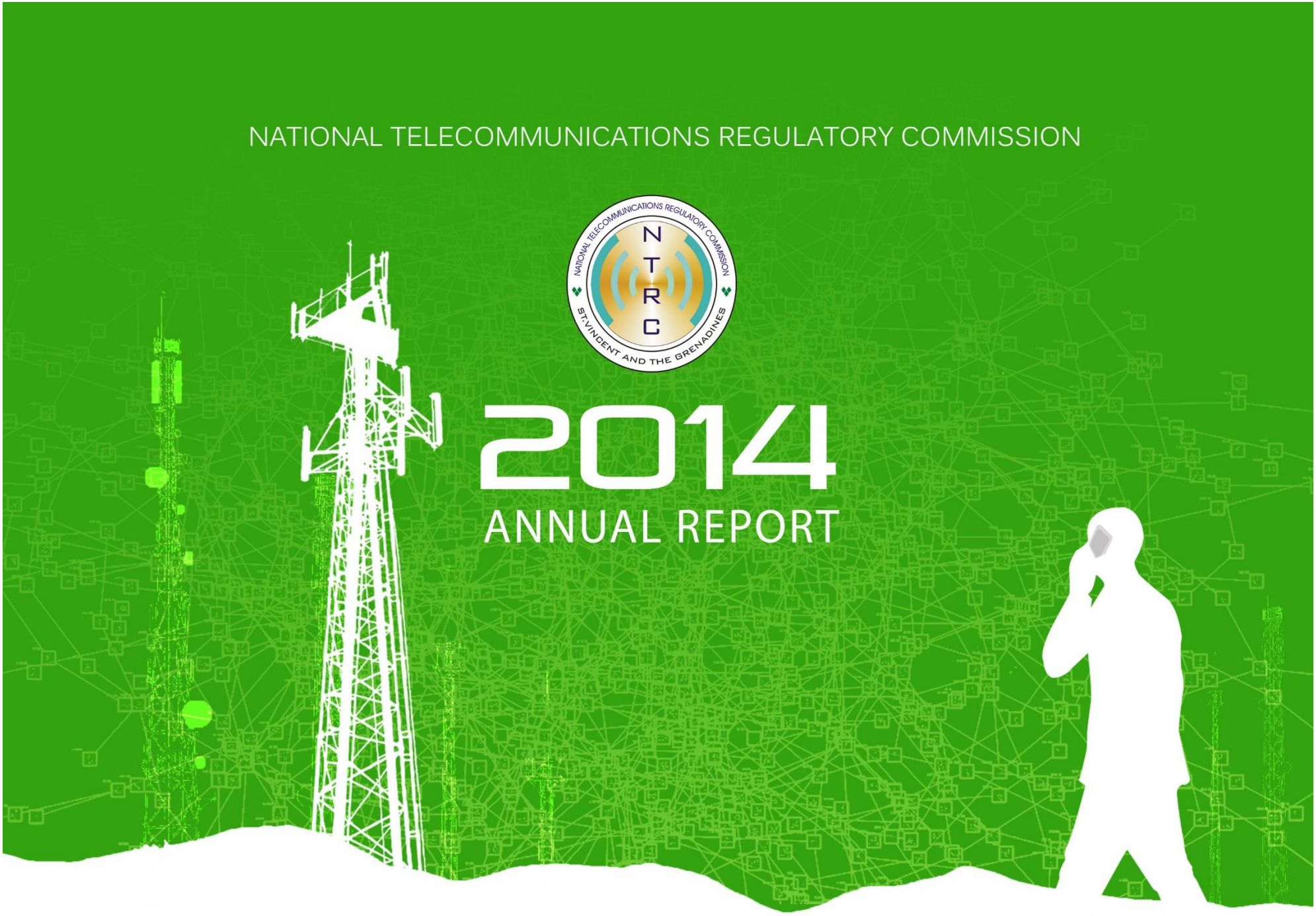
NATIONAL TELECOMMUNICATIONS REGULATORY COMMISSION




# 2014 ANNUAL REPORT

ntrc.vc

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# 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 Laws of St. Vincent and the Grenadines 2009.

# 4. The Commissioners

**Mr. Clifford Davy**
Deputy Chairman

**Mr. St. Clair Scott**
Chairman

**Ms. Roxann Knights**
Commissioner

**Mr. Richard Roberts**
Commissioner

**Dr. Alston Stoddard**
Commissioner

# 5. Staff Members

Mr. Apollo Knights
Director

Ms. Nadine Hull
ICT Manager

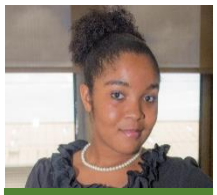
Mr. Kyron Duncan
USF Administrator

Ms. Mishka L. Quashie
Accountant

Ms. Andra Keizer
Administrative Officer

Ms. Keizer Gurley
USF Operations Officer

Mr. Marcellus Constance
ICT Officer



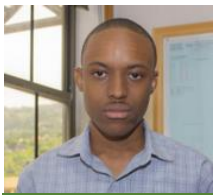
Ms. Lizrene Charles
USF Assistant

Ms. Shonden Baptiste
Admin / Account Asst.

Ms. Gineal Joseph
Operations Officer

Ms. Shanka Edwards
USF Project Officer

Mr. Cyron Cyrus
IT Technician



Mr. Chadwick Douglas
IT Technician

# 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 the NTRC's 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.
- Balanced of experienced staff along with qualified and innovative young interns.

## 6.2 Weaknesses

- Inadequate pricing control mechanisms for dominant suppliers of services specifically in areas of mobile and cable TV retail rates.
- Lack of a formal relationship between the ECTEL organizational structure and that of the NTRCs.
- Lack of regulatory oversight on promotional activities of mobile service providers.
- Absence of Quality of Service (QoS) regulations in the sector.
- The inability of the current regulatory fee structure to maintain an adequate funding source for the regulatory system (ECTEL and the NTRCs) in the short term.
- Churn of Commissioners and staff when considering the small staff complement of the NTRC and the resources expended on developing the regulatory and technical skills of both Commissioners and staff.
- Current contribution rate to the Universal Service Fund (USF) has limited the NTRC in executing new projects.

## 6.3 Opportunities

- Ability to develop projects under the Universal Service Fund capable of reducing 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 the Commssion's legislative framework.
- The recent introduction of mobile broadband into the market by both mobile service providers provides a platform for the entry/creation of new technology based services which was not possible hitherto.

## 6.4 Threats

- Continued possibility of litigation from licencees.
- The issue of Cybercrime and Cyber Security is a threat facing not only the NTRC but our country and the region.
- The continued convergence of the ICT sector facilitated by IP technology which facilitates cross border services that evade the Commsion's existing regulatory framework.
- Consolidation of service providers across the region is leading to a creation of new monopolies among certain services.

# 7. Critical Issues

Currently, there are three critical areas that need to be addressed in the sector:

## 7.1 Cyber Security

These issues were highlighted in detail in the NTRC's 2009 Annual Report and remains as relevant today. For such issues to be properly addressed, it will have to be done at the regional level (CARICOM, OECS, etc.) but if this is be possible, ECTEL should take the lead and treat it as a matter of urgency. Additionally, areas should be addressed in the NTRC's new Telecommunications Regulatory framework so that the legislative provisions would guide the actual work that would need to be done by the region's respective regulatory agencies. In the interim, the NTRC is working towards improvement of this issue with the development and launching of an Associate Degree program in Cyber Security at the St. Vincent and the Grenadines Community College which started in September 2014.

## 7.2 Broadcast Standards and Royalties

In the absence of broadcast legislation or content/programing provisions within the new Electronic Communications Bill, the Government should look at alternative mechanisms, such as, agreements with the licencees to address issues such as royalties, local content and programming schedules. The issue of royalties for the local and regional artistes is a fundamental pillar in protecting the Caribbean civilization going forward.

## 7.3 Broadband Penetration Level

It is critical that as a country, focus is geared towards an increase in the penetration levels of broadband access to consumers, if the country is to be able to compete on the global market in any serious fashion, irrespective of the sectors targeted. Broadband is now seen as an essential service globally that is comparable to that of electricity, telephone and water where St. Vincent and the Grenadines is well into the 90% penetration levels at the household level but is still less than 50% at the household level for broadband. Imagine the country still being below 50% in electricity or water penetration. Our country has to develop a national strategy to bring the broadband penetration above 90% by 2017. During 2012, the ECTEL Council of Ministers mandated the ECTEL Directorate to develop a National Broadband Plan and Strategy. However, while a regional broadband working group was established in early 2013 to deliver on this mandate, nothing substantial has been prepared to date. Noting this, the NTRC has taken the initiative in 2014 to utilize the skills of a SET Program intern to develop a draft Broadband Plan for St. Vincent and the Grenadines. Having recently completed consultations with relevant local stakeholders, the NTRC will be sending the draft document to Cabinet in early 2015 for possible adoption and implementation.

# 8. Sector Review

## 8.1 Financial Data Review

### 8.1.1 Telecommunications Sector Revenue

| | Cable and Wireless (SVG) Ltd | | | | | Digicel St. Vincent Ltd | | | Kelcom Int'l | | | Caribbean Business Machines Ltd | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Int'l Revenue (EC$) | Domestic Rev (EC$ | Data/ Internet Rev (EC$) | Mobile Rev. (EC$) | 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$) | Total Revenue (EC$) | Grand Total (EC$) |
| 2000 | xxxxxxxx | xxxxxxxxx | | xxxxxxxxx | xxxxxxxxx | | | | xxxxxxxxx | | xxxxxxxxx | | xxxxxxxxx |
| 2001 | xxxxxxxx | xxxxxxxxx | | xxxxxxxxx | xxxxxxxxx | | | | xxxxxxxxx | | xxxxxxxxx | | xxxxxxxxx |
| 2002 | xxxxxxxx | xxxxxxxxx | | xxxxxxxxx | xxxxxxxxx | | | | xxxxxxxxx | | xxxxxxxxx | | xxxxxxxxx |
| 2003 | xxxxxxxx | xxxxxxxxx | | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | | xxxxxxxxx | xxxxxxxxx | | xxxxxxxxx | | xxxxxxxxx |
| 2004 | xxxxxxxx | xxxxxxxxx | | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | | xxxxxxxxx | xxxxxxxxx | | xxxxxxxxx | | xxxxxxxxx |
| 2005 | xxxxxxxx | xxxxxxxxx | | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | | xxxxxxxxx | xxxxxxxxx | | xxxxxxxxx | | xxxxxxxxx |
| 2006 | xxxxxxxx | xxxxxxxxx | | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | | xxxxxxxxx | xxxxxxxxx | | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx |
| 2007 | xxxxxxxx | xxxxxxxxx | | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | | xxxxxxxxx | xxxxxxxxx | | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx |
| 2008 | xxxxxxxx | xxxxxxxxx | | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | | xxxxxxxxx | xxxxxxxxx | | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx |
| 2009 | xxxxxxxx | xxxxxxxxx | | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | | xxxxxxxxx | xxxxxxxxx | | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx |
| 2010 | xxxxxxxx | xxxxxxxxx | | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | | xxxxxxxxx | xxxxxxxxx | | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx |
| 2011 | xxxxxxxx | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | | xxxxxxxxx |
| 2012 | xxxxxxxx | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | | xxxxxxxxx |
| 2013 | xxxxxxxx | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | | xxxxxxxxx |
| 2014 | xxxxxxxx | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | xxxxxxxxx | | xxxxxxxxx |

***Table 1*** *Total Revenue earned by providers of telecommunications services 2000 to 2014*

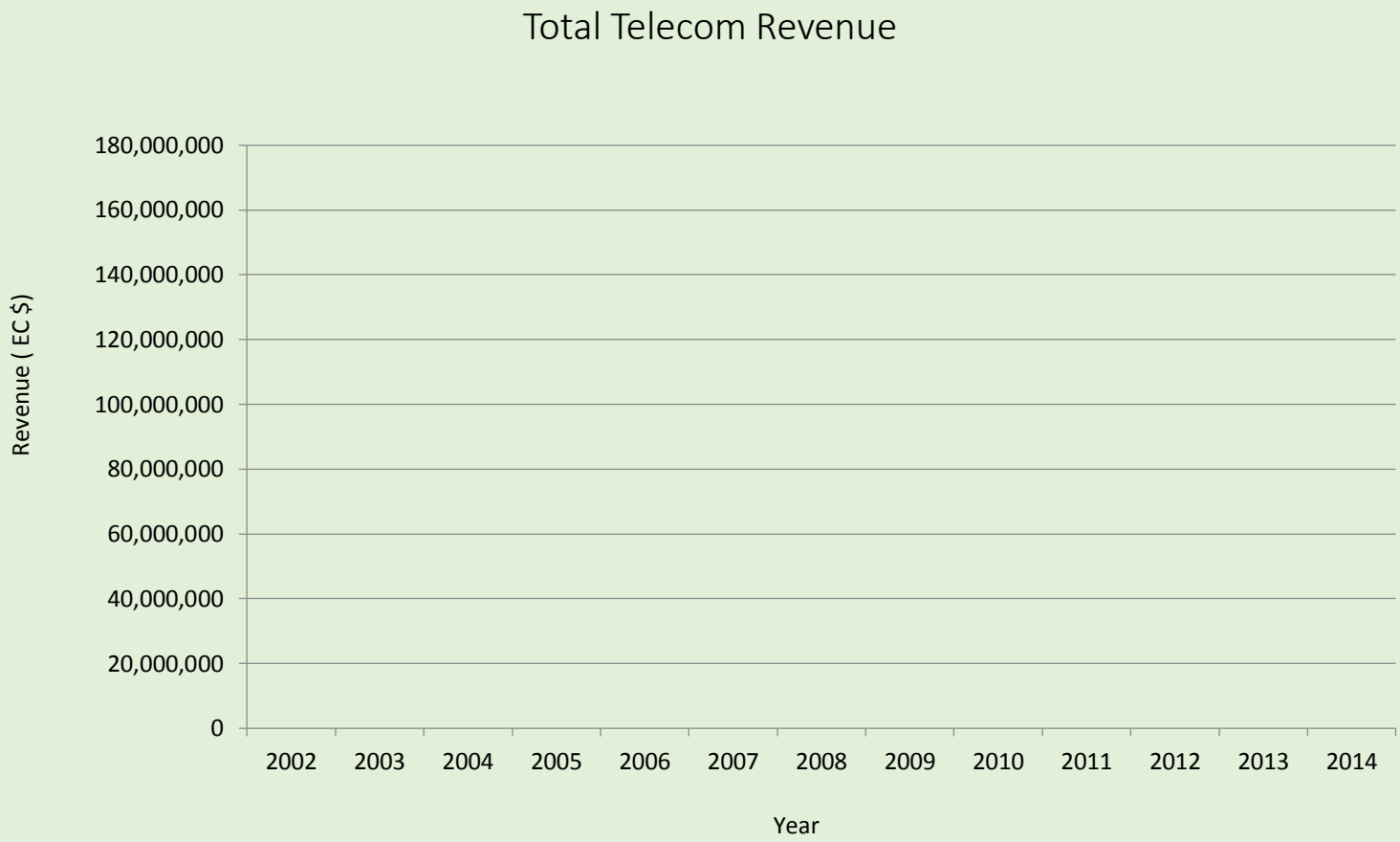

Total Telecom Revenue
Revenue ( EC $)
180,000,000
160,000,000
140,000,000
120,000,000
100,000,000
80,000,000
60,000,000
40,000,000
20,000,000
0
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
Year

*Figure 1*

### 8.1.2 Revenue of the NTRC and ECTEL for the period 2002 to 2014

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

There was a 2% decrease in 2014 for frequency fees. This was due to one service provider changing from paying it's frequency fees a full year in advance to quarterly as per our regulations.

In 2014, there was a 98% increase in the application fees as there was a significant increase in new applications. In addition, there were a number of licences and frequency authorizations that were renewed.

| Revenue of NTRC and ECTEL 2002 to 2014 | | | | |
|---|---|---|---|---|
| Year | NTRC Application fees | Percent increase | NTRC & ECTEL Frequency Fees | Percent increase |
| **2002** | $107,036 | | $607,600 | |
| **2003** | $5,100 | -95% | $1,366,604 | 125% |
| **2004** | $8,800 | 73% | $1,577,400 | 15% |
| **2005** | $10,300 | 17% | $1,539,669 | -2% |
| **2006** | $11,275 | 9% | $1,681,560 | 9% |
| **2007** | $22,725 | 101% | $1,245,183 | -25% |
| **2008** | $13,325 | -42% | $1,906,089 | 53% |
| **2009** | $13,225 | -7% | $1,487,390 | -21% |
| **2010** | $23,846 | 80% | $1,392,962 | -7% |
| **2011** | $16,109 | -48% | $1,723,158 | 24% |
| **2012** | $16,390 | 2% | $2,055,433 | 19% |
| **2013** | $15,927 | -3% | $1,787,020 | -13% |
| **2014** | $31,547 | 98% | $1,748,588 | -2% |
| | **$295,605** | | **$20,118,656** | |

***Table 2***

### 8.1.3 Licence fees received by the Government for the period 2002 to 2014

There was a 14% increase in revenue for licence fees collected by the NTRC on behalf of the Government in 2014 compared to 2013. This is mainly due to the receipt of funds from Karib Cable on their Subscriber Television Licence which was issued in February 2013 under the Telecommunications Act. Prior to this the licence fees for subscriber television was paid directly to the Accountant General as per the legacy licencing arrangement.

| Year | License Fees | Total | Percent Increase |
|---|---|---|---|
| 2002 | 3,365,391 | 3,365,391 | |
| 2003 | 2,803,927 | 2,803,927 | -17% |
| 2004 | 3,329,145 | 3,329,145 | 19% |
| 2005 | 3,421,159 | 3,421,159 | 3% |
| 2006 | 3,850,955 | 3,850,955 | 5% |
| 2007 | 4,301,521 | 4,301,521 | 11% |
| 2008 | 4,081,151 | 4,081,151 | -6% |
| 2009 | 4,065,706 | 4,065,706 | -4% |
| 2010 | 4,034,096 | 4,034,096 | -1% |
| 2011 | 3,886,912 | 3,886,912 | -4% |
| 2012 | 3,756,898 | 3,756,898 | -3% |
| 2013 | 3,638,128 | 3,638,128 | -3% |
| 2014 | 4,146,265 | 4,146,265 | 14% |
| | **48,832,046** | **53,511,377** | |

***Table 3***

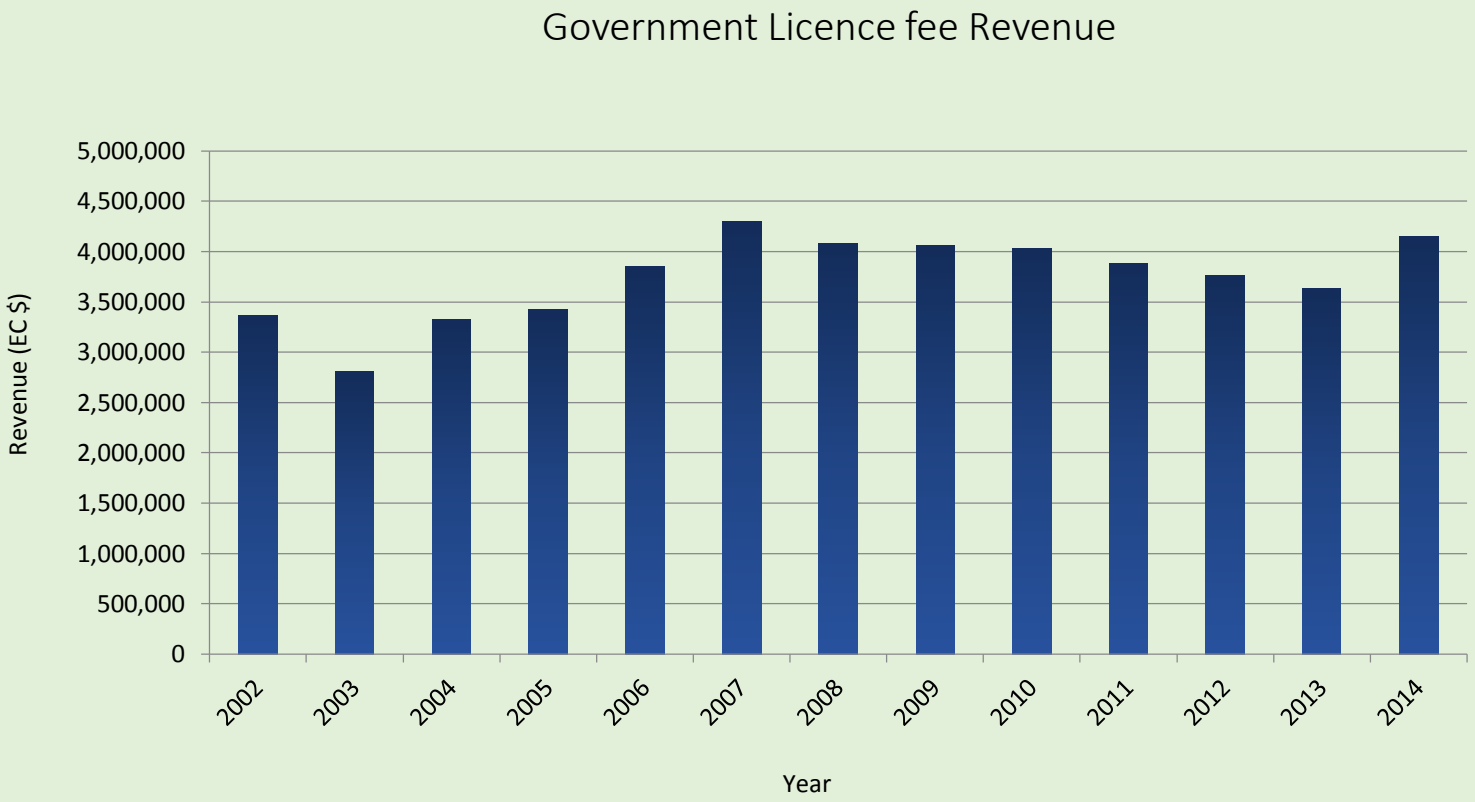



*Figure 2*

Licence Fees collected from 2002 - 2014

### 8.1.4 Financial Performance of the NTRC

#### A. Revenue

The NTRC projected to receive $1,086,361.00 for the year ending December 31, 2014. However, $1,111,351.20 was actually received which is $24,990.02 more than the budgeted amount. The Commission received additional revenue relating to the increased applications, both new and renewals.

#### B. Expenditure

##### i. Recurrent

For the year ending December 31, 2014, the NTRC projected to spend $1,072,825.21 on recurrent expenditure; however, $1,043,635.61 was actually spent. The Commission also has accrued expenses for 2014 amounting to $37,937.50 which include staff gratuities. Overall, total expenditure for 2014 amounted to $1,081,573.11.

##### ii. Capital

The amount of $50,200.00 had been budgeted for capital expenditure for the financial year 2014. However, $32,380.11 was spent which gives a difference of $17,819.89. Funds were allocated for the purchase of an Inmarsat Thrane Device which is needed as part of the NTRC's Disaster Back-up Plan. However, the preferred model is not yet available to the market and as such, this purchase has been deferred.

##### Conclusion

The NTRC's financial performance over the 2014 financial year was very commendable.

## 8.2 Projected Revenue for 2015

For the fiscal year 2015, the NTRC has projected to collect $2,613,155.00 in revenue from frequency fees. This is an increase of 21% or $447,035.00 compared to the 2013 amount of $2,166,120.00. This increase is due to new frequencies that were issued during 2014 and some which are expected to be issued in 2015.

## 8.3 Human Resource Development for 2014

The NTRC continues 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. A number of these training programmes were sponsored by international agencies.

The particular areas covered during 2014 were as follows:

- American Management Association (AMA) Business Writing.
- American Management Association (AMA) Effective Executive Speaking.
- UWI Open Campus Managing Projects for Success
- ACCA Professional Certification via Association of Chartered Certified Accountants (ACCA).
- ITU Young ICT Policy Leaders Programme.
- ITU Regional Training Workshop on ITU Information and Communication Technology (ICT) Indicators.
- ITU Amateur Radio Communications Training.
- ECSE Directors' Education and Accreditation Programme.
- ECTEL/NTRC Administrative Professional Workshop
- ECTEL Competition Law and Analysis Training Workshop.

In addition, staff members were required to read a new book each quarter on their area of specialty.

## 8.4 Regulations

No new Telecommunications regulations were gazetted during 2014.

## 8.5 Staff

The NTRC filled three junior staff positons in 2014 that became vacant after the holders of the positions went off to futher their studies:

- Ms. Gineal Joseph, Operations Officer, replaced Ms. Rachael Quashie.
- Mr. Shanka Edwards, USF Project Officer, replaced Ms. Shontell Murphy.
- Mr. Chadwick Douglas, IT Technician, replaced Mr. Brandon Benn.

There was also an intern Mr. Cyron Cyrus from the SET programme that was assigned to the NTRC in 2014.

## 8.6 Policy Development

Two ECTEL/NTRCs forums were held in 2014. The first was held in August 2014 in St. Lucia where discussions were held on the draft new Price Cap Plan (PCP) for LIME, draft Quality of Service (QoS) regulations for the sector and the final draft of the new Electronic Communications Bill. This new Bill is intended to replace the existing Telecommunications Act across the sub region. While the new Bill has made some improvements, including administrative structures for the NTRCs, which were missing in the initial Act, it is the view of NTRC SVG that it is deeply deficient in addressing the real needs of a converged sector. It is predominantly still a Telecommunications bill for a sector that is now an ICT one. The second forum was also held in St. Lucia in November 2014 and looked mainly on the review of the Universal Service Funds (USFs) across the sub region. Coming out of the forum, it was agreed that a consultation document be prepared in early 2015 to address the following objectives:

a. Redefinition of the scope of universal service to include technology and ICT ancillary services;
b. Change of the name from Universal Service Fund to Universal Service and Access Fund, which will encompass content and access;
c. Change in the eligibility conditions for providers who wish to implement projects;
d. Amendments to the method of calculations of the annual administrative budget;
e. Rules of contingency;
f. Changes in the contribution rate to the funds. The implementation of different contribution rates for different categories of services and service providers.

The above changes are required to mitigate the current challenges of the USFs across the sub region as well as the anticipated needs in the medium term. They will guide the changes needed to the existing Universal Service Fund Regulations.

## 8.7 Spectrum Management

In 2014, work continued on the evaluation of the specialized spectrum management software, SMS4DC (Spectrum Management for Developing Countries) developed by the ITU for its member states. The Commission reviewed the most recent version of the software, version 4.1, with regards to the needs in St. Vincent and the Grenadines in particular. With regards to its engineering functions, it was noted that the mapping included in the software remains inadequate for the Commission's purposes as the maps of the country are not large enough to give any details with regards to the country's topography which is essential in spectrum management. Also, the software was tested with regards to the submission of notices of frequency assignment to the ITU however, the testing was a failure as the submission module of the software is built especially for ITU Region 1 countries and not for Region 2 countries such as St. Vincent and the Grenadines. Finally, with regards to both the administrative and engineering function the software continues to lack user friendliness.

The NTRC weekly spectrum monitoring activities continues to cover not only the FM broadcasters, but also include frequencies used by other operators such as television broadcasters and cellular operators.

## 8.8 Internet Access

As of December 2014, the total number of Fixed internet subscribers in St. Vincent and the Grenadines was sixteen thousand, five hundred and twenty-seven (16,527). This figure shows a 10.36% increase over the number of subscribers in 2013. In 2014, both Cable and Wireless and Karib Cable had an increase in the number of subscribers when compared to their 2013 figures. While such increases have been the norm over the last decade, it is not large enough to bring the country to the levels of penetration seen in the developed countries.

Therefore it is imperative that St. Vincent and the Grenadines looks at practical strategies to substantially increase the country's penetration rates over the medium term. This will need to be done via a National Broadband Plan. As of December 2014, a National Broadband Plan was drafted that sets out to bridge the digital divide, not only by providing high speed broadband access to the masses but

by also creating opportunities for its potential and current users to utilize broadband to its fullest potential.

At the community level the NTRC has done substantial work over the last three years through the USF. As at December 2014, there were over 150 sites nationally with open access to Wi Fi service. These include all educational institutions, LRCs and a number of community centers. All Police Stations and Health centers have been equipped with Wi Fi service under the USF.

## 8.9 Public Consultation

The NTRC conducted a public consultation on a new Price Cap Plan(PCP) for LIME in 2014. This new plan was developed by ECTEL to replace the existing PCP. The main change in the new plan is to remove the regulation of Internet services of LIME from the PCP noting the competition for such services from Karib cable(FLOW). With the announce merger of LIME and FLOW in November 2014 the NTRC plans to look carefully at how this transaction will impact the proposed PCP.

## 8.10 Telephone Rates

ECTEL fiinalised a new draft Price Cap Plan (PCP) in late 2014 to replace the existing PCP of LIME. This new PCP will continue to regulate the fixed voice services of LIME. The issue of continued non-regulation of mobile retial rates is impacting consumers in a negative way. While we have seen the mobile termination rates(MTRs) which is a regulated service being reduced over the last seven years, we have not seen a similar trend with mobile retail rates which is not regulated. In fact we have seen increases in the mobile retail rates recently.

## 8.11 Public Awareness

The NTRC held three community discussions in Layou Barroullie and Vermont and two open days in the following areas in 2014:

1. Barrouallie Learning Resource Center
2. South Rivers Learning Resource Center

The NTRC also held three school discussions at the following locations in 2014:

1. West St. George Secondary School
2. St Mary's R. C Primary School
3. Stubbs Government Primary School

The schools discussions were held to educate students about the work being done by the NTRC and Cybersecurity/cybercrime issue. This is a very critical area noting that all students would have received Netbooks/laptops issued by the Government and are now able to access Wi Fi services at any school and most community centers.

In addition, two public drives were held under the Kingstown Post Office; both 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 the nation. These events ran concurrrently with television and radio advertisements. Such initiatives will continue in 2015.

## 8.12 Universal Service Fund

For the year ending December 31, 2014, the Universal Service Fund budgeted to receive a total of One Million, Two Hundred and Eighty Three Thousand Dollars ($1,283,000.00) from the telecom service providers and interest on account was projected to be Thirty Seven Thousand, Five Hundred Dollars ($37,500.00). The actual revenues received by the Universal Service Fund in 2014 was One Million, Two Hundred and Ninety Nine Thousand, One Hundred and Thirty Three Dollars and Fifty Two Cents ($1,299,133.52) from telecom service providers. A total of Forty One Thousand, Seven Hundred and Twenty Four Dollars and Ninety Three Cents ($41,724.93) was received as interest on the account. A total of seven projects are currently being funded under the Universal Service Fund.

The NTRC did not seek to pursue any new projects in 2014 as the current funds available are not sufficient to fund any new projects. In this regard the NTRC during 2014 has been working with the relevant stakeholders to adjust the current USF contribution rate.

Of the seven projects currently being funded one remained un-commissioned as of December 2014. This is as follows:

Payphone Project: The infrastructure on this project has been completed. However, there has been a delay with the commissioning process due to connectivity issues at the Vermont Nature Trail site.

More details on the USF projects can be found in the 2014 USF Annual Report.

In 2014, the NTRC hosted the second annual Idea and Innovation Competition known as the $i^2$ Competition. The NTRC was able to partner with the SVG Broadcasting Corporation, Toastmasters Organization, Hot 97 Radio Station, National Insurance Services (NIS), the Searchlight Newspaper, the Ministry of Education, and the Center for Enterprise Development (CED) to host this year event. The competition encouraged students from various Secondary, Technical and Tertiary level institutions from across the country to put forward ideas and mobile applications that can implement new systems or improve existing systems within departments of the Public Service of St. Vincent and the Grenadines inclusive of state agencies that provide services to the public.

The Competition officially began on September 11, 2014 and is expected to conclude with the finals scheduled to be held on January 15, 2015.

## 8.13 Cable TV

After bringing Karib Cable's TV services under the oversight of the NTRC in 2013 with the issuing of a Subscriber Television Licence under the Telecom Act, the company was acquired by FLOW (Columbus Communications) soon thereafter. Since that time the NTRC has had numerous discussions with FLOW to regularize the acquisition. It was finally agreed that the company will submit new applications for all services and frequencies which was done in September 2014. This situation was further compounded with the announcement in November 2014 that Cable & Wireless Communications (LIME) agreed to aquire 100% shareholding of Columbus Communications (FLOW). The NTRC has since briefed the Hon.Minister with responsibility for Telecommunications on the potential impact of the merger and possible soultions . LIME was issued a Subscriber television licence in 2011 and was expected to provide some level of competition to Karib cable (FLOW) . With the proposed merger such competition will no longer be forthcoming and will require certain regulatory interventions by the Minister and the NTRC.

## 8.14 Statistics

The NTRC continued in 2014 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 while Table 4 on page 27 gives a detailed overview of customer data supplied by the telecommunications providers.

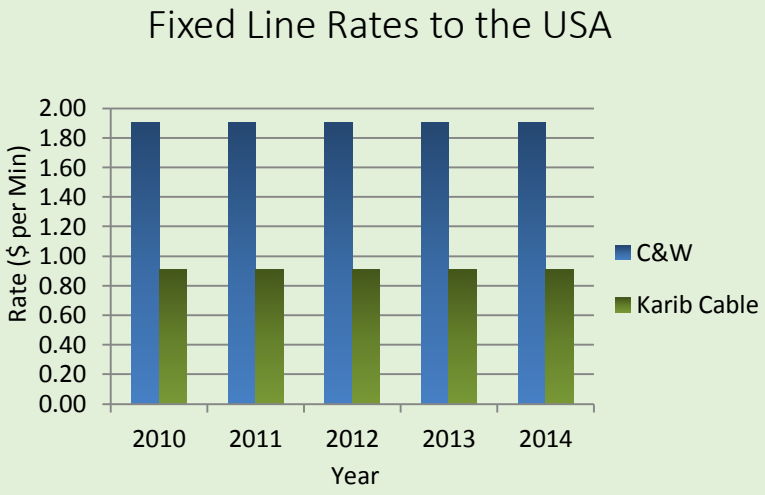



*Figure 3*

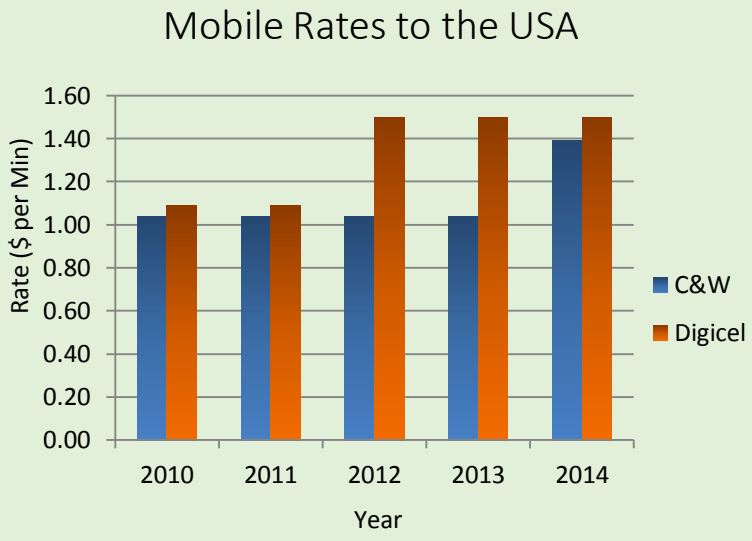



*Figure 4*

The rates depicted in Figure 3 are not regulated. No competition existed in the fixed line market until Karib Cable entered in 2009. It is noted that these rates has remained unchanged from 2010 to 2014.

The rates depicted in Figure 4 are not regulated. In 2010 the rates were the lowest ever recorded to under $1.00 EC per minute during peak time.There was an increase in Cable and Wireless rate in 2014.

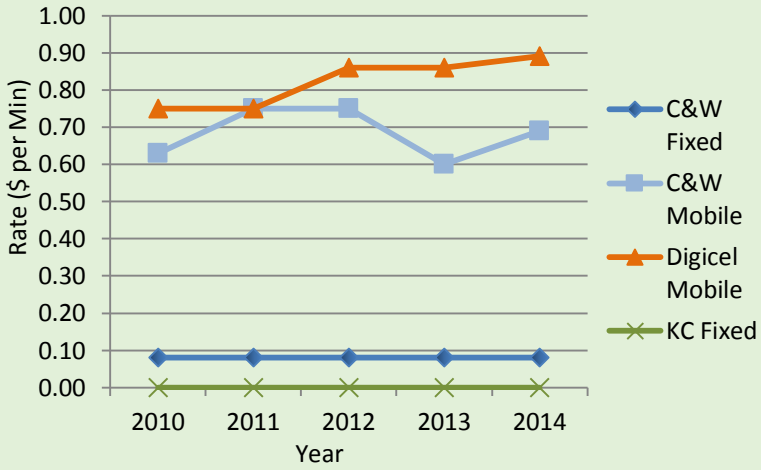



*Figure 5*

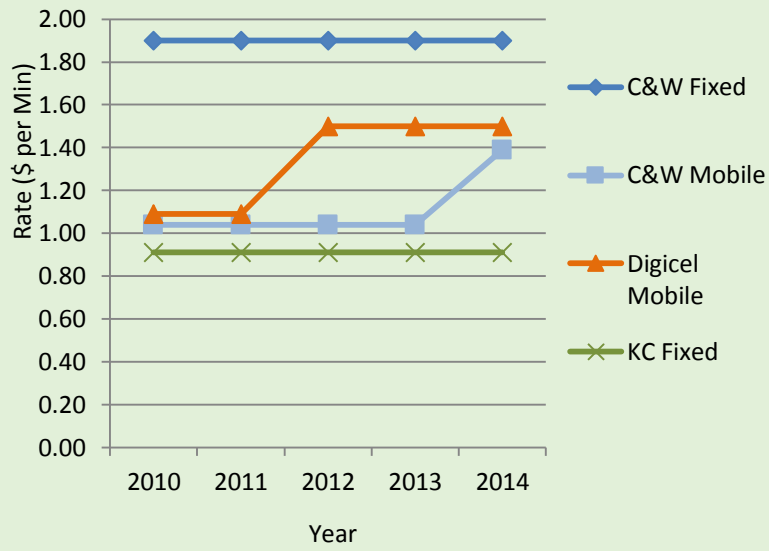



*Figure 6*

The domestic rates in figure 5 are the daytime rates for calls made to customers on the same network. In 2014 there was an increase in both C&W and Digicel mobile domestic rates.

The international rates in figure 6 are the daytime rates for calls to the USA for all providers. Figure 3 and Figure 4 show that while fixed line and mobile rates are basically on par for international calls, there is a large discrepancy between fixed line and mobile rates for domestic calls.

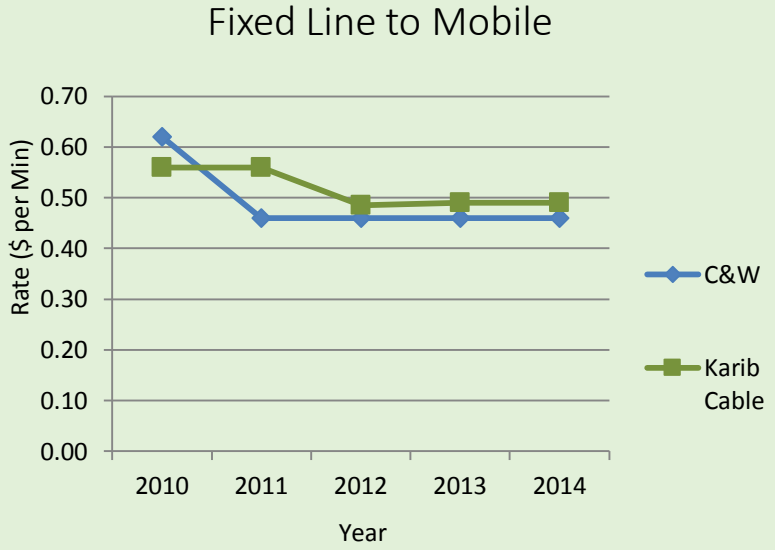



*Figure 7*


*Figure 8*

Figure 7 shows Cable & Wireless' and Karib Cable's fixed line to mobile rates for 2010 to 2014. We see a reduction to Cable & Wireless' rate from 2011 to 2014. Karib Cable's rate remained constant over 2010 to 2011; but a reduction took place in 2012 however the rates remained unchanged from 2013.

It is noted that Cable & Wireless' mobile subscribers have decreased in 2014 while Digicel's customers increased. Digicel's percentage in market share continues to grow over Cable & Wireless.

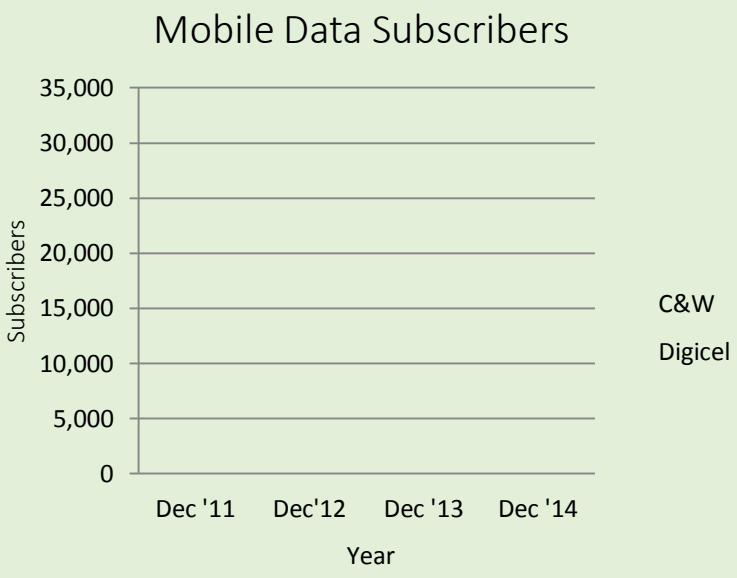



*Figure 9*

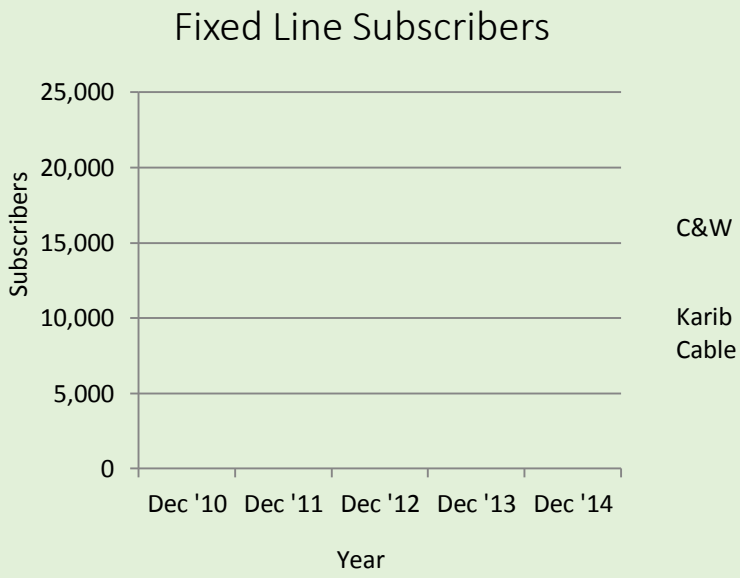



*Figure 10*

Figure 9 shows a comparison of the total mobile data subscribers for Cable & Wireless and Digicel from 2010 to 2014.

Figure 10 shows a decrease in fixed line subscribers in 2012 and 2013 for both Cable & Wireless and Karib Cable. However, in 2014 there was an increase in fixed line subscribers for Cable and Wireless.

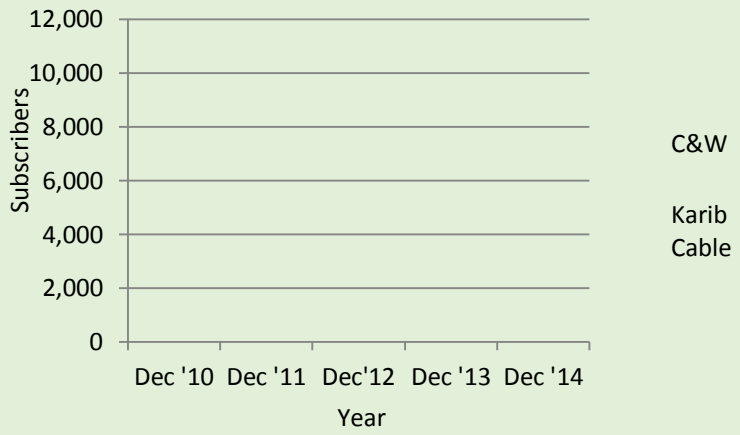



*Figure 11*

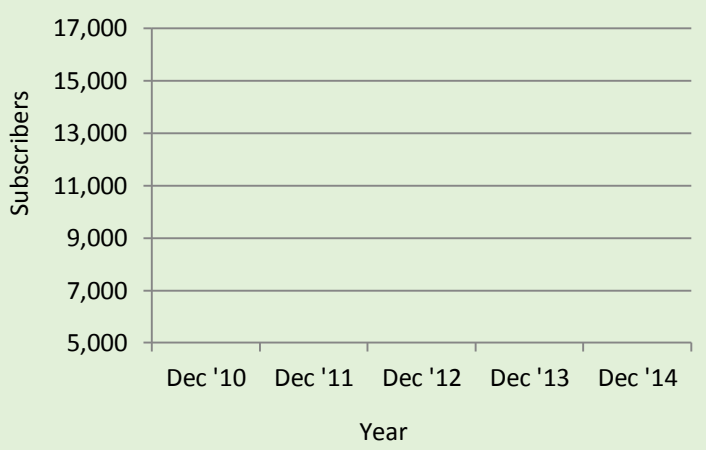



*Figure 12*

Figure 11 shows the number of broadband internet customers by provider. Cable and Wireless had experienced a decline in broadband subscribers in 2012, however there was an increase in broadband subscribers in 2013 and 2014. Karib Cable has also increased its number of subscribers for 2013 and 2014.

Figure 12 shows the number of broadband internet subscribers from 2010 to 2014 on a whole. There has been a slight decline in 2012, however there is an increase in the broadband internet subscribers in 2013 and 2014.

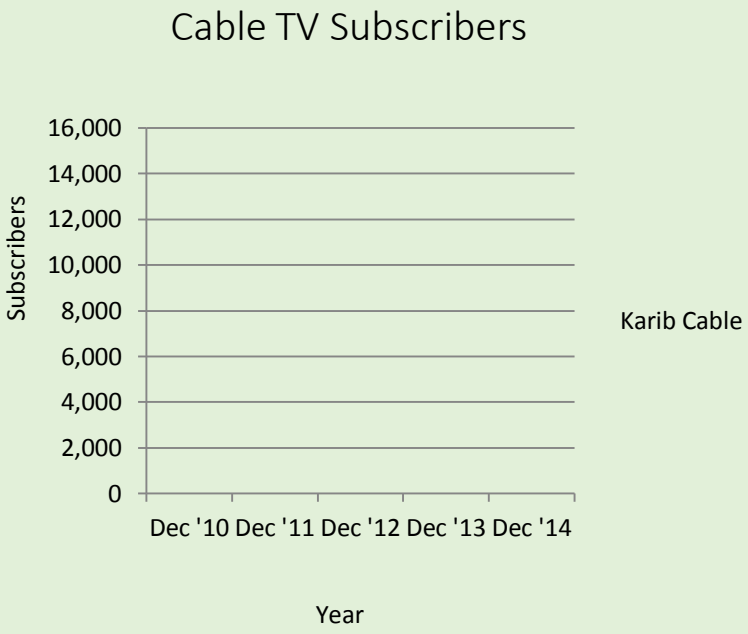



*Figure 13*

Figure 13 shows that Karib Cable experienced a slight decrease in Cable TV subscribers during 2014.

| | | | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|---|---|---|---|---|---|
| Cable & Wireless (WI) Ltd | Fixed Line Subscribers | Residential | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx |
| | | Business | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx |
| | | **Total** | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx |
| | Internet Subscribers | Dialup | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx |
| | | ISDN | x | x | x | x | x | x | x | x |
| | | ADSL (Residential) | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx |
| | | ADSL (Business) | | | | | xxxxxx | xxxxxx | xxxxxx | xxxxxx |
| | | **Total** | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx |
| | Mobile Subscribers | Post paid | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx |
| | | Prepaid | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx |
| | | **Total** | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx |
| Digicel | Mobile Subscribers | Post paid | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx |
| | | Prepaid | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx |
| | | **Total** | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx |
| Karib Cable | Cable TV Subscribers | Residential | | | | | | xxxxxx | xxxxxx | xxxxxx |
| | | Business | | | | | | xxxxxx | xxxxxx | xxxxxx |
| | | Free Service | | | | | | xxxxxx | xxxxxx | xxxxxx |
| | | **Total** | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx |
| | Internet Subscribers | Residential | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx |
| | | Business | | | | | xx | xxxxxx | xxxxxx | xxxxxx |
| | | Free Service | | | | | | xxxxxx | xxxxxx | xxxxxx |
| | | **Total** | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx |
| | Fixed Line Subscribers | Residential | | | | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx |
| | | Business | | | | x | x | x | x | x |
| | | Free Service | | | | | | x | x | x |
| | | **Total** | | | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx | xxxxxx |

*Table 4*

Table 4 contains the Customer data submitted from the three Telecom Providers. The ISDN Internet Service for Cable & Wireless is no longer in use. For Karib Cable's data for 2014, the three services have been broken down into residential, business and free service.

## 8.15 Licencing

The NTRC continued in 2014 to facilitate the application process for new licences under the Telecommunications Act (CAP 418) of the Revised Laws of St. Vincent and the Grenadines 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.

| | | 2009 | | 2010 | | 2011 | | 2012 | | 2013 | | 2014 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | New | Renew | New | Renew | New | Renew | New | Renew | New | Renew | New | Renew |
| **Individual type licenses** | Fixed Public | 0 | N/A | 1 | N/A | 1 | N/A | 0 | N/A | 0 | N/A | 0 | N/A |
| | Internet Networks | 0 | N/A | 0 | N/A | 0 | N/A | 0 | N/A | 0 | N/A | 1 | N/A |
| | Subscriber Television | 0 | N/A | 2 | N/A | 1 | N/A | 0 | N/A | 1 | N/A | 1 | N/A |
| | Int'l Simple Voice Resale | 0 | N/A | 1 | N/A | 0 | N/A | 0 | N/A | 0 | N/A | 1 | N/A |
| | Mobile Cellular | 0 | N/A | 0 | N/A | 0 | N/A | 0 | N/A | 0 | N/A | 0 | N/A |
| | Public Radio paging | 0 | N/A | 0 | N/A | 0 | N/A | 0 | N/A | 0 | N/A | 0 | N/A |
| | Submarine cable | 0 | N/A | 0 | N/A | 0 | N/A | 0 | N/A | 0 | N/A | 0 | N/A |
| **Class type licenses** | Private network/services | 0 | N/A | 1 | N/A | 1 | N/A | 1 | N/A | 0 | N/A | 0 | N/A |
| | Internet services | 0 | N/A | 0 | N/A | 0 | N/A | 0 | N/A | 0 | N/A | 0 | N/A |
| | Radio Broadcast | 0 | N/A | 8 | N/A | 1 | N/A | 0 | N/A | 0 | 3 | 1 | 5 |
| | Value Added Services | 0 | N/A | 0 | N/A | 0 | N/A | 0 | N/A | 0 | N/A | 1 | N/A |
| | Community radio | 1 | N/A | 0 | N/A | 0 | N/A | 0 | 2 | 0 | N/A | 0 | N/A |
| | Television Broadcast | 0 | N/A | 0 | N/A | 0 | N/A | 1 | N/A | 0 | N/A | 0 | N/A |
| | Maritime mobile | 1 | 23 | 0 | 19 | 3 | 42 | 4 | 67 | 35 | 31 | 35 | 31 |
| | Land mobile | 1 | 275 | 3 | 212 | 5 | 267 | 3 | 172 | 2 | 155 | 3 | 204 |
| | Aeronautical radio | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Aircraft station | 3 | 18 | 1 | 16 | 2 | 17 | 2 | 17 | 4 | 17 | 3 | 17 |
| | Amateur Radio station | 29 | 23 | 36 | 36 | 38 | 60 | 27 | 80 | 25 | 84 | 26 | 82 |
| | Citizen Band radio | 0 | 0 | 0 | 5 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| | Family Radio Band | 4 | 0 | 2 | 1 | 1 | 0 | 1 | 5 | 1 | 3 | 1 | 3 |
| | Ship Station | 61 | 112 | 28 | 131 | 44 | 170 | 27 | 122 | 15 | 182 | 18 | 157 |
| **Miscellaneous** | CPE Dealers reg. fee | 18 | 12 | 18 | 17 | 17 | 44 | 15 | 18 | 14 | 16 | 10 | 17 |
| | Exam Fees for Radio Operators | 0 | N/A | 0 | N/A | 2 | N/A | 0 | N/A | 1 | N/A | 1 | N/A |
| | Type Approval fee | 0 | N/A | | N/A | 3 | N/A | 16 | N/A | 22 | N/A | 27 | N/A |
| | Ship station Operators | 24 | 16 | 25 | 32 | 17 | 55 | 25 | 9 | 27 | 7 | 29 | 21 |
| | Aircraft Station Operators | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

***Table 5***

Table 5 outlines the number of licences issued from 2009 to 2014. These issued licences are broken down as being new licences, issued in the specific year, and renewals of existing licences, first issued in previous years.

## 8.16 Policy Recommendations

1. Cyber Security/Strategy - 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 or the EU, noting the potential threat to their states 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 the NTRC's 2009 Annual Report. While NTRC SVG is doing some work on this issue via the Associate Degree programme in Cyber Security recently launched at the St.Vincent and the Grenadines Community College along with school presentations on the subject matter, more has to be done at the national, regional and CARICOM level.

   As the NTRC develops a National Broadband Plan which will also guide the work of the USF, it is imperative that a cyber-strategy be also developed, both at the regional and domestic levels. The State cannot wait until there is a catastrophic event occurring in the business community or Government sector to do this. Banks always create vaults to protect their assets. The bigger the banks, the bigger the vaults! It would be unwise for a large national bank to be built without a vault. In the same way, larger and faster networks that connect persons cannot be built, along with critical infrastructure, and systems without the relevant structures, systems and regulatory framework to protect these networks and services. The ITU has done some work in this area in 2012 in assisting Caribbean countries to set up national CIRTs. It is now up to the state to move this process forward. These are areas that can be funded to some extent at the local level by the USF as soon as its mandate and scope has been broadened.

2. Regulatory Focus on Convergence- St. Vincent and the Grenadines has to move from the current approach of just regulating networks and some services offered over these networks. The Country has to move to regulating what goes on with these networks, and not just the "content",. but more so, the applications that are allowed to or not allowed to operate on these networks. More details on this issue are outlined in the NTRC's 2009 Annual Report. The proposed new Electronic Communications Bill falls short on this critical issue. The sector has moved from a telecom one to one of ICT so must our regulatory framework.

3. USF mandate: As a country, the question has to be asked, what should access be created to? Access to the global internet with the content of developed countries or to the global internet with content also from the region and the nation states? Access cannot be created to something that does not exist and which our USF, as currently structured, can only provide limited funding. the USF scope has to be expanded to allow for more and sole funding of content related projects.

   Some progress was finally made in this area in November 2014 with the convening of a regional forum on the direction of the ECTEL Council of Ministers on the initiation of NTRC SVG.

   Hopefully, ECTEL follows through on the required work in 2015 to come up with the revised USF regulations.

4. Mobile Broadband: One should be cautious with the potential of mobile broadband which is being pushed by some as a real solution of bringing broadband to the masses. From what is being seen in a number of developed countries, there are limitations to this technology. If it were different, there would not be a move to limit the quantity of data downloaded to mobile devices by consumers. There is a growing move to do away with unlimited mobile plans which LIME has already moved to implement and which Digicel has also followed in 2014. Currently, fixed line internet does not have data caps. If these mobile broadband solutions which purports speeds greater than DSL are so robust, why is there caps on the data that their customers can download? The NTRC believes it has to do with capacity. The mobile networks are not designed to backhaul such a large amount of data by so many concurrent users. It is also the reason more and more mobile service providers are using Wi-Fi hot spots to offload data from their mobile networks. It is the belief of the NTRC that this is the way to go. The NTRC can look at installing more Wi-Fi hotspots across the country and use them as a source of revenue for the USFs by handling traffic from the mobile operators. Such a network will also have positive spin offs for fixed broadband into homes. The mobile devices will automatically switch between the Wi-Fi spots and the mobile networks based on which are in close proximity. This is a project that can be done in all five ECTEL states as a regional project with local components.

The country also has to look beyond just mobile phones but other devices and services. Such a network can also be used to link devices in police cars, service vehicles, etc. Such a network will require few new towers etc. but will use existing buildings and existing fixed line network assets.

5. 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 2017. The country 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 the population from productively participating in the country's economic, social and cultural development thereby reducing the level of the competitive advantage as a nation. At our current growth rate for fixed internet we would not reach 90% penetration of households until 2025. The NTRC has developed a draft National Broadband Plan in 2014 and will be seeking to have it taken to Cabinet in 2015 for adoption and subsequent implementation.

# 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 Laws of St. Vincent and the Grenadines 2009. Most of the objectives cannot be accomplished on its own due to the mandate given to ECTEL on certain issues. However, the Universal Service Fund allows for some flexibility at the national level which NTRC SVG has sought to utilize the available resources for the maximum benefits via practical and needed projects that meet the needs of the 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 in order to ensure that the pending review of the NTRC's 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 2014

1. Amendments to the current Universal Service Fund (USF) Regulations in order to facilitate the expansion of the mandate of the USF.

   The NTRC has developed and put forward a number of recommendations to extend the mandate of the USF. This was formally presented to all 5 NTRCs and ECTEL officials at the regional forum convened by ECTEL in St. Lucia in November 2014. Furthermore and in line with this, ECTEL plans to conduct a public consultation in early 2015 with the aim of gathering feedback from stakeholders regarding the proposals put forward by the NTRCs to widen the mandate of the USF as well as to adjust the contribution rate of service providers. The main recommendations that will be highlighted in the public consultation are:

   - Redefinition of the scope of the Universal Service to include technology and ICT ancillary services;
   - Change of the name from Universal Service Fund to Universal Service and Access Fund, which will encompass content and access;
   - Change in the eligibility conditions for providers who wish to implement projects;
   - Amendments to the method of calculation of the annual administrative budget;
   - Rules of contingency;
   - Changes in the contribution rate to the Funds. The implementation of different contribution rates for different categories of services and service providers.

2. To execute the 2nd annual NTRC's $I^2$ Competition which presents the opportunity for students at the Secondary and Tertiary level institutions as well as the Medical Colleges to develop innovative ideas and Mobile Applications that can improve the efficiency and effectiveness of the public service.

   The 2nd annual NTRC's $I^2$ Competition commenced in September 2014. This year's competition saw 46 teams

from 13 schools entering with participants from both the Mainland and the Grenadines with 19 teams from 8 schools advancing as finalists in the Grand Finale which will be held on Thursday January 15, 2015 at the NIS' Conference Room. The event will be streamed live using the services of the company ITFX Digital Solutions who happen to also be a part of the Incubator Program established by the Government's CARCIP ICT Project.

While the annual competition deals specifically with the creation of ideas and mobile applications relating to the local public service, the underlying foundation and vision of this strategic project is to foster the development of youth in the field of application creation for any market and thus for the creation of more local content and entrepreneurship. In light of this, St. Vincent and the Grenadines has already begun to see movement in this direction as is evident by Mr. Cenus Hinds, one of the winners of last year's competition in the mobile application category and a prime example of what the country hopes to achieve. In the months following, the aspiring young entrepreneur formed a company and developed a commercial mobile application called Konservi which is available in the Google Play Store. Mr. Hinds, 21 and a recent graduate of the SVG Community College, was selected by the NTRC to comprise the panel of judges residing over this year's competition.

He is also the author of a recently published novel "The Eclipse" that is currently available for sale on Amazon. It is the youth and budding entrepreneurs like Mr. Hinds that the nation has to provide the framework and assistance for so that they can achieve their full potential and thereby create new economic activities via startup companies that have the potential to transform the people and economy in this new digital age.

3. The development of two major USF projects that could attract funding from regional and international donors.

   The NTRC has already identified the components and the respective costs that will comprise these projects. However it was decided that the projects will stand a better chance for potential funding if the agenda is one with a regional scope. As such the NTRC plans to hold discussions with the other NTRCs in early 2015 to identify the various components and initiatives which they will be interested in partnering with the NTRC SVG to execute.

The components for the new projects which have been developed so far include:

a. A wearable mobile unit/device for a selected number of senior citizens that will provide a means of indication by alert if they become incapacitated, for example, after a fall etc.

b. Special Communication Equipment for schools and centers that cater for special needs and disabilities.

c. Communication Equipment for first responder volunteers thus expanding the ability to communicate nationally in times of disasters.

d. Equip strategic public locations to provide Wi-Fi hotspot service, as well as additional community centers nationally.

e. Provide streaming equipment and premium streaming accounts to the Agency for Public Information in order to facilitate live web streaming of public events.

f. SMS and email systems for NEMO that will allow the organization to alert citizens of an impending or current disaster situation. Such alerts will have the capacity to deliver information to citizens at a national level or to a geographically selected area of the country using an online map. For example only drivers traveling to the country side will be notified of a blocked/damaged road and the need to divert. The system will be integrated with the networks of both mobile service providers.

g. Provision of external access points on homes located in very low income neighborhoods that will provide hot spot services to the surrounding community.

h. Provision of heavy duty printers to the educational institutions inclusive of 3D printers for the Divisions of Technical Studies at the Community College.

i. Develop and deliver short training courses at subsidized costs using the facilities at the Learning Resource Centers (LRCs). Such courses will not exceed more than 10 weeks in duration. The courses will cover the following areas:

   i. Beginners level in 3D Animation.
   ii. Introduction to Web Designs.
   iii. Computer Aided Design (CAD).
   iv. Graphic Design.

v. Mobile Application Development.
vi. Server Management.
vii. Film Making.

4. The development of an electronic payment option on the NTRC's website.

   This task has been substantially completed. The systems have been put in place with the inclusion of the relevant coding on the Commission's website. This is being implemented using the 4C's ecommerce platform. The NTRC is currently in the phase of testing the system with trial payments.

5. The development of a draft proposal for a National Broadband Plan for St. Vincent and the Grenadines.

   This task was completed in December 2014 with substantial work being done by a member of staff that is currently on the Government's SET Program. The NTRC is currently seeking feedback from relevant stakeholders after which the drafted plan will be finalized and recommended to Cabinet for its adoption and implementation

6. The development and execution of a new Public Awareness Plan for the NTRC.

   A new Public Awareness Plan was developed and executed in 2014 by the NTRC. One of the major components included the utilization of social media platforms to increase the reach and penetration of the NTRC's content while keeping cost within the Commission's budget.

7. Research Radiation and QoS policies for possible implementation.

   The QoS drafts were developed in 2014. They are listed among the topics to be discussed at the Commissioners' Meeting scheduled for January 2015 after which the finalized drafts will be forwarded to ECTEL for possible consideration in the new QoS regulations for the sub region. These drafted standards were developed after taking into consideration the trends in technology globally and the feedback the NTRC received regarding

the major concerns from consumers during the public awareness and consultation activities held over the last few years. The NTRC was not able to complete work on the radiation standards in 2014 as the ICT staff was deployed in the last couple of months in 2014 to resolve the situation with the Wi Fi services in the educational institutions. Work on the radiation standards will be carried out in 2015.

# 11. Major Objectives for 2015

1. To execute the 3rd annual NTRC's $i^2$ Competition which presents the opportunity for students at the Secondary and Tertiary level institutions to develop innovative ideas and mobile applications that can improve the efficiency and effectiveness of our public service.

   This will commence in September 2015. The aim is to further improve the number of participating teams and schools. To do this, the plan is to execute targeted public awareness activities in the first half of the year at those secondary schools that have not participated in the competition to date.

2. Work along with ECTEL and the other NTRCs in developing new regulations and contribution order for the Universal Service Fund (USF).

   This critically influences the scope of work which the NTRC wants to implement using the fund's resources. As is, the NTRC cannot implement any new projects until the USF contribution order is amended to allow for increase revenues to the fund due to the fact that the current revenue stream can only support the continuation of the existing USF projects.

3. To submit the draft proposal of the National Broadband Plan to Cabinet for adoption and implementation.

   The country needs a clear policy on what we want to accomplish with the broadband penetration levels, speeds and quality and a reasonable timeframe in which this can be done. This can only be done via a National Broadband Plan established by the Government with clear goals, timelines and a commitment to provide the relevant resources where necessary. The country cannot leave such a critical parameter of our national development to the discretion of the service providers.

4. The Launching of our national IXP (Internet exchange point).

   The NTRC was given the responsibility of executing this task which is a component of the World Bank funded CARCIP Project. It was the intention to have it completed during 2014 but this was not achieved owing to varying reasons. The IXPs that have so far been established in the other ECTEL states namely Grenada, Dominica and recently in St. Lucia, are located in either the NTRC's office or a Government office and only hosts fixed line ISPs being LIME and Flow/Karib cable, and in the case of Dominica, LIME and the Cable TV operators. In SVG, it is the aim to have all ISPs on the IXP inclusive of the mobile service providers such as Digicel. The NTRC was given approval to locate the IXP equipment at the subsea landing station at Arnos Vale which is a prime location to facilitate the site of servers for third party content providers such as Facebook, Google and Akamai. The true benefits of an IXP cannot be fully realized until the content providers are located at the IXP location as in their absence domestically destined traffic will still have to flow through internationally located IXPs.

   At present, all of the equipment and servers for the IXP have been procured and are already located at the subsea landing station at Arnos Vale which is owned by Southern Caribbean Fiber (SCF) (recently acquired by Digicel). The current delay is in getting SCF to install the necessary power and grounding circuits to the two equipment racks that will house the IXP equipment and servers. After that has been established, the three service providers LIME, Flow and Digicel, who already have communications links to this facility, will connect to the IXP and the necessary configurations on the IXP equipment will be done. The NTRC expects to have the IXP in operation by February 2015.

5. The Launching of the electronic payment option for the NTRC.

   Licencees will now be able to make payments using credit and debit cards via the NTRC's website. It will be of great benefit especially to the international clients who normally submit type approval applications to the NTRC on behalf of manufacturers who intend to sell their

products in SVG. These manufacturers range from mobile phone manufacturers, such as Apple, to photocopier companies, such as Canon. The current payment procedure which involves wire transfer of payments to the NTRC's account before applications can be processed proves to be a very slow, time consuming process and not in line with the state of technology and e-commerce globally. The NTRC believes that it can be the leading force in this area for public service entities in the country.

6. The development of a draft Radiation Standard for possible implementation.

   These standards will take into consideration the location of radio transmitters and its proximity to human establishment and the like. Such issues are a concern both globally and locally. Presently, there are no regulations or policies to guide the location of such equipment. As the nation moves towards a more wireless society, these concerns will continue to increase. It is an area that the NTRC has been calling on ECTEL to address over the last five years without success and as a result, the Commision has decided to start the process following which the recommendations will be provided to ECTEL for possible implementation via regulations.

7. To seek international funding for two USF projects in collaboration with other NTRCs.

   The NTRC SVG plans to engage the other regional NTRCs in partnership to develop and implement two large ICT projects that can be implemented using funds from the USF as well as funds sourced from an external donor agency such, as the World Bank, EU or the CDB.

   The NTRC SVG strongly believes that the expansive experience in executing ICT projects under the USF thus far will lend itself as an advantage when engaging these international agencies for accessing joint funding. These projects will comprise of the components identified under Objective 3 for 2014 shown above.

8. To monitor the LIME/Flow merger.

   The NTRC intends to work with ECTEL and all relevant Government ministries/departments/agencies to ensure all regulatory provisions are followed in the proposed merger of these two service providers that currently operate in the country.

   The NTRC will also assist ECTEL in ensuring that the relevant conditions are included in a new Price Cap Plan that will protect the interest of the consumers and other service providers from any possible negative effects that can result from the likely situation of a sole provider of services as well as the ability to offer quad play services.

9. To increase public awareness on the issues of Cyber Security and Cyber Crime.

   The NTRC will continue to execute the public awareness programs on these subject areas in the nation's educational institutions in 2015. The NTRC plans to expand this awareness program to reach persons outside of schools via various media channels. The NTRC also sees the expansion of the mandate of the USF as a means to facilitate the scope of work that still needs to be covered nationally on this matter, such as the funding of the operations of a national Computer Incident Response Team (CIRT).

# 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 2014