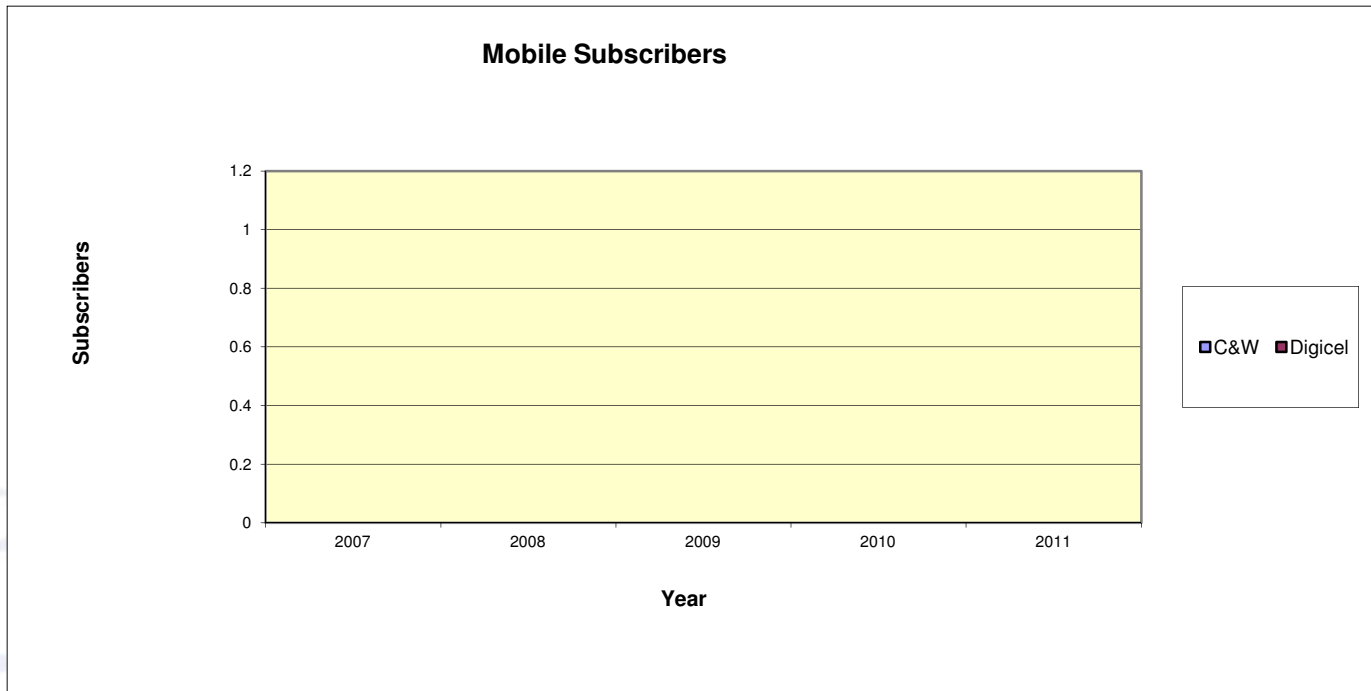
The international rates in Graph #4 are the daytime rates for calls to the USA for all providers.

These graphs show that while fixed line and mobile rates are basically on par for international call, there is a large discrepancy between fixed line and mobile rates for domestic calls.



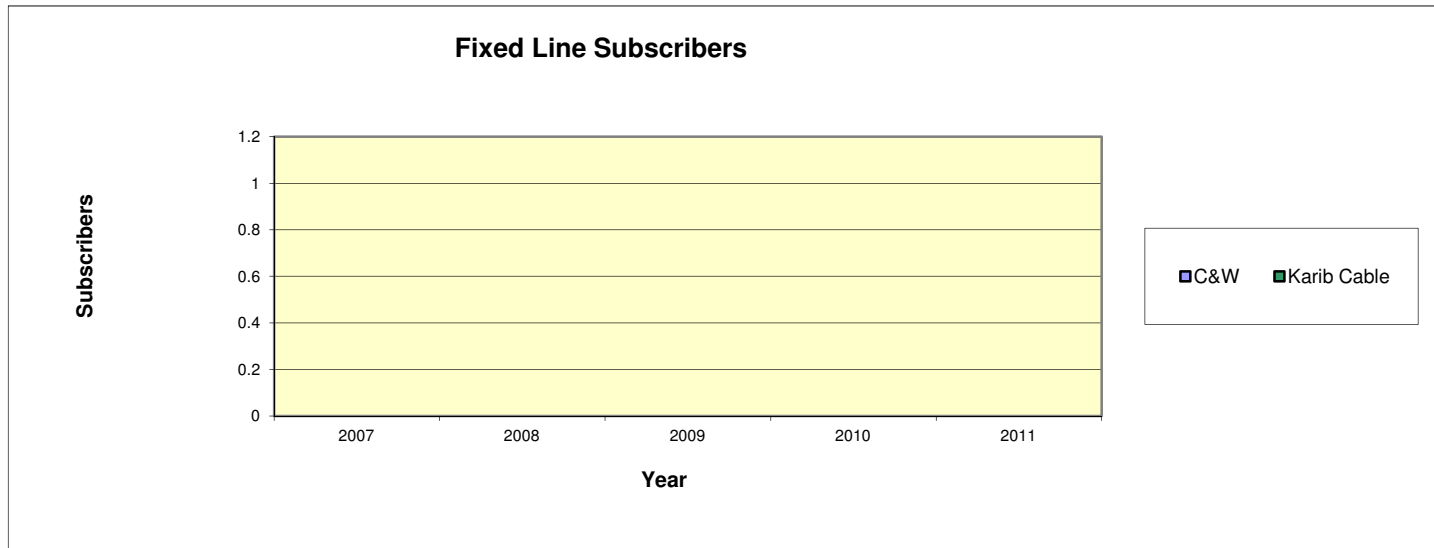
Graph #5

In 2009 the fixed to mobile rate depicted in Graph #5 was influenced by the interconnection agreement between Cable & Wireless and Digicel. This has resulted in a reduction in rates for Cable & Wireless fixed line to mobile. This rate continues to fall in 2011.



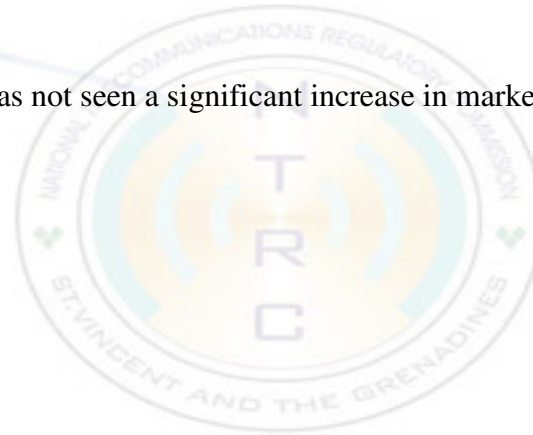
Graph #6

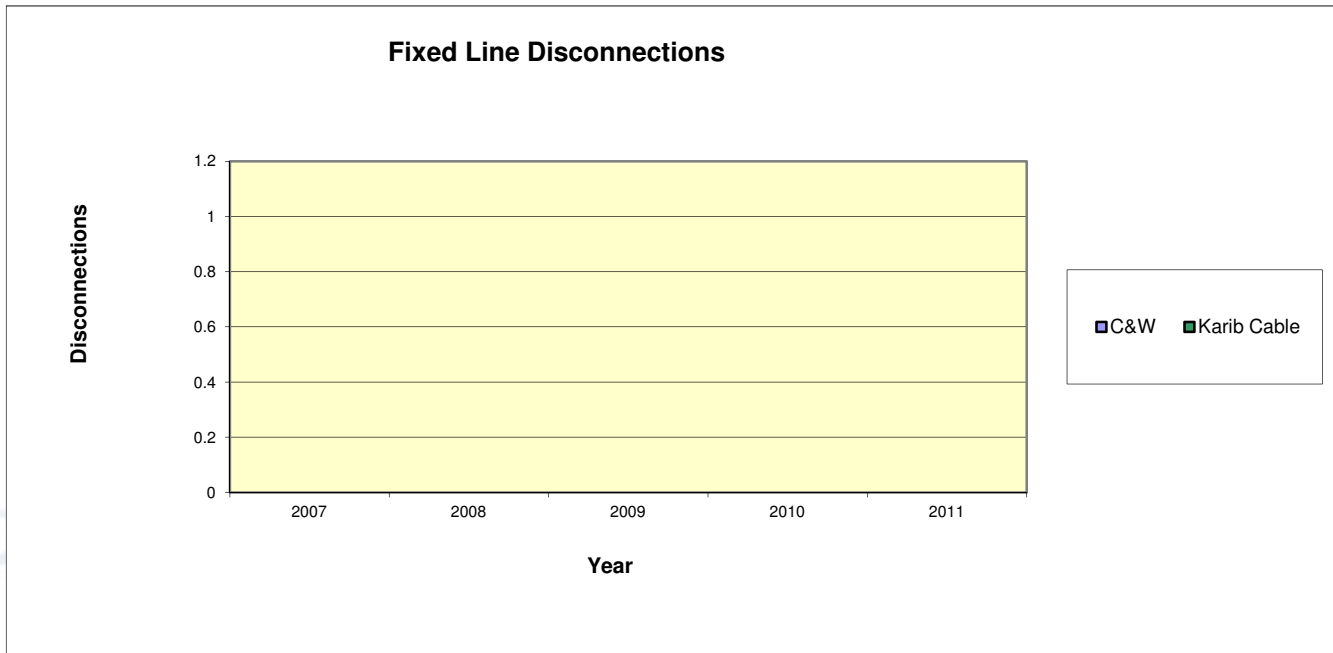
There was no notable change in the total number of mobile subscribers in 2011. However, Digicel's percentage in market share continues to grow over Cable & Wireless'.



Graph #7

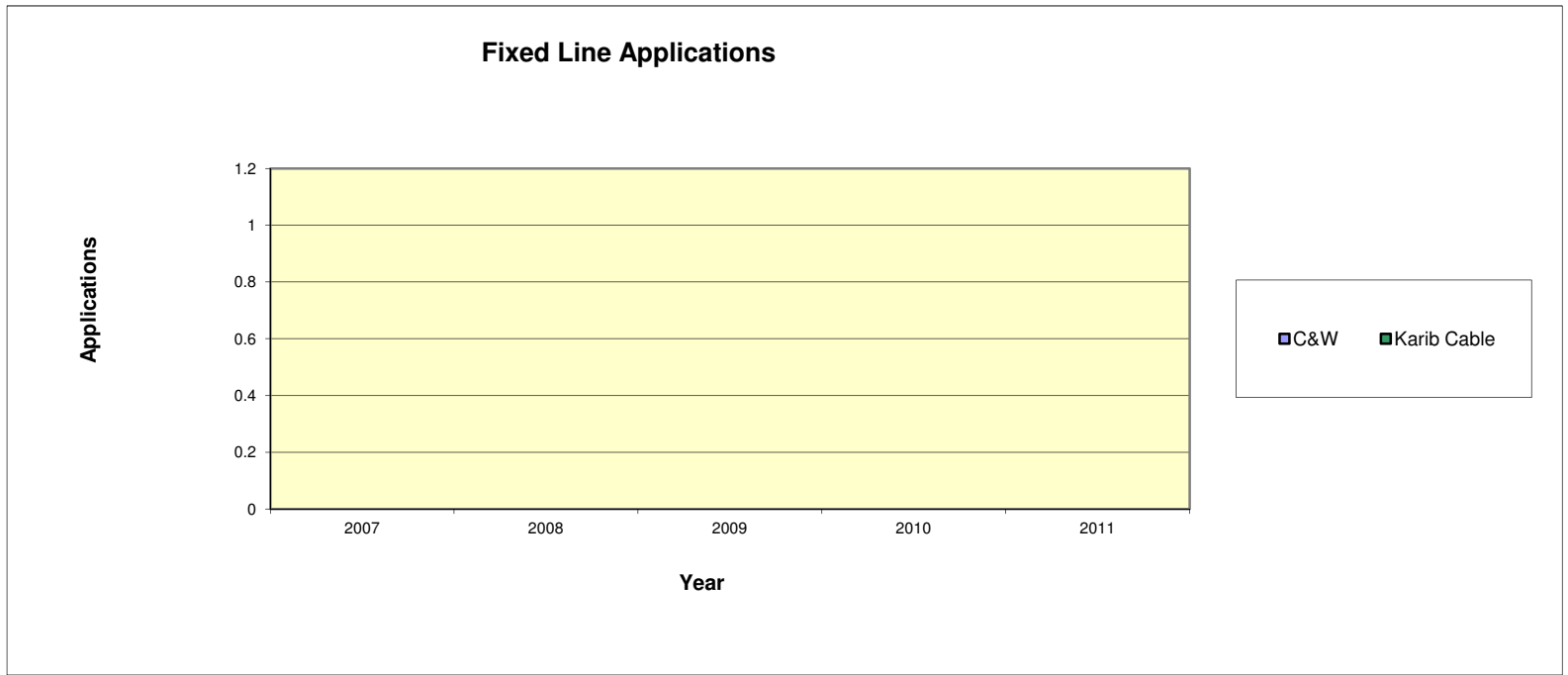
Graph #7 shows an increase in fixed line subscribers in 2011. Karib Cable has not seen a significant increase in market share.





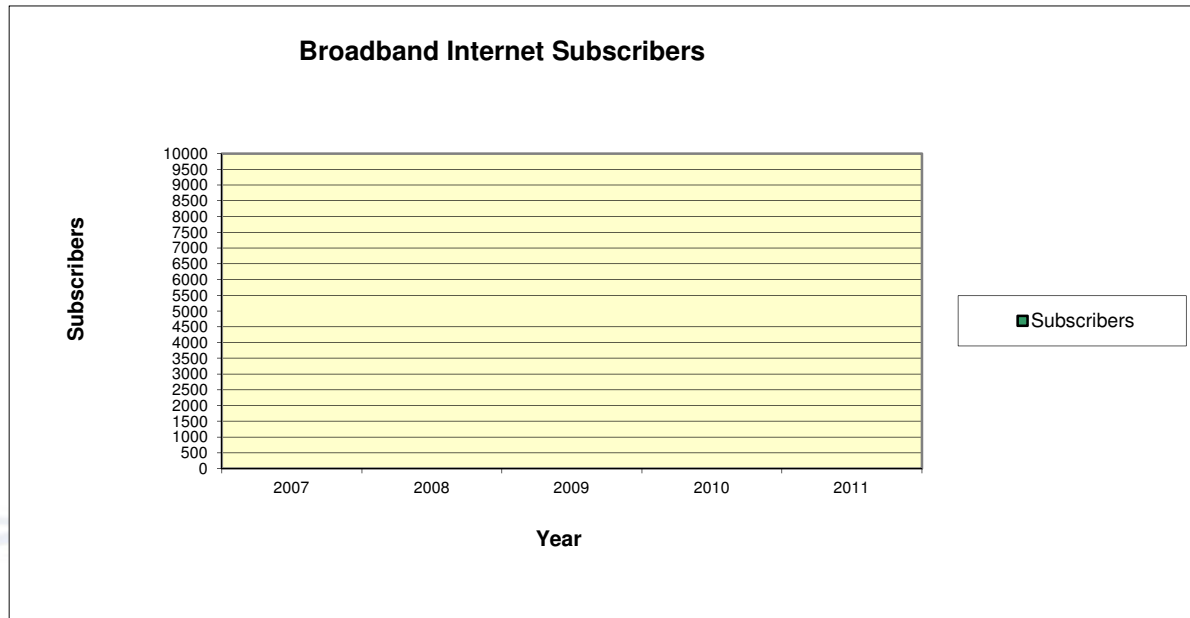
Graph #8

Graph #8 shows the number of fixed line customers disconnected during each year between 2007 and 2011. There was a sharp decrease in Cable & Wireless disconnections to 2010 and this figure is now on par with Karib Cable's.



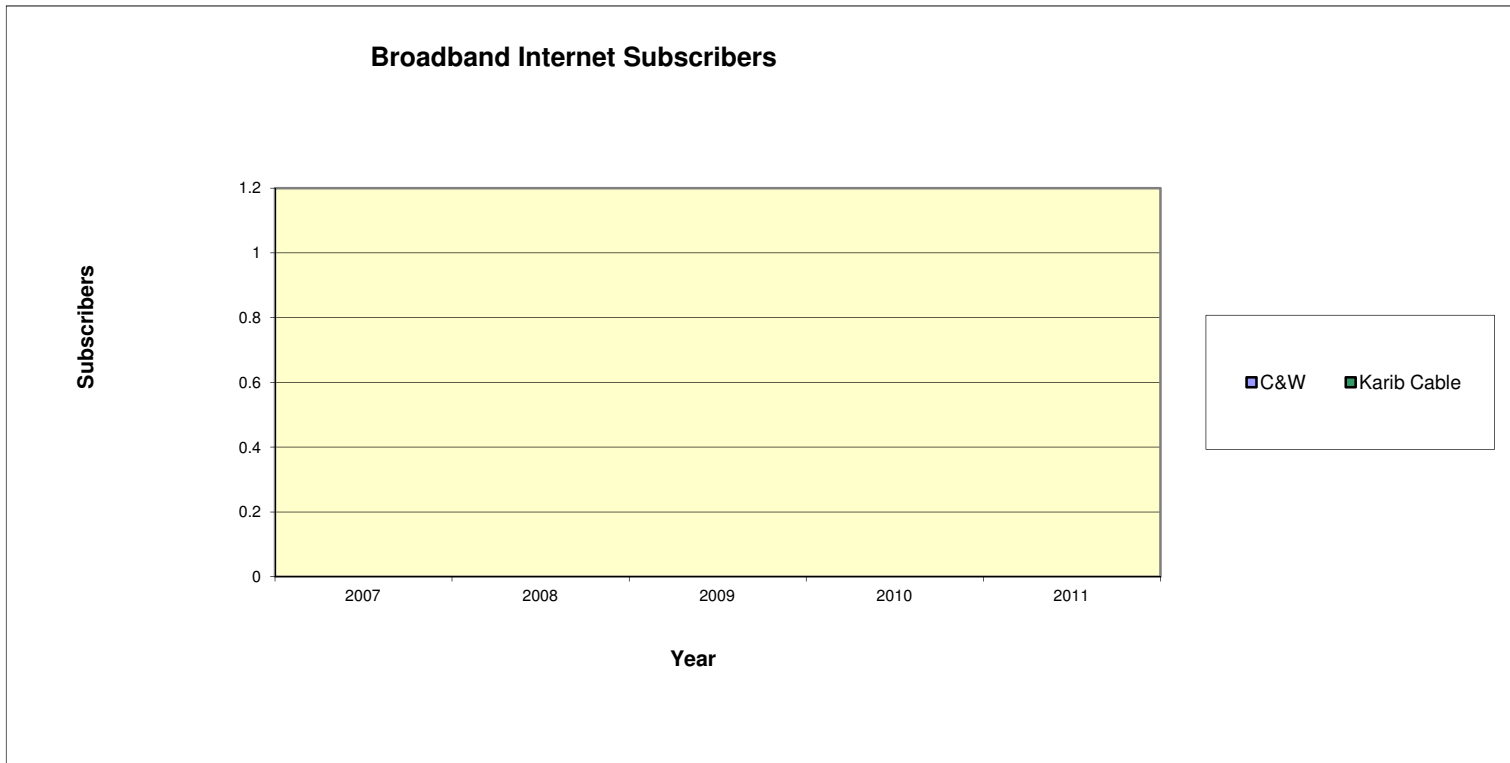
Graph #9

Graph #9 shows a decrease in applications for Cable & Wireless fixed lines and an increase in the same for Karib Cable.



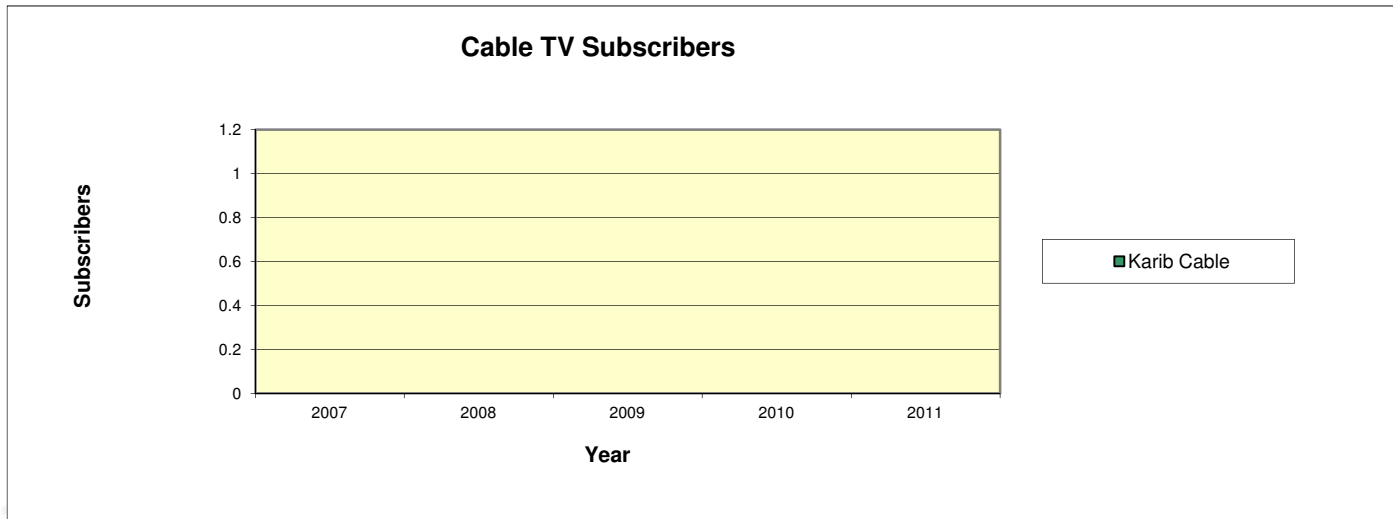
Graph #10

Graph #10 shows the number of broadband internet customers by provider. Both Cable and Wireless and Karib Cable have experienced a steady increase in its internet customers over the past five years.



Graph #11

Graph #11 shows the number of residential and business broadband internet subscribers in 2011.



Graph #12

Graph #12 shows that Karib Cable experienced a small decrease in Cable TV subscribers during 2011.



| | | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|--------------------------------------|--------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Cable & Wireless (WI) Ltd | | | | | | | |
| Fixed Line Subscribers | | | | | | | |
| | Residential | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx |
| | Business | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx |
| | Total | xxxxx | xxxxx | xxxxx | xxxxx | xxxxx | xxxxx |
| Internet Subscribers | | | | | | | |
| | Dialup | xxx | xxx | xxx | xxx | xxx | xxx |
| | ISDN | x | x | x | x | x | x |
| | ADSL (Residential) | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx |
| | ADSL (Business) | | | | | | |
| | Total | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx |
| Mobile Subscribers | | | | | | | |
| | Post paid | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx |
| | Prepaid | xxxxx | xxxxx | xxxxx | xxxxx | xxxxx | xxxxx |
| | Total | xxxxx | xxxxx | xxxxx | xxxxx | xxxxx | xxxxx |
| Digicel | | | | | | | |
| Mobile Subscribers | | | | | | | |
| | Post paid | | xxxx | xxxx | xxxx | xxxx | xxxx |
| | Prepaid | | xxxxx | xxxxx | xxxxx | xxxxx | xxxxx |
| | Total | | xxxxx | xxxxx | xxxxx | xxxxx | xxxxx |
| Karib Cable | | | | | | | |
| Cable TV Subscribers | | | xxxxx | xxxxx | xxxxx | xxxxx | xxxxx |
| Internet Subscribers (Residential) | | | xxxx | xxxx | xxxx | xxxx | xxxx |
| Internet Subscribers (Business) | | | | | | | |
| | Total | | xxxx | xxxx | xxxx | xxxx | xxxx |
| Fixed Line Subscribers | | | | | | | |
| | Residential | | | | | xxx | xxx |
| | Business | | | | | x | x |
| | Total | | | | xxx | xxx | xxx |

Table #4

Table #4 contains the Customer data submitted from the three main Telecom Providers. The Fixed Line business subscriber data for Cable & Wireless had a larger than expected increase for the 2011 compared to 2010, however we were unable to determine the reason for the increase.



| | 09 | | 10 | | 11 | |
|---------------------------------|-----|-------|-----|-------|-----|-------|
| | New | Renew | New | Renew | New | Renew |
| Individual type licenses | | | | | | |
| Fixed Public | 0 | N/A | 1 | N/A | 1 | N/A |
| Internet Networks | 0 | N/A | 0 | N/A | 0 | N/A |
| Subscriber Television | 0 | N/A | 2 | N/A | 1 | N/A |
| Int'l Simple Voice Resale | 0 | N/A | 1 | N/A | 0 | N/A |
| Mobile Cellular | 0 | N/A | 0 | N/A | 0 | N/A |
| Public Radio paging | 0 | N/A | 0 | N/A | 0 | N/A |
| Submarine cable | 0 | N/A | 0 | N/A | 0 | N/A |
| Class type licenses | | | | | | |
| Private network/services | 0 | N/A | 1 | N/A | 1 | N/A |
| Internet services | 0 | N/A | 0 | N/A | 0 | N/A |
| Radio Broadcast | 0 | N/A | 8 | N/A | 1 | N/A |
| Community radio | 1 | N/A | 0 | N/A | 0 | N/A |
| Television Broadcast | 0 | N/A | 0 | N/A | 0 | N/A |
| Maritime mobile | 1 | 23 | 0 | 19 | 3 | 42 |
| Land mobile | 1 | 275 | 3 | 212 | 5 | 267 |
| Aeronautical radio | 1 | 0 | 0 | 0 | 0 | 0 |
| Aircraft station | 3 | 18 | 1 | 16 | 2 | 17 |
| Amateur Radio station | 29 | 23 | 36 | 36 | 38 | 60 |
| Citizen Band radio | 0 | 0 | 0 | 5 | 0 | 1 |
| Family Radio Band | 4 | 0 | 2 | 1 | 1 | 0 |
| Ship Station | 61 | 112 | 28 | 131 | 44 | 170 |
| Miscellaneous | | | | | | |
| CPE Dealers reg. fee | 18 | 12 | 18 | 17 | 17 | 44 |
| Exam Fees for Rad. Oper. | 0 | N/A | 0 | N/A | 2 | N/A |
| Type Approval fee | 0 | N/A | | N/A | 3 | N/A |
| Ship station Operators | 24 | 16 | 25 | 32 | 17 | 55 |
| Aircraft Station Operators | 0 | 0 | 0 | 0 | 0 | 0 |

Table #5

8.17 Licensing

The NTRC continued to facilitate the application process for new licenses under the Telecommunications Act (CAP 418) of the Revised Law of St. Vincent and the Grenadines of 2009. 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 #5 outlines the number of licences issued from 2009 to 2011. 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. Also table #5 outlines the new licences and the existing licences renewed for the period 2009- 2011.

8.18 Policy Recommendations:

The following need to be examined in the policy framework of the Government at the local, regional and international level.

Cyber Security - This threat needs a regional approach noting the resources needed and the complexity of the problem. Such an initiative can be facilitated with possible assistance from the USA, noting the potential threat to their country and the role the Caribbean can play in minimizing such a threat if the member states of the region are properly prepared. More details on this very important issue were outlined in our 2009 Annual Report.

Regulatory Focus on Convergence- Our Country has to move from our current approach of just regulating networks and

some services offered over these networks. We have to move to regulating what goes on these networks and not just the “content”, etc but more so the applications that are allowed to or not allowed to operate on these networks. More details on this issue are in our 2009 Annual Report.

ICT Opportunities - Further to the opportunities that were outlined in our 2009 Annual Report and which were specifically identified within software development, the NTRC would like to add a new area for closer examination going forward and which is directly linked to the issue of Cyber security. As a country, we have to see where we can identify opportunities that can position ourselves/our country ahead of other countries and other global players. An area that will see a lot of attention in the near to medium term is security for mobile networks/applications and devices. As the trend in mobile devices move to more smarter devices with greater access speeds, the threats we have seen to personal/corporate computers and networks over the last two decades will be greater and more complicated with the increase in more smarter and faster mobile devices in the near and medium term. This is a great opportunity for us as a country to start putting in place training programs and incentives to develop the necessary skill sets among our citizens that can provide the necessary services for this area of the ICT market. Those who are ahead of the curve will reap the most reward. We cannot play catch up in this area as we have been doing in all other areas of ICT skill development. We can be a global leader in this area within four years if the right programmes and incentives are implemented within the next year.

National Broadband Strategy- There is a critical need to develop a national strategy to facilitate the increasing of

broadband penetration level to a minimum of 90% of households by 2015. As a country, we cannot allow the current rate of increase for this essential service at the household level to remain on its current trend. To do so will keep a large proportion of our population from productively participating in our country's economic, social and cultural development thereby reducing level of our competitive advantage as a nation.



9. Broad Response Strategies

As the Telecom/ICT Sector continues to function within a liberalized environment, the NTRC in collaboration with ECTEL and the Government has to respond to the requirements of a competitive sector so as to protect the interests of both the providers and the consumers and facilitate a relevant regulatory framework that will cater for the increased rate of change in the sector.

The NTRC has to operate within the harmonized framework of the ECTEL Treaty and the Telecommunications Act (CAP 418) of the Revised Law of St. Vincent and the Grenadines of 2009. Most of its objectives cannot be accomplished on its own due to the mandate given to ECTEL on certain issues.

However, the Universal Service Funds allow for some flexibility at the nation level which our NTRC has sort to utilize the available resources for the maximum benefits via practical and needed projects that meets the needs of our citizens.

Recognizing the limitations outlined above, the NTRC would seek to continue to work closely with ECTEL, the Ministry/Minister responsible for Telecommunications and relevant stakeholders so as to ensure that the revised regulatory framework for the telecom sector and other ICT Initiatives are capable of addressing the issues that currently exist and those that are envisioned.

10. Result Indicators 2011

1. **Seek to have the issue of broadcasting content addressed via some form of regulatory framework.**
The NTRC has raised this issue both at the local and regional levels. It is also identified as one of our critical issues in our 2010 annual report.
2. **Seek to complete the Licencing of SVG Broadcasting Corporation Television Service under the Telecommunications Act (CAP 418) of the Revised**

Law of St. Vincent and the Grenadines of 2009. This was completed.

3. **Seek to settle matter relating to the disputed licenses fees from Cable and Wireless covering the period April to September 2001.** This matter is ongoing.
4. **Complete study documenting 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. The locations of all the microwave / cell / broadcast towers have been documented. However possible implications with regards to having new entrants enter the market within the next five years have not yet been completed. It is expected that this task will be completed in the second quarter of 2012

- 5. Migrate all existing Excel format financial reports of the NTRC to automated reports via the Peachtree Accounting System.** This is 80% completed. The NTRC had the purchase Peachtree 2012 in the effort to get the tools required to complete the task. It is expected that this task will be completed in the first quarter of 2012.
- 6. Review the NTRC IT systems and processes with the objective of improving them for efficiency and security.** This has been completed. The identified recommendations will be implemented in 2012.
- 7. Integrate existing standalone databases of the NTRC into one database.** This task has been completed. The NTRC database was developed in house and has been commissioned.
- 8. Continue the implementation of the three projects identified by the Universal Service Fund (USF) in**

2009 and those identified in 2010. Contracts were executed for the three projects (Maritime, Payphone and Schools) in 2011.

- 9. Work with ECTEL and other stakeholders in ensuring that the new Telecommunications Bill addresses the relevant issues in the sector for the medium term.** Not much work was done on the new bill in 2011 by ECTEL. A regional consultation is planned for the first half of 2012.
- 10. Seek to have the issue of broadcasting content addressed via some form of regulatory framework.** The NTRC has been asked to sit on a committee established by the SVG Standards Bureau in 2011. This committee has been charged with the mandate of developing national standards for broadcasting.
- 11. Research Equipment needed to measure RF radiation levels.** This has been completed.
- 12. Source Training for Broadcasters especially in the area of antenna patterns and installations.** This has been completed.
- 13. Develop Brochures and Posters for the NTRC dispute resolution process.** This has been completed.

11. Major Objectives for 2012

- 1. Seek to complete the Licencing of SVG Broadcasting Corporation Television Service under the Telecommunications Act (CAP 418) of the Revised Law of St. Vincent and the Grenadines of 2009.**
- 2. Explore the feasibility of utilizing soft phones at the NTRC.**
- 3. Explore the use of the payroll module in the Peachtree accounting software being used by the NTRC.**
- 4. Develop a business strategy for the NTRC specifically as it relates to use of technology in the NTRC business processes.**
- 5. Explore the creation of a knowledge network between the NTRCs and ECTEL.**
- 6. Create a user manual for NTRC database.**
- 7. Operationalise NTRC ICT Disaster Plan.**
- 8. Create 2012 USF Operating Plan.**
- 9. Implement a minimum of three new projects under the USF.**
- 10. Conduct training for the Accounts/administrative staff in Peachtree 2012.**
- 11. Establish a pension plan for the NTRC.**
- 12. Review and update the Performance appraisal system of the NTRC.**
- 13. Seek to facilitate the development of a policy to assist service providers to migrate their mobile networks to fourth generation technology (4G).**
- 14. Seek to facilitate the development of a National Broadband strategy for St.Vincent and the Grenadines.**
- 15. Review the Universal Service Fund (USF) legislative framework to identify if it is appropriate to meet the NTRC objectives in the short to medium term.**

12. Annex A

12.1 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 favourable 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 endeavours 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 specialized 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 customers 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”*

13. Annex B

13.1 Audited Financial Statements 2011

