



# 2016

## Annual Report

NATIONAL TELECOMMUNICATIONS  
REGULATORY COMMISSION  
St. Vincent and the Grenadines

In Photo: NTRC's GMDSS Training event at Fisheries Conference Room

# About Cover Photo

This photo was taken at the first Global Maritime Distress and Safety System (GMDSS) radio training session which took place at the Fisheries conference room on Wednesday April 27, 2016 in Kingstown. The NTRC in collaboration with the St Vincent and the Grenadines Coast Guard Services facilitated the event. The training session catered for fishermen and persons involved in maritime activities across the country. The aim of the training session was to advise the participants of the new GMDSS system which was implemented by the NTRC

to facilitate emergency and non-emergency communication at sea.

The insert shows the facilitator Mr. Grayson Stevens, Leading Seaman at the SVG Coast Guard Services demonstrating to the participants how the GMDSS radio is to be used. This aspect was part of the hands on segment of the training. Training sessions were also held at various locations throughout St. Vincent and the Grenadines which include Barrouallie, Bequia, Calliaqua and Union Island.

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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.

## 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. St. Clair Scott**  
Chairman



**Mrs. Roxann Williams**  
Deputy Commissioner



**Mr. Richard MacLeish**  
Commissioner



**Dr. Alston Stoddard**  
Commissioner



**Mr. Petrus Gumbs**  
Commissioner



## 5. Staff Members





**Apollo Knights**  
Director



**Nadine Hull**  
ICT Manager



**Shonden Baptiste**  
Administrative  
Coordinator



**Kyron Duncan**  
USF Administrator



**Lizrene Charles**  
Operations Officer



**Mishka L. Quashie**  
Accountant



**Cyron Cyrus**  
ICT Technician



**Andra Keizer**  
Administrative  
Officer



**Carlton Derrick**  
Intern



**Keisha Gurley**  
Consumer & Public  
Relations Manager



**Jori Thorne**  
Intern



**Marcellus  
Constance Jr.**  
ICT Officer



**Kalsia Ottley**  
Intern



## 6. SWOT Analysis

### Strengths

- The NTRC has the responsibility of 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 members and Commissioners.
- Staff members are keen to participate in capacity building programmes in line with the needs of the organization.
- A balanced combination of experienced staff alongside young, innovative and qualified interns

### Weaknesses

- Inadequate price controlling mechanisms for dominant suppliers of services specifically in areas of mobile voice, Fixed Broadband and Cable TV retail rates.

- Lack of regulatory oversight on promotional activities of mobile service providers.
- Absence of Quality of Service (QoS) regulations in the sector. This is an urgent issue noting the recent QoS issues being experienced by consumers of Fixed Broadband services.
- 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.

### 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 Commission's legislative framework.
- The recent introduction of mobile broadband into the market by both mobile service providers presents a platform for the entry/creation of new technology based services which was not possible hitherto.
- Certain project components of the Caribbean Regional Communications Infrastructure Program (CARCIP) project provide a great opportunity to bring the Grenadines broadband network on par with the mainland via the laying of a domestic subsea cable along with possibilities of fiber connectivity to the communities on both the mainland and the Grenadines.

## 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 (OTTs) that evade the Commission'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:

### **Cyber Security**

The NTRC has held discussions within secondary schools to sensitize students on cyber related crimes and the various ways in which they can protect themselves online. Best practices of using the internet were also published through our social media pages. The NTRC continues to work in collaboration with the St. Vincent and the Grenadines Community College (SVGCC) to offer an Associate Degree programme in Cyber Security. Additionally, the NTRC has worked along with the Ministry of Economic Planning, Sustainable Development, Industry, Information and Labour to develop a plan to educate students in secondary and tertiary schools about the Cybercrime Act 2016. Notwithstanding these initiatives, the NTRC believes that the Government needs to make the commitment to establish a national Computer Incident

Response Team (CIRT), such an entity is needed at this time to serve as the focal point to address the cyber security issues that are of increasing frequency in recent times and which are targeting both the private sector and citizens.

### **Broadcast Standards and Royalties**

In the absence of broadcast legislation or content/programming 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 integrity of the Caribbean's civilization going forward.

## 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 expected 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 for which St. Vincent and the Grenadines is well into 90% penetration at the household level, but is just about half at 52% at the household level for broadband. A penetration rate at about 50% in electricity and water today is unimaginable. Our country is in the process of developing a National Broadband Plan to bring the broadband penetration above 90% by 2022. 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 took 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. The draft Broadband Plan which was submitted to Cabinet in March 2015 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 current and future users to utilize broadband to its fullest potential.

The NTRC in collaboration with the Ministry of Economic Planning, Sustainable Development, Industry, Labour and Information through the World Bank funded Caribbean Regional Communication Infrastructure Program (CARCIP) further developed the draft broadband plan in 2016. It is expected that the draft Broadband Plan will be finalized through a consultative process with all of the relevant stakeholders in the first quarter of 2017.

In addition to the above, the Universal Service Fund (USF) has been working on increasing the broadband penetration level within the country through seven different projects that have been implemented since 2010, particularly the SMART Project which saw the homes of over three hundred and forty persons being connected with internet service at a subsidized cost. Numerous public locations, such as community centers, educational institutes and tourism sites have been outfitted with wireless service which can be accessed by the general public. Noting the success of the projects that have been implemented



to date, the USF has begun the development of three new projects which will see the number of hotspots in the country increasing, as well as, providing over five hundred homes with subsidized internet service.

## 8. Sector Review

### Financial Data Review

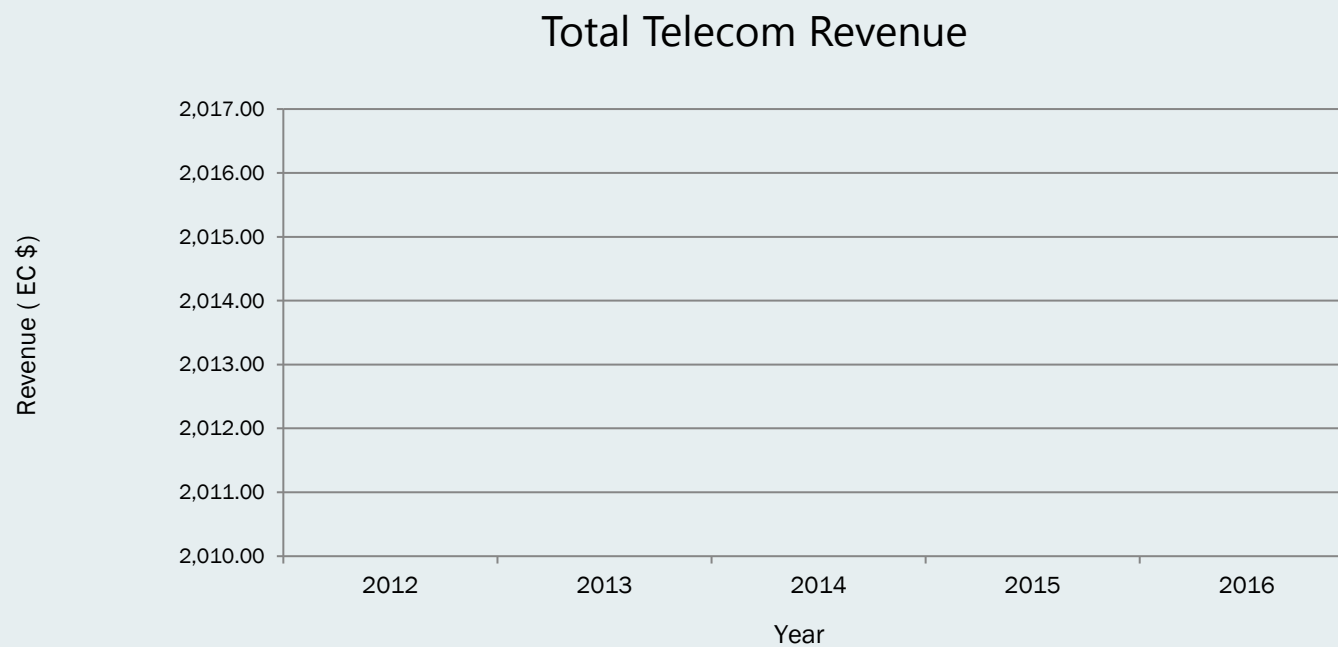
#### Telecommunications Sector Revenue

Year	Cable and Wireless (SVG) Ltd							Digicel St. Vincent Ltd				
	Mobile Revenue (EC\$)		Fixed Line Revenue (EC\$)		Internet Revenue (EC\$)	Other Revenue (EC\$)	Total	Mobile Revenue (EC\$)		Data Revenue (EC\$)	Other Revenue (EC\$)	Total
	International Revenue (EC\$)	Domestic Revenue (EC\$)	International Revenue (EC\$)	Domestic Revenue (EC\$)				International Revenue (EC\$)	Domestic Revenue (EC\$)			
2012	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX
2013	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX
2014	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX
2015	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX
2016	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX

TABLE 1 TOTAL REVENUE EARNED BY PROVIDERS OF TELECOMMUNICATIONS SERVICES FROM 2012 TO 2016

Year	Kelcom Int'l (Columbus Communications)						Silvakast
	Fixed Line Revenue (EC\$)		Cable TV Revenue (EC\$)	Internet Revenue (EC\$)	Other Revenue (EC\$)	Total	Cable TV Revenue (EC\$)
	International Revenue (EC\$)	Domestic Revenue (EC\$)					
2012	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	-	XXXXXXXX	-
2013	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	-	XXXXXXXX	-
2014	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	-
2015	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	-
2016	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX

TABLE 2 TOTAL REVENUE EARNED BY PROVIDERS OF TELECOMMUNICATIONS SERVICES FROM 2012 TO 2016



TELECOM REVENUE EARNED BY THE PROVIDERS FROM 2012-2016

FIGURE 1



### Revenue of the NTRC and ECTEL for the period 2002 to 2016

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

There was a marginal increase of 1% in 2016 for frequency fees. Additional fees were collected for new frequencies.

In 2016, there was a slight reduction of 1% in the application fees compared to 2015.

Year	NTRC Application fees	Percent increase	NTRC & ECTEL Frequency Fees	Percent increase
<b>2002</b>	\$107,036		\$607,600	
<b>2003</b>	\$5,100	-95%	\$1,366,604	125%
<b>2004</b>	\$8,800	73%	\$1,577,400	15%
<b>2005</b>	\$10,300	17%	\$1,539,669	-2%
<b>2006</b>	\$11,275	9%	\$1,681,560	9%
<b>2007</b>	\$22,725	101%	\$1,245,183	-25%
<b>2008</b>	\$13,325	-42%	\$1,906,089	53%
<b>2009</b>	\$13,225	-7%	\$1,487,390	-21%
<b>2010</b>	\$23,846	80%	\$1,392,962	-7%
<b>2011</b>	\$16,109	-48%	\$1,723,158	24%
<b>2012</b>	\$16,390	2%	\$2,055,433	19%
<b>2013</b>	\$15,927	-3%	\$1,787,020	-13%
<b>2014</b>	\$31,547	98%	\$1,748,588	-2%
<b>2015</b>	\$25,617	-18%	\$2,681,489	53%
<b>2016</b>	\$25,324	-1%	\$2,708,686	1%

TABLE 3

### Licence fees received by the Government for the period 2002 to 2016

There was a 7% decrease in revenue for licence fees collected by the NTRC on behalf of the Government in 2016 compared to 2015. This is mainly due to a decline in two of the Telecommunications Providers' revenue.

Year	License Fees	Total	Percent Increase
<b>2002</b>	3,365,391	3,365,391	
<b>2003</b>	2,803,927	2,803,927	-17%
<b>2004</b>	3,329,145	3,329,145	19%
<b>2005</b>	3,421,159	3,421,159	3%
<b>2006</b>	3,850,955	3,850,955	5%
<b>2007</b>	4,301,521	4,301,521	11%
<b>2008</b>	4,081,151	4,081,151	-6%
<b>2009</b>	4,065,706	4,065,706	-4%
<b>2010</b>	4,034,096	4,034,096	-1%
<b>2011</b>	3,886,912	3,886,912	-4%
<b>2012</b>	3,756,898	3,756,898	-3%
<b>2013</b>	3,638,128	3,638,128	-3%
<b>2014</b>	4,146,265	4,146,265	14%
<b>2015</b>	4,079,164	4,079,164	-1.6%
<b>2016</b>	3,788,925	3,788,925	-7%

TABLE 4



Licence Fees collected from 2012 - 2016

FIGURE 2

## Financial Performance of the NTRC

### A. Revenue

The NTRC projected to receive \$1,160,004.33 for the year ending December 31, 2016. However, \$1,230,201.52 was received, which is \$70,197.19 more than the budgeted amount. Collected in 2016 was \$45,580.00 in receivables outstanding for numbering fees. \$16,000.00 was received for sickness and maternity benefits and \$5,000.00 more was received for application fees and interest than budgeted.

### B. Expenditure

#### i. Recurrent

For the year ending December 31, 2016, the NTRC projected to spend \$1,149,791.47 on recurrent expenditure; however, \$1,153,401.94 was actually spent. The Commission also has accrued expenses for 2016 amounting to \$63,505.73 which include staff gratuities and other capital items. Overall, total expenditure for 2016 amounted to \$1,216,907.67.

#### ii. Capital

The amount of \$17,430.40 was budgeted for capital expenditure for the financial year 2016. However, \$29,142.69 was spent which gives a difference of \$11,712.29. New Board room chairs were purchased at the end of the year amounting to \$14,000.00.

### Conclusion

The NTRC's financial performance over the 2016 financial year was satisfactory.

## Projected Revenue for 2017

For the fiscal year 2017, the NTRC is projected to collect \$2,820,735.00 in revenue from frequency fees. This is an increase of 4% or \$119,490.00 compared to the 2016 amount of \$2,701,245.00. This increase is due to new frequencies that were issued in 2016 as well as, expected new frequencies in 2017.



## Human Resource Development for 2016

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 2016 were as follows:

- Cisco Certified Network Associate (CCNA) Certification. This course is delivered online and is self-taught.
- Masters in Project Management. This program is being done online with the University of International Cooperation in Costa Rica.
- BSc Management Studies (Human Resource Management). This program is being done online via UWI Open Campus St. Vincent and the Grenadines.
  - ACCA Professional Certification via Association of Chartered Certified Accountants (ACCA). This program is being done through ACCA in the United Kingdom.

- USTTI courses: 16-102 Introduction to Radio Spectrum Monitoring and Measuring sponsored by the Federal Communications Commission and Comsearch. This training was conducted in Washington D.C. 16-103. Practical Applications on Spectrum Management and Spectrum Monitoring sponsored by TCI International. This training was conducted in Fremont, California.
- CTU Caribbean Training Workshop on ICT Indicators interference between different countries. This workshop was conducted in Trinidad and Tobago.
- Advanced Mobile Application Development – This program was conducted at the SVG Community College.
- Sixth ECTEL/NTRC Administrative Professionals Training. This training was conducted in Grenada.

In addition, staff members were required to participate in Coursera courses of their choice to aid in training and development.

## Regulations

No new Telecommunications Regulations were gazetted during 2016.

## Staff

In 2016 the following persons were recognized for their years of service to the organization:

- Mrs. Roxann Williams, Deputy Commissioner for ten (10) years of service.
- Ms. Keisha Gurley, Consumer and Public Relations Manager for ten (10) years of service.
- Ms. Lyncole Ollivierre, Cleaner for fifteen (15) years of service.

## Policy Development

The main policy work carried out during the year was finalizing the draft National Broadband Plan for St. Vincent and the Grenadines. This Plan is critical for establishing the requisite parameters on our country's mobile and fixed broadband networks and services that

will meet the demands of our businesses and consumers for the next five years.

With the assistance of the World Bank via the CARCIP project, funding was obtained to hire a consultant to review and finalise the initial draft plan that was developed by the NTRC in 2015. The work of the consultant also includes consultations with targeted stakeholders and consumers in general. The targeted stakeholder consultations were held in November 2016 and five community consultations will be held in the first quarter of 2017. Two of the community consultations will be held in the Grenadines noting the special geographical limitations of this area for communications development.

It is the NTRC's expectation that the final draft of the National Broadband Plan will be taken to Cabinet in the second quarter of 2017 for adoption and implementation.

The mandate by the ECTEL Council of Ministers to have Number portability for both fixed and mobile services operational in 2016

did not materialize. While work commenced on this task in 2016 and some milestones were met on the project it is now expected to be completed in 2017.

Work continued in 2016 on addressing the regulatory challenges currently facing the telecom sector in the sub region where the policy recommendations that were developed in 2015, transitioned into draft regulations which went out for Public consultation in 2016. These regulations cover the following areas and are expected to be enacted in 2017:

- Significant market power.
- Access to Network Infrastructure and Wholesale Services.
- Infrastructure sharing.
- Access to Essential Facilities at Cable Landing stations.
- Retail Pricing.
- Consumer Protection.
- Roaming services
- Dispute Resolution

## Spectrum Management

In 2016, the Commission continued its weekly monitoring of radio spectrum (TV and FM broadcasters, as well as, cellular operators) throughout St. Vincent and the Grenadines. In June 2016, an ECTEL/ NTRC Forum was hosted in St. Vincent and the Grenadines and the status of the proposed purchase of an Integrated Spectrum Management and Monitoring System was discussed.

At that time, the technical and financial bid submissions from Rohde and Schwarz, TCI, LS Telecom and CRFS had been reviewed and costings were circulated to the group for review and comments. NTRC St. Vincent however, outlined that they were not in favor of the purchase of the mobile monitoring vehicles as the NTRC St. Vincent already had a Nissan Navara that was to be used for spectrum monitoring. NTRC St. Vincent also questioned whether or not a cost benefit analysis was done with regards to the components of the system that was being proposed as they were

not in agreement with regards to the amount of money to be spent on a system that, from experience, would not be used frequently.

As a result, the architecture and cost of the proposed spectrum management and monitoring system is being reviewed.

### Cellular Sites

The table below shows the number of cellular sites and 4G services in St. Vincent and the Grenadines.

Company	Location	Number of Cell Sites	Number of Cell Sites with 4G services
<b>Cable &amp; Wireless</b>	St. Vincent	32	32
	Grenadines	8	8
<b>Digicel</b>	St. Vincent	35	27
	Grenadines	12	8

The sites provide coverage to most of the populated areas on mainland St. Vincent, however, there is a need for better coverage within the Grenadines islands.

### Internet Access

As of December 2016, the total number of Fixed internet subscribers in St. Vincent and the Grenadines was twenty-one thousand, eight hundred and sixty-five (21,865). This figure shows a 17.69% increase over the number of subscribers in 2015. In 2016, Karib Cable had an increase in the number of subscribers when compared to their 2015 figures while Cable and Wireless saw a decrease. These increases over the years, though steady, need to be at an increasing level of subscription nationally to bridge the digital divide which exists.

The Government of St. Vincent and the Grenadines and particularly the NTRC is doing its part to increase access to the internet with the development of various projects. In 2015, in addition to the six other projects implemented under the Universal Service Fund (USF) that offer internet access to various locations throughout St. Vincent and the Grenadines, the NTRC began the development of another project for which it will be seeking external funding. This project will not only revolutionize free internet access island wide

but also seeks to provide internet access at a subsidized rate to underprivileged households.

In addition to the increased internet access, the NTRC is also seeking to have the rate of contribution to the USF by the telecommunications providers increased. This will provide increased revenues to the USF for more projects to be implemented and thus provide more access to telecommunication services. In addition to these initiatives by the NTRC, the National Broadband Plan which was drafted, is in its consultation phase and it is expected to be completed and adopted before the end of 2016. This plan sets out various policies and plans to be adopted locally so as to bridge the digital divide.

In 2016, the NTRC expanded the number of free internet access points. The Milton Cato Memorial Hospital, Heritage Square, The Kingstown Cruise Ship Terminal, The Port Authority Recreational Facility all received free wireless internet connectivity in 2016. This is in addition to the other locations which have free wireless internet access nationwide. In 2016, the subsidized internet program also became fully subscribed with 340 households benefiting from

internet access at a subsidized rate of \$10 E.C monthly under the SMART project funded by the USF.

## Public Consultation

The NTRC conducted public consultations on the following:

1. Draft Mobile Electronic Communications (Roaming Services) Bill and Draft Mobile Electronic Communications (Roaming Services) Regulations. The aim of this consultation paper was to gather the views of stakeholders in the telecommunications sector of all ECTEL Member States as it relates to the process of developing a framework for the regulation of mobile roaming services.
2. The principles, methodologies and guidelines for the determination of interconnection rates. The aim of this consultation paper was to gather the views of stakeholders.

3. Draft Electronic Communications (Dispute Resolution) Regulations. The objective of this consultation was to gather the views of stakeholders as it relates to the adoption in ECTEL member states of regulations addressing the resolution of disputes in the sector.

4. Consultation on Adoption in ECTEL States of Regulations Addressing Guidelines for Market Analysis, Access to Network Infrastructure and Wholesale Services, Infrastructure Sharing, Submarine Cable Access, Retail Pricing and Consumer Protection Regulation (Specific Rules for Consumer Protection in the Electronic Communications Sector). The aim of this consultation paper was to promote a competitive market environment and enhancing consumer protection in the ECTEL Contracting States. The following were the new regulations:

- Regulations Addressing Guidelines for Market Analysis
- Access to Network Infrastructure and Wholesale Services Regulations
- Infrastructure Sharing Regulations

- Submarine Cable Access Regulations
- Retail Pricing Regulations
- Consumer Protection Regulation (Specific Rules for Consumer Protection in the Electronic Communications Sector)

5. Draft Policy Recommendations for the Implementation of Number Portability in ECTEL Member States. The basic aim of the consultation paper was to set out the key parameters that will define the implementation of Number Portability (NP) in ECTEL Contracting States.

## Telephone Rates

A revised Price Cap Plan (PCP) has not yet been developed. Since the announcement of the LIME/FLOW merger in late 2014, work has been focused on drafting amended licenses to better regulate the market with regards to gaining the Minister's prior approval before a merger or acquisition takes effect. This work is still ongoing. The current Price Cap Plan (PCP) remains in effect.



## Public Awareness

In 2016, the NTRC executed several public awareness initiatives. These initiatives included existing and new activities. The following highlights the activities executed:

1. Town Hall meetings: Town Hall meetings were held in Kingstown, Bequia, Belair and Barrouallie. An event was scheduled to take place on November 29, 2016 at the George Stephen's Secondary School in Colonarie but due to the adverse weather conditions, the Town Hall meeting was postponed to January 26, 2017. At these events, persons were educated on the complaint filing process and were given demonstrations on how to complete the relevant forms along with the functions and work that the NTRC is engaged in.
2. Radio and Television presentations: These were conducted to inform the general public of the Fourth annual i<sup>2</sup> competition.
3. Facebook and Twitter campaigns: In an effort to reach a wider and more substantial audience on our Facebook and Twitter social media platforms, the Commission held various competitions which included iPads as prizes.
4. Career Fairs: The Bishop College Kingstown, Intermediate High School and the Bethel Secondary School invited the NTRC to share information to their students at their career fairs.
5. Implementation of an i Squared (i<sup>2</sup>) App or Idea: The hosting of the i<sup>2</sup> Competition has seen many innovative ideas and mobile applications put forward by secondary and tertiary students in St. Vincent and the Grenadines. The NTRC has taken the initiative to implement an idea put forward by the St. Vincent Grammar School in 2014. The Group ECU's put forward the idea of the creation of an App that allows the public to view the prices of commodity items. The NTRC started the project in May 2016 and the development of the android version of the App was completed in December 2016. The testing phase of the App will be completed by the end of February 2017 and the

App is scheduled to be launched in March 2017. The App allows consumers to compare prices of food items at the main supermarkets in SVG.

6. Promotional Items: The Commission purchased promotional items and distributed these items to persons at all events.
7. School Discussions: In an effort to increase the number of entries for the third annual  $i^2$  competition, the public awareness committee visited fifteen (15) secondary schools and the St. Vincent and the Grenadines Community College (Division of Nursing). The presentations at the school events revolved around the NTRC, USF and Cybersecurity.
8. Fourth annual  $i^2$  competition: On September 16, 2016 the Commission launched the fourth annual  $i^2$  competition. This competition is a forum that challenges students to develop and present projects in the form of Ideas and Mobile Applications. Previously, the competitions were geared towards the development of ideas that can implement new systems or

improve existing systems in the departments within the Public Service of St. Vincent and the Grenadines and other state agencies that provide services to the public. However in 2016, the competition targeted the private sector within St. Vincent and the Grenadines with the aim of improving the efficiency of their business operations.

The competition was promoted during the first half of the year, at the launch in September 2016, and during the registration period that ended in November 2016. However, this year saw a decrease in the number of entries. Twenty two (22) entries were received compared to Thirty Seven (37) entries which were received for the 2016 competition. This was mainly as a result of two schools that in the past had many entries but did not participate in 2016, namely the St. Vincent Grammar and St. Martins Secondary Schools.

The entries from the secondary level were from the Petit Bordel Secondary School, Mountain View Academy, Union Island Secondary School, Thomas Saunders Secondary School, St.

Vincent Girls High School, Troumaca Secondary School, George Stephens Sr. Secondary School, Bishops College Kingstown and the St. Joseph Convent Kingstown.

The tertiary level saw participation from two (2) divisions of the St. Vincent and the Grenadines Community College entering the competition, including the Division of Teachers Education and the Division of Arts, Science and General Studies.

For the first time in the history of the competition, entries were received from the Bishops College Kingstown, St. Joseph Convent Kingstown and the Division of Teachers' Education. The finals of the competition concluded on January 19, 2017.

9. GMDSS Radio Training Sessions: The NTRC in collaboration with the St Vincent and the Grenadines Coast Guard Services delivered five (5) GMDSS radio training sessions at the popular fishing communities for fishermen and other persons involved in maritime activities. The training sessions advised the participants of the new GMDSS system which was implemented

by the NTRC to facilitate emergency and non-emergency communication at sea. Additionally, the training involved practical sessions on how to use the GMDSS radios which allow persons to communicate with the GMDSS system and other ships that possess the system. The sessions were held in Barrouallie, Bequia, Calliaqua, Union Island and Kingstown. A raffle was also conducted and Randolph Dickson of Barrouallie won a free portable GMDSS radio.

10. Launching of the NTRC's Connect App: On June 14<sup>th</sup> 2016, the NTRC launched its first Mobile Application known as the "NTRC Connect App". NTRC Connect is a mobile application for the Android platform designed to assist users in finding various wireless connectivity hotspots in St. Vincent and the Grenadines, such as, schools and community centers, as well as, the assorted cell towers used by Cable and Wireless and Digicel. The target group for this app is the general public of St. Vincent and the Grenadines, as well as, tourists who visit the island. NTRC Connect has three different maps that users can

use to view this information depending on their preference. In particular, these maps are:

- Road Map - Map that shows the road network, as well as, any points of interest on the island.
- Satellite Map - Map that shows the user images of the island that were taken via satellite and plane so they can have a better idea of how the location in question will look.
- Hybrid Map - Map that combines both the road map and satellite map so that users will get all of the information possible about the island.

There are additional features, such as, directions to the various wireless hotspots in the app and also reporting faults at these locations. The NTRC plans to add more information about the Business Wi-Fi hotspots in the island, as well as, release an iOS version of this mobile app.

11. Consumer Regulation Stakeholder Meeting: This meeting was held on March 3, 2016 with the aim to allow consumers to express their views on the draft Consumer Protection

Regulations so that their comments would be incorporated into the draft regulations.

12. NTRC's 2016 MyApp Summer Program: The NTRC held its second annual MyApp Summer program, which ran from the period July 25, 2016-August 31, 2016. It took place at the Petit Bordel Secondary School and nineteen students attended the program. The objective of the NTRC's MyApp Program is to teach participants between the ages of 13-18 who may or may not have previous exposure on how to code and design applications. The program introduced participants to ways in which they can portray their acquired skills in larger incentive forums, such as, the annual NTRC's *P*<sup>2</sup> Competition or any other technological era in St. Vincent and the Grenadines.

## Universal Service Fund

For the year ending December 31, 2016, the Universal Service Fund budgeted to receive a total of One Million, One Hundred and Ninety Three Thousand, Six Hundred Dollars (\$1,193,600.00) from

the telecom service providers and interest on account was projected to be Ten Thousand Dollars (\$10,000.00). The actual revenues received by the Universal Service Fund in 2016 was One Million, One Hundred and Ninety Three Thousand, Two Hundred and Seventy Five Dollars and Thirty Four Cents (\$1,193,275.34) from telecom service providers. A total of Thirteen Thousand, Two Hundred and Fifty Three Dollars and Forty Three Cents (\$13,253.43) 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 2016 as the funds available were not sufficient to fund any new projects. In this regard, the NTRC during 2016 worked alongside the relevant stakeholders to adjust the current USF contribution rate.

One of the seven projects funded remained un-commissioned as at year end which is the Payphone Project: The infrastructure in this project has been completed. However, there has been a delay in the commissioning process due to inconsistent camera footage from the cameras installed at the locations under the project for remote access viewing. The inconsistencies are occurring as a result of faulty line plants, sea blast interference, fluctuating power and modems with unstable IP configurations. Steps to rectify the issues

were identified and all camera feeds are expected to be up by January 2017.

More details on the USF projects can be found in the 2016 USF Annual Report.

In 2016, the NTRC hosted its second annual summer coding and application development initiative, the MyApp Summer Program, where the main objective of the summer program was to teach the participants how to code and design applications and provide opportunities for the younger population to enhance their technological skills. The program, which was taught by Mr. Jason Alexis, commenced on July 25, 2016 and concluded on August 26, 2016. An overall evaluation of the program was completed on August 28, 2016 and it was noted that the objective of the program was achieved without any substantial setbacks. Despite their lack of previous programming experience, the participants successfully produced a significant amount of authentic code by the completion of the program.

## 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 acquire 100% shareholding of Columbus Communications (FLOW). The NTRC has since briefed the Honourable Minister with responsibility for Telecommunications on the potential impact of the merger and possible solutions. LIME was issued a Subscriber television licence in 2011 and was expected to provide some level of competition to Karib Cable. With the proposed merger, such competition will no longer be forthcoming and will require certain regulatory interventions by the Minister and the NTRC.

## Statistics

The NTRC continued in 2016 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 pages 35 and 36 give a detailed overview of customer data supplied by the telecommunications providers.

### Fixed Line Rates to the USA

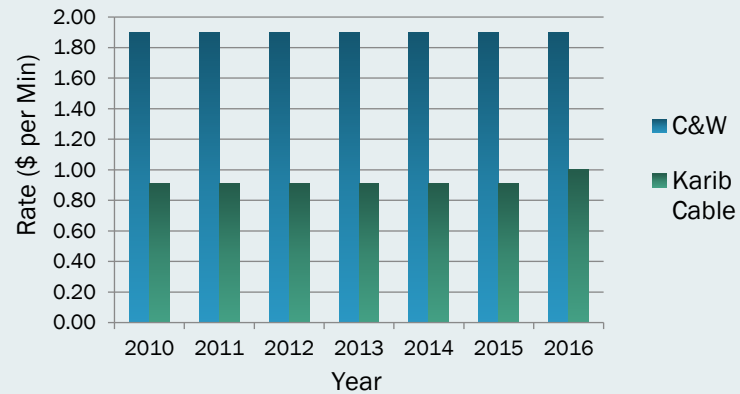


FIGURE 3

The rates depicted in Figure 3 are not regulated. Note that these rates have remained unchanged up to 2015. In 2016, Karib Cable's rates increased.

### Mobile Rates to the USA

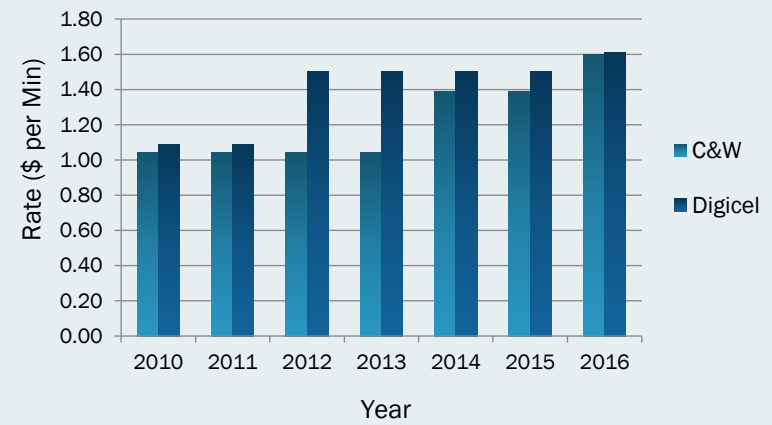


FIGURE 4

The rates depicted in Figure 4 are not regulated. We saw a further increase to the rates in 2016.

### Domestic Rates

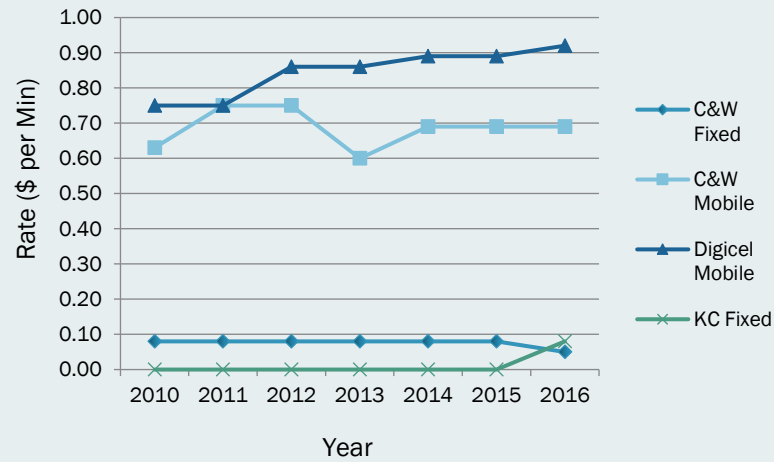


FIGURE 5

The domestic rates in Figure 5 are the daytime rates for calls made to customers on the same network. From 2014 to 2015 there was no increase in mobile domestic rates for C&W or Digicel. However, Karib Cable's and Digicel's rates increased in 2016 while Cable & Wireless' fixed line rate reduced.

### International Rates

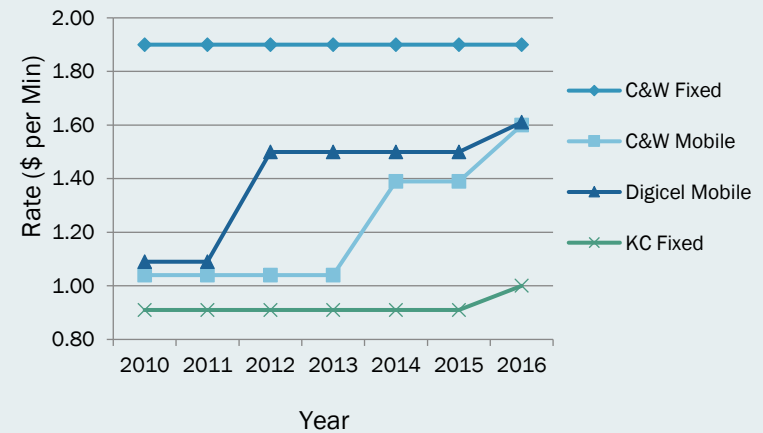


FIGURE 6

The international rates in Figure 6 are the daytime rates for calls to the USA for all providers. All providers recorded an increase to their rates in 2016.



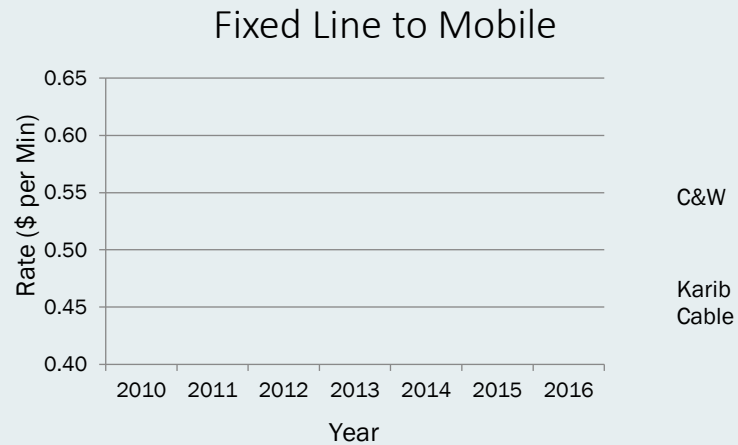


FIGURE 7

Figure 7 shows Cable & Wireless' and Karib Cable's fixed line to mobile rates for 2010 to 2016. The rates remained unchanged going forward from 2013 to 2015. However, Karib Cable recorded an increase in 2016.

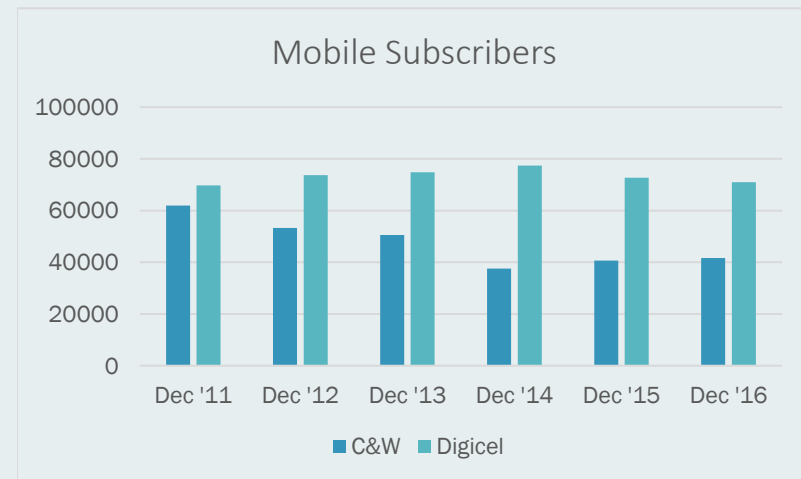


FIGURE 8

It is noted that Cable & Wireless' mobile subscribers increased in 2016. However, Digicel lost some subscribers during this year. Digicel's percentage in market share still continues to be higher over Cable & Wireless'.

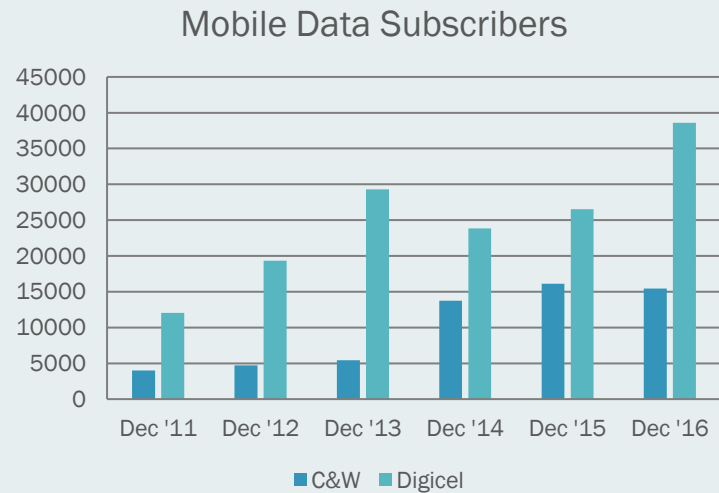


FIGURE 9

Figure 9 shows a comparison of the total Mobile Data Subscribers for Cable & Wireless and Digicel. We saw a large increase to Digicel's data subscribers in 2016. However, Cable & Wireless' reduced marginally.

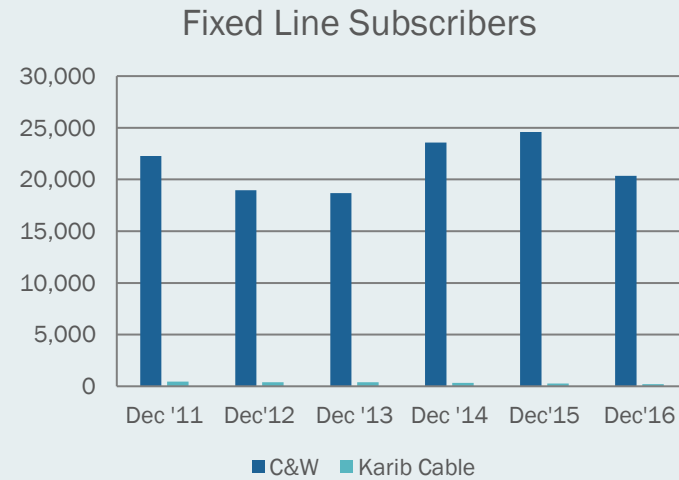


FIGURE 10

Figure 10 shows a comparison in Fixed Line Subscribers for Cable & Wireless and Karib Cable. In 2016, Cable & Wireless recorded a slight increase while Karib Cable recorded a marginal decrease.

### Broadband Internet Subscribers



FIGURE 11

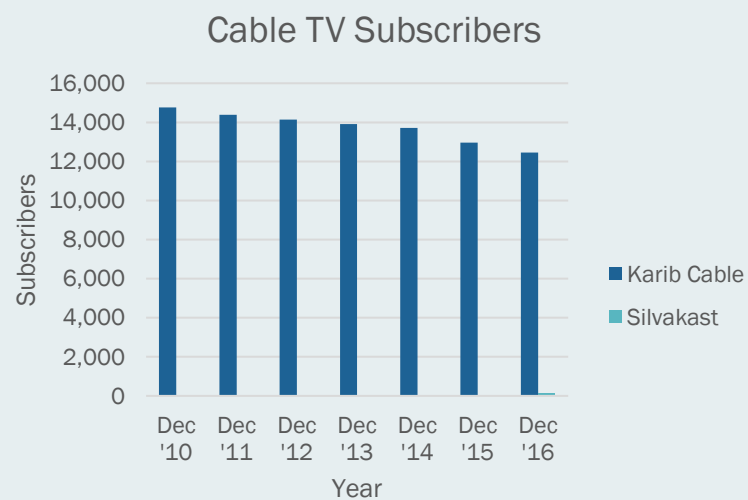
Figure 11 shows the number of Broadband Internet Subscribers per provider. Cable and Wireless experienced a slight decline in broadband subscribers in 2016, however there was a significant increase in broadband subscribers for Karib Cable within this year.

### Broadband Internet Subscribers



FIGURE 12

Figure 12 shows the number of Broadband Internet Subscribers from 2010 to 2016 on a whole. There has been a slight decline in 2012, however there has been an increase in the Broadband Internet Subscribers from 2013.



**FIGURE 13**

Figure 13 shows that Karib Cable experienced a slight decrease in Cable TV subscribers in 2016 while Silvakast experienced a slight increase in Cable TV subscribers during 2016.

			2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Cable & Wireless (W) Ltd	Fixed Line Subscribers	Residential	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
		Business	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
		Total	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
	Internet Subscribers	Dialup	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
		ISDN	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
		ADSL (Residential)	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
		ADSL (Business)	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
		Total	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
	Mobile Subscribers	Post paid	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
		Prepaid	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
		Total	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Digicel	Mobile Subscribers	Post paid	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
		Prepaid	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
		Total	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Karib Cable	Cable TV Subscribers	Residential	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
		Business						xxxxxx	xxxxxx	xxxxxx		
		Free Service						xxxxxx	xxxxxx	xxxxxx		
		Total	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
	Internet Subscribers	Residential	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
		Business	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
		Free Service						xxxxxx	xxxxxx	xxxxxx		
		Total	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
	Fixed Line Subscribers	Residential				xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
		Business				xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
		Free Service				xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
		Total	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx

SilvaKast	Cable TV Subscribers	Residential										xxxxxx
		Business										
		Total										xxxxxx

**TABLE 5** Table 4 contains the Customer data submitted from the three Telecom Providers. The ISDN Internet Service for Cable & Wireless is no longer in use.

## Licensing

The NTRC continued in 2016 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 for evaluation 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		2015		2016	
		New	Renew	New	Renew	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	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	1	N/A	0	N/A
	Subscriber Television	0	N/A	2	N/A	1	N/A	0	N/A	1	N/A	1	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	0	N/A	0	N/A
	Mobile Cellular	0	N/A	0	N/A	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	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	0	N/A	0	1
Class type Licenses	Private network/services	0	N/A	1	N/A	1	N/A	1	N/A	0	N/A	0	N/A	1	1	1	2
	Internet services	0	N/A	0	N/A	0	N/A	0	N/A	0	N/A	0	N/A	0	N/A	0	2
	Radio Broadcast	0	N/A	8	N/A	1	N/A	0	N/A	0	3	1	5	1	6	1	7
	Value Added Services	0	N/A	0	N/A	0	N/A	0	N/A	0	N/A	1	N/A	1	N/A	0	0
	Community radio	1	N/A	0	N/A	0	N/A	0	2	0	N/A	0	N/A	1	1	2	3
	Television Broadcast	0	N/A	0	N/A	0	N/A	1	N/A	0	N/A	0	N/A	0	N/A	0	1
	Maritime mobile	1	23	0	19	3	42	4	67	35	31	35	31	1	16	1	26
	Land mobile	1	275	3	212	5	267	3	172	2	155	3	204	0	10	10	20
	Aeronautical radio	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
	Aircraft station	3	18	1	16	2	17	2	17	4	17	3	17	1	18	1	17
	Amateur Radio station	29	23	36	36	38	60	27	80	25	84	26	82	8	47	20	20
	Citizen Band radio	0	0	0	5	0	1	0	1	0	0	0	0	2	3	0	0
	Family Radio Band	4	0	2	1	1	0	1	5	1	3	1	3	1	2	2	1
	Ship Station	61	112	28	131	44	170	27	122	15	182	18	157	46	177	41	184
Miscellaneous	CPE Dealers reg. fee	18	12	18	17	17	44	15	18	14	16	10	17	2	10	5	18
	Exam Fees for Radio Operators	0	N/A	0	N/A	2	N/A	0	N/A	1	N/A	1	N/A	0	N/A	0	N/A
	Type Approval fee	0	N/A		N/A	3	N/A	16	N/A	22	N/A	27	N/A	56	N/A	85	N/A
	Ship station Operators	24	16	25	32	17	55	25	9	27	7	29	21	17	40	16	28
	Aircraft Station Operators	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TABLE 6 Table 5 outlines the number of licences issued from 2009 to 2016. The issued licences are broken down as new licences, issued in the specific year, and renewals of existing licences, first issued in previous years.



## 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 their 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 the 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 aims 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 2016

1. To execute the 4<sup>th</sup> annual NTRC's *P*<sup>2</sup> 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.

The competition was executed and public awareness activities were carried out in the first half of the year. Public awareness initiatives were done during the launch in September 2016 and also during the registration period which came to an end in November 2016. For the first time entries were received from the Bishops College Kingstown, St. Joseph convent Kingstown and the Division of Teachers' Education. However, this year saw a decrease in the number of entries. Twenty two (22) entries were received compared to the Thirty Seven (37) entries which were received for the 2015/2016 competition.

2. Increase Public Awareness on Complaint Filing.

Town Hall meetings were held in Kingstown, Bequia, Belair and Barrouallie. An event was scheduled to take place on November 29, 2016 at the George Stephen's Secondary School in Colonaire but due to the adverse weather conditions, the Town Hall meeting was postponed to January 26, 2017. At these events, persons were educated on the complaint filing process and were given demonstrations on how to complete the relevant forms.

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

In 2016, the NTRC St. Vincent and the Grenadines developed two projects and will be seeking funding from the World Bank. These project are a mixture of free wireless internet access at playing fields, hard courts and rural

locations where persons congregate. Additionally, there are plans to provide ICT training in various subject areas at the Learning Resource Centers nationwide and a project to provide emergency communication capabilities to senior citizens locally. In an effort to secure funding for these projects, the NTRC held meetings with the four other NTRC's to incorporate them into various aspects of the project. NTRC Dominica and NTRC Grenada have agreed to partner with us with these project initiatives. NTRC Dominica has already submitted their scope of works and NTRC Grenada is expected to complete their document and submit to us by the end of February 2017. Following this, the NTRC will be working along with the Ministry of Economic Planning, Sustainable Development, Industry, Information and Labour to finalize the document to seek funding.

4. Management of the VC Domain.

The NTRC did not receive a decision from the Ministry in 2016 on the way forward on the management of the VC domain.

5. New USF Regulations and Fees.

The consultation on the new USF regulations and Order came to a close in the first quarter of 2016. All comments were submitted to ECTEL for consideration. The revised document was presented to the ECTEL Council of Ministers in April 2016. However, they had requested some additional changes to the proposed Contribution Order which were then approved by them in August 2016. The draft USF Order was then sent to the Ministry of Economic Planning, Sustainable Development, Industry, Information and Labour by ECTEL in September 2016 for promulgation. In November 2016, the NTRC worked closely with the Ministry on ensuring that the necessary detailed information was included in the Memorandum prepared for Cabinet in support of the recommended changes for adoption. We

anticipate that the new Order will come into effect within the first quarter of 2017.

6. Implementation of an i<sup>2</sup> App or Idea.

The hosting of the i<sup>2</sup> Competition has seen many innovative ideas and mobile applications put forward by secondary and tertiary students in St. Vincent and the Grenadines. However, despite the many ideas none of the ideas have been implemented and as such, the NTRC has taken the initiative to implement an idea put forward by the St. Vincent Grammar School in 2014. The Group ECU's put forward the idea of the creation of an app that allows the public to view the prices of commodity items. In May 2016, the NTRC started the project. The development of the App was completed in December 2016 and we are currently in the testing phase of the App. As such, to ensure proper testing we have invited the public to assist us in testing this beta version of the app. This testing of the app will be

completed by the end of February 2017 and the app is scheduled to be launched in March 2017.

7. Launch of Map App.

In June 2016 the NTRC launched a mobile application called NTRC Connect. This application allows users to identify all locations that have free Wi-Fi in St. Vincent and the Grenadines. Persons can also report problems directly to the NTRC when services at any of our locations are down. Directions are also provided to the Wi-Fi spots and cell towers locations in St. Vincent and Grenadines. The App also identifies the location of all cell towers for both Cable & Wireless (SVG) Limited and Digicel (SVG) Limited clearly stating where 4G sites are.

8. Launch and promotion of the IXP.

St. Vincent and the Grenadines launched its Internet Exchange Point (IXP) in January 2016. Subsequent to the

Launch, a Committee was setup to guide the process of completing the IXP Agreement and MOU between the parties to the agreement. We are currently in the final stages of the completion of the agreement and MOU and we anticipate that the agreement and MOU will be signed by the end of February 2017. Following this, activities will commence to promote the public production and consumption of local content at the IXP.

#### 9. Broadband Plan.

The NTRC in collaboration with the Ministry of Economic Planning, Sustainable Development, Industry Information and Labour through the World Bank funded Caribbean Regional Communication Infrastructure Program (CARCIP) developed a draft broadband plan in 2016. This plan was developed to address the critical ICT Gaps in broadband as a means to stimulate private sector investments, innovations, lower prices, increased speeds, improved quality of service and provide better options for the citizens

of St Vincent and the Grenadines. A Series of five consultations are planned for 2017 in the communities of Layou, Georgetown, Bequia, Canouan and Kingstown. The last consultation is scheduled for February 16th 2017 at the Methodist Church Hall. The General public is invited to these sessions to give their feedback on the draft plan. Following this the plan will be updated by the consultant and then be submitted to Cabinet for approval and adoption by March 2017.

## 11. Major Objectives for 2017

1. To execute the 5<sup>th</sup> annual NTRC's  $\mathcal{P}^2$  Competition. There will be some changes to the competition this year which will include the addition of a new category to cater for non-students. To seek to increase participants in student category.
2. To seek international funding for two USF projects in collaboration with other NTRCs. This objective carries over from 2016.
3. Finalise National Broadband plan after public consultation process and seek approval from Cabinet for its adoption and execution.
4. Continue work on Number Portability implementation in the ECTEL member states with the intention of having number portability available to customers in St. Vincent and the Grenadines by November 2017.
5. Working jointly with ECTEL and the Ministry of Economic Planning, Sustainable Development, Industry, Information and Labour, in having the new electronic communications bill and relevant subsidiary regulations enacted.
6. Working jointly with the Ministry of Economic Planning, Sustainable Development, Industry, Information and Labour, in having new licences issued to Cable and Wireless and Columbus Communications.
7. Launch the IOS version of the NTRC connect app.
8. Expand the MyApp program to cater for two summer events with one being held in the Grenadines.

## 9. Annex A

### 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

Frequency	<p><b>CTU Caribbean Telecommunications Union</b></p> <p>CTU is the major Telecommunications policy organ in the Region, directed by Inter-Governmental specialized action under a special Agreement establishing the Union.</p>	<p><b>ITU International Telecommunication Union</b></p> <p>ITU works closely with all standards organizations to form an international uniform standards system for communication.</p>	connected to the general telecommunications network principally to call ships automatically.
	<p>The rate of a repetitive event.</p> <p>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).</p>	<p><b>Land Mobile</b></p> <p>A mobile service between base stations and land mobile stations, or between land mobile stations</p> <p><b>Maritime Mobile</b></p> <p>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</p>	<p><b>Radio frequency spectrum</b></p> <p>That part of the electromagnetic Spectrum used for communications; includes frequencies used for AM- FM radio and cellular phones and television etc.</p>
GMDSS	<p><b>Global Maritime Distress and Safety System</b></p> <p>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.</p>	<p><b>MMSI Maritime Mobile Service Identity</b></p> <p>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</p>	<p><b>Ship Station</b></p> <p>A Mobile station in the maritime mobile service Located on board a vessel which is not permanently moored, other than a survival craft station</p>
			<p><b>Spectrum</b></p> <p>“(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.</p>



<b>Stations</b>	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
<b>Telecommunications</b>	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.
<b>Universal Service</b>	universal service" includes the provision of – <ol style="list-style-type: none"><li>Public voice telephony;</li><li>Internet access;</li><li>Telecommunications services to schools, hospitals and similar institutions and the disabled and physically challenged; or</li><li>Other service by which people access efficient, affordable and modern telecommunications.</li></ol>
<b>USAID</b>	The US Agency for International Development

## 10. Annex B

### **Audited Financial Statements 2016**