



NATIONAL TELECOMMUNICATIONS REGULATORY COMMISSION
ANNUAL REPORT 2017

About Cover Photo

This photo shows the Chairman of the NTRC Mr. St. Clair Scott (middle) and the winners of the Mobile Applications Open Category of our Fifth Annual i2 Competition Grand Finale and Prize Giving Ceremony which took place at the Kingstown Methodist Church Hall on November 15, 2017. The team shown is LX2, Jana Lewis (Left) and Terbry Lewis (right).

Presentations were also made on ideas and mobile applications in our Secondary Categories. The aim of our competition was to provide the foundation for innovation by giving participants a forum to create great inspiring ideas that could revolutionize the Vincentian Society.

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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 National Telecommunications Regulatory Commission (NTRC) in collaboration with the Eastern Caribbean Telecommunications Authority (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



Kyron Duncan
USF Administrator



Mishka L. Quashie
Accountant



Andra Keizer
Administrative
Officer



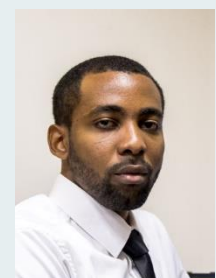
Keisha Gurley
Consumer & Public
Relations Manager



**Marcellus
Constance Jr.**
ICT Officer



Shonden Baptiste
Executive
Assistant



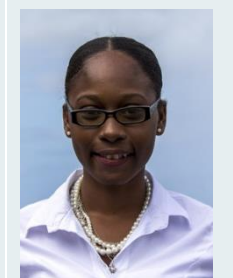
Cyron Cyrus
Software Engineer



Jori Thorne
Accounting Officer



Eustasha Walter
Public Relations
Officer



Shadeja Gordon
Customer
Experience Officer

6. SWOT Analysis

Strengths

- 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.
- A balanced combination of experienced staff alongside young, innovative and qualified interns.

Weaknesses

- Inadequate price control 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 current 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.
- Potential for 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.
- 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.
- Issuing of renewal licences to major service providers in the market will allow for filling of some regulatory gaps.

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 Over the Top 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 continued to play its part in sensitizing the general public relating to matters of their security in cyber space. This has been done through the use of social media and our monthly ICT newsletters to share useful information on how they can protect their digital identity. Further, the NTRC has kept its ongoing partnership with the Ministry of Finance, Economic Planning, Sustainable Development and Information Technology to educate Vincentians on the Cybercrime Act 2016 through our town hall meetings which are held throughout St. Vincent and the Grenadines.

Our collaboration with the St. Vincent and the Grenadines Community College (SVGCC) is ongoing and offers Vincentians an Associate Degree program in Cyber Security.

In December 2017, the NTRC also partnered with the Internet Society, St. Vincent and the Grenadines Chapter to host St. Vincent and the Grenadines' first National Cyber Security Symposium. This symposium brought together members from the public and private sector to make them better equipped in areas such as security and privacy, incident management, risk management and network resilience. Following the symposium, a subset of the symposium attendees inclusive of NTRC representatives, formed a group that will work on the development of a framework for a Computer Security Incident

Response Team (CSIRT). The NTRC believes that a CSIRT is needed 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 local businesses and individuals.

Broadcast Standards

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 local content and programming schedules.

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 NTRC developed a draft National Broadband plan in 2016. With funding assistance from the CARCIP project the NTRC in collaboration with the Ministry of Finance, Economic Planning, Sustainable Development and Information Technology along side a World Bank Consultant

conducted public consultations on the draft plan throughout the nation in the first quarter of 2017. With feedback from the consultations the final draft of the plan was completed in June 2017. It is the expectation of the NTRC that the final draft of the Broadband Plan be taken to Cabinet in 2018 for adoption and execution. One of the main components of the Broadband plan is to bring broadband penetration levels above 90% by 2023.

8. Sector Review

Financial Data Review

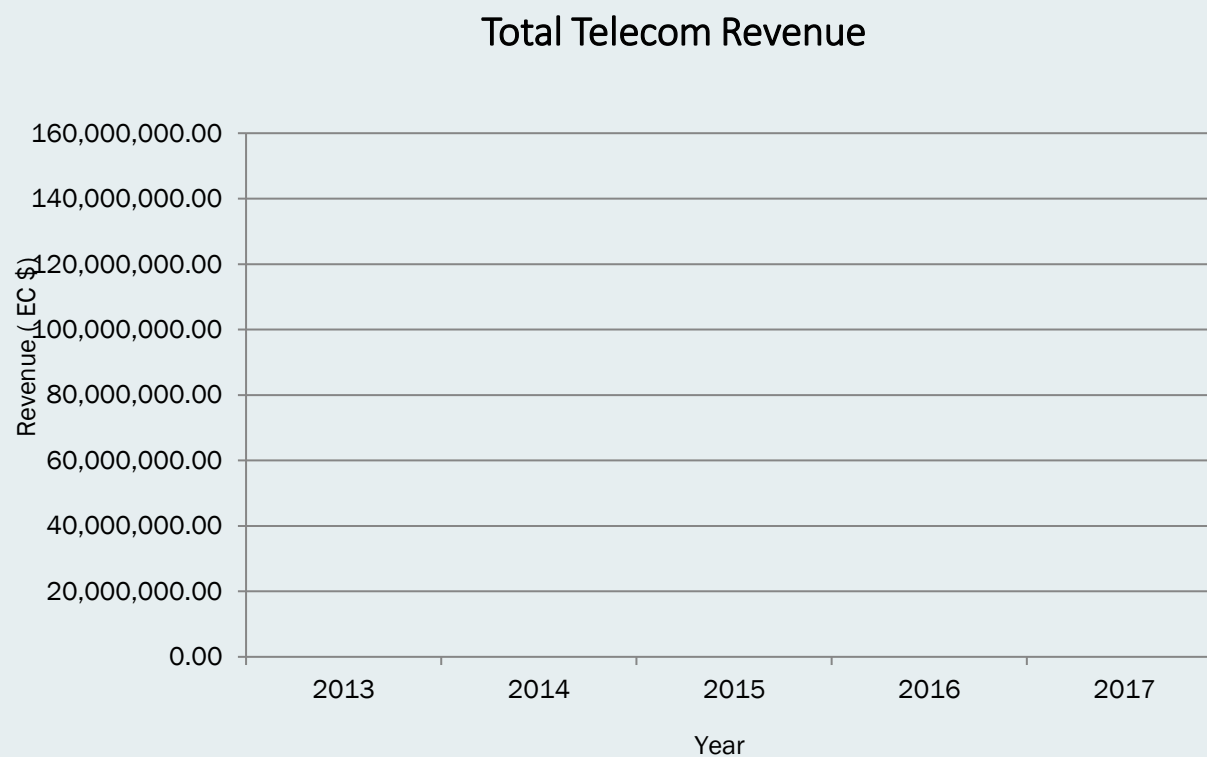
Telecommunications Sector Revenue

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\$)	Data	International Revenue (EC\$)	Domestic Revenue (EC\$)				International Revenue (EC\$)	Domestic Revenue (EC\$)			
2012	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
2013	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
2014	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
2015	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
2016	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
2017	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx

TABLE 1 TOTAL REVENUE EARNED BY PROVIDERS OF TELECOMMUNICATIONS SERVICES FROM 2012 TO 2017

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	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
2013	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
2014	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
2015	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
2016	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
2017	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx

TABLE 2 TOTAL REVENUE EARNED BY PROVIDERS OF TELECOMMUNICATIONS SERVICES FROM 2012 TO 2017



TELECOM REVENUE EARNED BY THE PROVIDERS FROM 2012-2017

FIGURE 1

Revenue of the NTRC and ECTEL for the period 2002 to 2017

Frequency fees are shared between the NTRC and the ECTEL. There was a reduction of 18% for frequency fees collected in 2017. This is because there were fees due to be collected in 2017 which were not settled by the year-end. These amounted to \$504,150.00. If these fees were collected, the total collection for 2017 would have been \$2,730,712 which is an increase of 0.8% over the 2016 collection. These fees are expected to be collected within the 1st quarter of 2018. For application fees, in 2017, there was a reduction of 11% compared to 2016 as we had received applications for Individual licenses in 2016 but none in 2017.

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%
2015	\$25,617	-18%	\$2,681,489	53%
2016	\$25,324	-1%	\$2,708,686	1%
2017	\$22,473	-11%	\$2,226,562	-18%

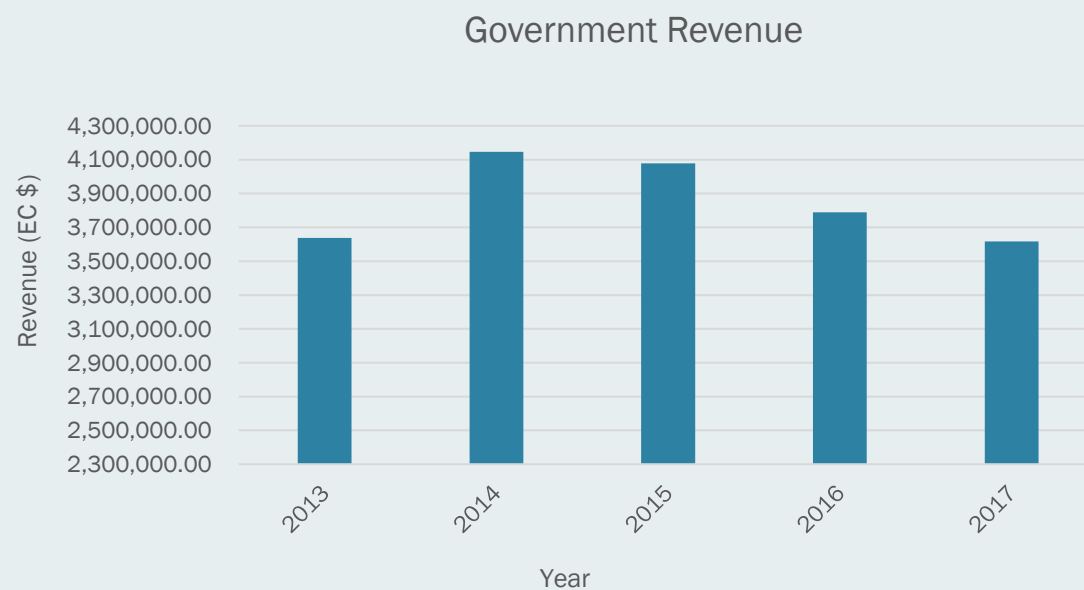
TABLE 3

Licence fees received by the Government for the period 2002 to 2017

There was a 5% decrease in revenue for licence fees collected by the NTRC on behalf of the Government in 2017 compared to 2016. This is mainly due to a decline in two of the Telecommunications Providers' revenue.

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%
2015	4,079,164	4,079,164	-1.6%
2016	3,788,925	3,788,925	-7%
2017	3,617,662	3,617,662	-5%

TABLE 4



Licence Fees collected from 2013 - 2017

FIGURE 2

Financial Performance of the NTRC

A. Revenue

The NTRC projected to receive \$1,330,825.00 for the year ending December 31, 2017. However, \$1,341,651.00 was received, which is \$10,826.00 more than the budgeted.

B. Expenditure

i. Recurrent

For the year ending December 31, 2017, the NTRC projected to spend \$1,233,368.00 on recurrent expenditure; however, \$1,259,529.00 was actually spent. The Commission also accrued expenses for 2017 amounting to \$15,000 which included staff gratuities and electricity cost.

ii. Capital

The amount of \$118,540.86 was budgeted for capital expenditure for the financial year 2017. However, \$115,527.00 was spent which gives a difference of

\$3,211.00 due to price changes of items at the purchase date.

Conclusion

The NTRC's financial performance over the 2017 financial year was satisfactory.

Projected Revenue for 2018

For the fiscal year 2018, the NTRC is projected to collect \$3,780,485 in revenue from frequency fees. This is an increase of 34% or \$959,750 compared to the 2017 amount of \$2,820,735.00. This includes \$504,150 for the fees which were to be collected in 2017 and additional fees of \$357,000 for spectrum applications currently under review.

Human Resource Development for 2017

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.

The particular areas covered during 2017 were as follows:

- Cisco Certified Network Associate (CCNA) Certification. This course was delivered online.
- 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 course: 17-244 Mobile Broadband: Addressing the 1000x Data Challenge sponsored by QUALCOMM Incorporated. This training was conducted in San Diego, California.
- USTTI course: 17-245: Mobile Broadband: Empowering People Business and Society sponsored by Ericsson. This training was conducted in Plano, Texas
- ITU Satellite Communication Workshop. This workshop was conducted in Grenada.

- Advanced Mobile Application Development – This program was conducted at the SVG Community College.

In addition, staff members were required to undertake specialised Coursera courses relevant to their NTRC duties.

Regulations

The following regulation was Gazetted in 2017:

- Telecommunications (Universal Service Fund Contribution Order) Regulations S.R.O. #4 of 2017.

Staff

In 2017 the following persons were recognized for their years of service to the organization:

- Mr. St. Clair Scott, Chairman for five (5) years of service
- Mr. Apollo Knights, Director for fifteen (15) years of service.
- Ms. Andra Keizer, Administrative Officer for (15) years of service
- Ms. Mishka Quashie, Accountant for ten (10) years of service.

Ms. Shonden Baptiste was appointed as the Executive Assistant in 2017. In addition, Mr. Javed Francis an intern from the SET programme who was assigned to the NTRC in 2017.

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 2016. The work of the consultant in 2017 targeted consumers in general. Five community consultations were held in the first quarter of 2017. Two of the community consultations were held in the Grenadines (Bequia and Canouan) 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 2018 for adoption and implementation.

While it was envisioned to have the new electronic communications bill along with the list of subsidiary regulations in place in 2017 this did not materialize. ECTEL revised the draft bill and licence templates and has indicated that these changes would be approved at the next ECTEL Council of Ministers meeting in the first quarter of 2018. It is expected that the new regulatory framework for the sector would be recommended to member states in 2018 for enactment.

The NTRC have been working along with the National Emergency Management Organization (NEMO) in St. Vincent and the Grenadines as it relates to the establishment of an Emergency Communications Network for SVG. This project is

a World bank funded Regional Disaster Vulnerability Reduction Project for procuring a Digital Emergency Communications Network for NEMO. The project is now in the bidding stage for the supply and installation of a modern, state-of-the-art voice/data emergency communications network for use throughout SVG.

Spectrum Management

The NTRC continued to conduct its weekly spectrum monitoring and management activities in the year 2017. Monitoring was mainly focused on St. Vincent, Bequia, Canouan and Union Island. Additionally, work was continued with ECTEL and other NTRCs to finalize the implementation of the new Integrated Spectrum Management and Monitoring System (ISMMS) that will be installed in 2018. The new ISMMS will provide advanced tools that will improve the management and monitoring of the spectrum resource in each ECTEL member state

During the third quarter of 2017, representatives of the NTRC enhanced their knowledge through an online course offered by the ITU for regulators within the Latin America and

Caribbean Region. The modules within this course dealt with the ITU and World Radio Conferences; Spectrum management and required engineering tools, Spectrum monitoring and enforcement systems for service evaluation. This course will positively impact the implementation of the ISMMS.

Cellular Sites

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

Company	Location	Number of Cell Sites	Number of Cell Sites with 4G services
Cable & Wireless	St. Vincent	32	32
	Grenadines	8	8
Digicel	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 on most of the Grenadines islands.

Internet Access

As of December 2017, the total number of Fixed internet subscribers in St. Vincent and the Grenadines was twenty-three thousand, three hundred and seventeen (23,317). This figure shows a 5% increase over the number of subscribers in 2016. In 2017, the NTRC was unable to execute new projects under the Universal Service Fund but continued with ensuring our existing free Wi-Fi service was available throughout the country. These include all one hundred and seven schools, fourteen Learning Resource Centers, thirty Community centers and high traffic areas such as Heritage Square, the Cruise Ship Terminal and the Port Authority Recreational Facility. This is in addition to the maintenance of subsidized internet services to 340 households, internet services at all Clinics, Hospitals and Police Stations nationwide.

While no new projects were executed in 2017 the NTRC was able to facilitate Wi Fi service at the newly constructed Calliaqua Town Hall via a fiber optic solution.

Public Consultation

The NTRC conducted a public consultation in 2017 on the Draft Mobile Electronic Communications (Roaming Services) Bill and Draft Mobile Electronic Communications (Roaming Services) Regulations. The aim of this consultation was to gather the views of stakeholders as it relates to the promotion of fair pricing and the use of cost-based pricing methods by the Telecommunications Providers in the ECTEL member states and also to recommend a regional cost-based pricing regime for the implementation by the ECTEL member states.

Public Awareness

In 2017, the NTRC executed several public awareness initiatives.

1. Town Hall meetings

Town hall meetings in Diamond, Richland Park, Calliaqua were cancelled due to the adverse weather

on the planned dates. On October 18, 2017 the Commission held a Town Hall meeting in Fitz Hughes where persons were educated on the Dispute Complaint Resolution 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 NTRC's MyApp Summer Program, the Fifth annual *Ĥ* competition and other events carried out by the NTRC during 2017.

3. Social Media campaigns

In an effort to reach a wider audience, the Commission engaged the public on Facebook, Twitter and Instagram with information on our business and held several competitions on the social media networks to engage the public and to increase following.

4. Career Fairs

In month of May 2017, the principal of the Kingstown Preparatory School invited the NTRC to share information on cybersecurity to their grade 6 students. Mr. Marcellus Constance the ICT Officer represented the NTRC at the event.

5. Launching of the Vincy Prices App

On Thursday March 30, 2017 the Vincy Prices App, which allows consumers to compare prices of food items at the main supermarkets in SVG was launched at the Ministry of Foreign Affairs Conference Room. This app idea was put forward by the team ECU's from the St. Vincent Grammar School at the 2014 \hat{P} competition. The mobile app was developed by the NTRC in collaboration with the Ministry of Foreign Affairs, Trade and Commerce.

6. School Visits

In an effort to increase the number of entries for the Fifth annual \hat{P} competition, the public awareness committee visited eight (8) secondary schools that had not participated in the competition since inception. The presentations at the school events revolved around the NTRC's \hat{P} competition over the years, the different phases in the competition, how to register for the competition and the rewards from entering the competition.

7. Fifth annual \hat{P} competition

On September 7, 2017 the Commission launched the fifth annual \hat{P} competition. This competition was a forum that challenged students to develop and present projects in the form of Ideas and/or Mobile Applications from both the public and private sectors of St. Vincent and the Grenadines to facilitate the implementation of a new system or improve existing systems within those sectors.

The 2017 competition was restructured to obtain entries from the public for persons under the age of 35 years. Prior to

this, the competition only accepted entries from students who attended secondary, technical and tertiary schools across St. Vincent and the Grenadines. The 2017 competition consisted of two categories which included the Secondary Category and the Open Category.

In 2017, there was an increase in the number of entries for the competition. A record breaking number of fifty (50) entries were received compared to twenty-five (25) entries which were received for the 2016 competition.

The schools that entered the secondary level were Petit Bordel Secondary School, Mountain View Adventist Academy, Union Island Secondary School, St. Vincent Girls High School, St. Vincent Grammar School, Emmanuel High School Mesopotamia, Central Leeward Secondary School and the St. Joseph Convent Kingstown.

The Open Category saw participation from thirteen (13) teams from the public.

For the first time in the history of the competition, entries were received from the Emmanuel High School Mesopotamia and Central Leeward Secondary School. The finals of the competition concluded on November 15, 2017 at the Methodist Church Hall. The winners of the various categories of the competition were as follows:

- Secondary Mobile Application Category: "Astra" from the St. Vincent Grammar School.
- Secondary Idea Category: "PBSS Inventors" from the Petit Bordel Secondary School.
- Open Category: "NL2".

8. Broadband Plan Consultations

The Ministry of Finance, Economic Planning, Sustainable Development and Information Technology

In collaboration with the National Telecommunications Regulatory Commission (NTRC) through the World Bank funded Caribbean Regional Communication Infrastructure Program (CARCIP) developed a draft National Broadband Plan for St. Vincent and the Grenadines that will cover the years 2017-2021. The plan was developed to address the critical gaps in broadband Internet as a means to stimulate private sector investment, innovation, affordable pricing, increase speeds and to improve quality of service for our citizens.

The Consultations were held to discuss the Government's intent to ensure nationwide access to reliable and affordable high speed broadband networks. The aim of the consultations was to gather feedback from the general public before the draft plan was finalized to incorporate the public feedback in the final plan. The consultations were held on the following dates and locations:

1. Layou - January 31, 2017
2. Georgetown - February 2, 2017

3. Canouan - February 7, 2017
4. Bequia - February 9, 2017
5. Kingstown - February 16, 2017.

9. NTRC' s 2017 MyApp Summer Program

For the third consecutive year, the NTRC held its annual MyApp Summer program in 2017. Due to the positive feedback from the public an additional program was held in 2017. The first program was held in Petit from July 24, 2017 – August 25, 2017. The second program was in Union Island from July 24, 2017 – August 18, 2017. A total of Twenty (20) students attended each 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 *i*² Competition. The 2017 program was made possible through sponsorship from the Bank of St. Vincent

and the Grenadines, Digicel, Cable & Wireless and the Caribbean Development Bank.

10. The Yearly Financial Assistance Program

In 2017, the NTRC developed a yearly program where financial assistance was given to one Primary school student and one Secondary school student. Zion I Gordon from the Belmont Government School received an amount of \$500.00 and Jeremiah Bascombe of the Buccament Bay Secondary School received an amount of \$1,000.00. The program targeted those students attending schools in the rural areas as well as, the Grenadine Islands. A letter was sent out to the schools in the rural area for the principals to submit the names of students that would qualify for the assistance and the reason/s why they should be considered. A committee consisting of NTRC staff members met and went through the names and selected the most suitable students. The financial

assistance program will continue for the foreseeable future.

11. The ECTEL EC Bill Roadshow

For the period May 17—18, 2017, ECTEL in collaboration with the NTRC hosted a roadshow in St. Vincent and the Grenadines. The roadshow was designed to further elaborate on the new suite of legislation that was developed by ECTEL which includes the Electronic Communications (EC) Bill. The Electronic Communication Bill is being proposed to replace the current Telecommunication Act.

The ECTEL team which comprised of the Managing Director Embert Charles, Director of Technical Services Andrew Millet and General Counsel Deborah Bowers met with several stakeholders. The ECTEL team met with the Cabinet of Ministers on May 17, 2017. Additionally, the team met with the Civil Society

Organization and the Telecommunications Service Providers on May 18, 2017.

12. The Civil Society Presentation Event

The Internet Corporation for Assigned Names and Numbers (ICANN) collaborated with the National Telecommunications Regulatory Commission (NTRC) and held a Civil Society Presentation event on Tuesday, May 9, 2017 at the Frenches House Conference Room. The aim of the event was to increase the knowledge of how the internet is governed locally and globally and its impact and interrelationships across all sectors of the economy to its users and providers. The main sessions of the event focused on the summary and readout from ICANN 58 meeting that took place in Copenhagen, Denmark in March 2017.

13. The IXP signing ceremony

On Thursday, November 30, 2017, the National Telecommunications Regulatory Commission (NTRC), hosted the signing of the Internet Exchange Point (IXP) agreements between Digicel and Flow at a ceremony held at the NTRC's Conference Room located on the second floor of the NIS Building, Kingstown, St. Vincent and the Grenadines

The IXP is important as it makes the internet better for consumers and without an IXP, all local internet traffic between customers on different ISP networks (e.g. Digicel and Flow) must leave St. Vincent and the Grenadines on one network and return on another network. With an IXP, local traffic on different networks no longer need to leave St. Vincent and the Grenadines, rather, it would be exchanged locally at the IXP.

In addition, sending traffic back and forth increases costs and latency, and so, having our own IXP is a boost and St. Vincent and the Grenadines can have benefits that can lead to a

more developed e-society and can urge the local ISPs to develop server farms to offer local hosting of websites and other cloud applications.

At the end of the ceremony, the CEOs of both Flow and Digicel signed a Memorandum of Understanding and Internet Exchange Point Governance Agreement. These documents outline the rules on how the IXP is managed and the rules on how traffic should be passed.

Universal Service Fund

For the year ending December 31, 2017, the Universal Service Fund revenue collected was down by One Hundred and Forty Six Thousand, Eight Hundred and One Dollar (\$146,801) or Nine Percent (9%) of the budgeted amount of One Million, Five Hundred and Fifty Nine Thousand, Eight Hundred and Ninety Six Dollars (\$1,559,869). Interest income however, exceeded the budgeted amount of Two Thousand, Five Hundred Dollars (\$2500) by Five Thousand, Three Hundred and Seventy Three Dollars (\$5,373).

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 2017 as the funds available were not sufficient to fund any new projects.

Additionally, the last of the seven projects being funded by the USF was commissioned. The Payphone Project, was commissioned in the month of January 2017. More details on the USF projects can be found in the 2017 USF Annual Report.

Cable TV

With the growth of streaming options (IPTv) on the Internet coupled with affordability concerns by consumers it seems that growth in the Cable TV market is no longer a business proposition. This applies to both the existing provider in the market as well as two entities that were granted said licences over the last 5 years but have failed to deploy service to the

market. While the Direct TV licensee has seen some growth in 2017 it is marginal when compared to the overall market size.

Statistics

The NTRC continued in 2017 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 5 on page 36 gives a detailed overview of customer data supplied by the telecommunications providers.

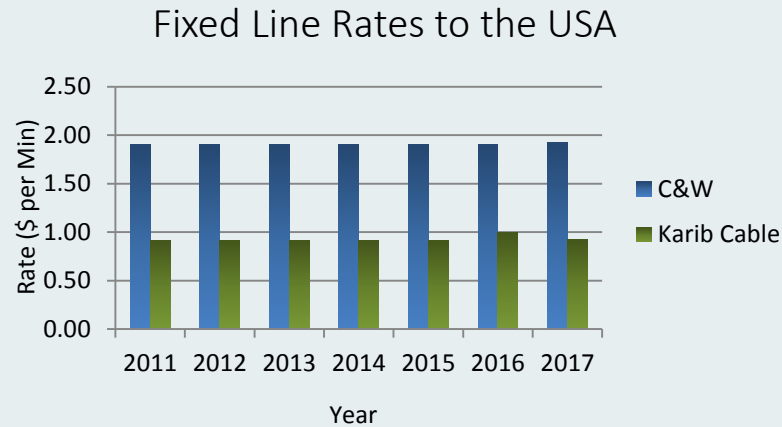


FIGURE 3

The rates depicted in Figure 3 are not regulated. Note that these rates have remained unchanged up to 2015. In 2017, we saw a decrease in their rates

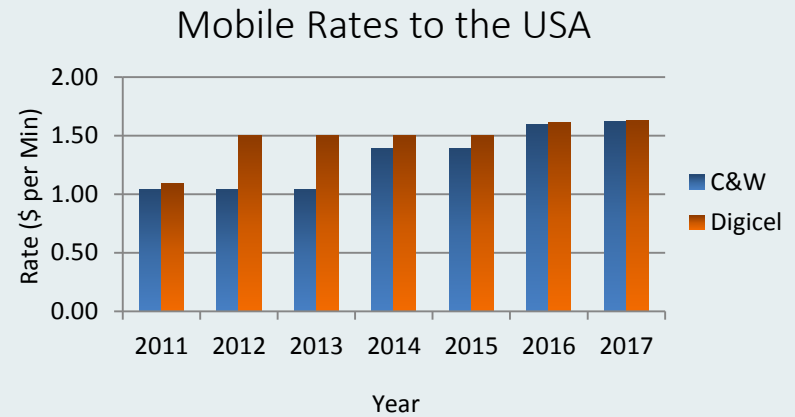


FIGURE 4

The rates depicted in Figure 4 are not regulated. We saw a slight increase to the rates in 2017.

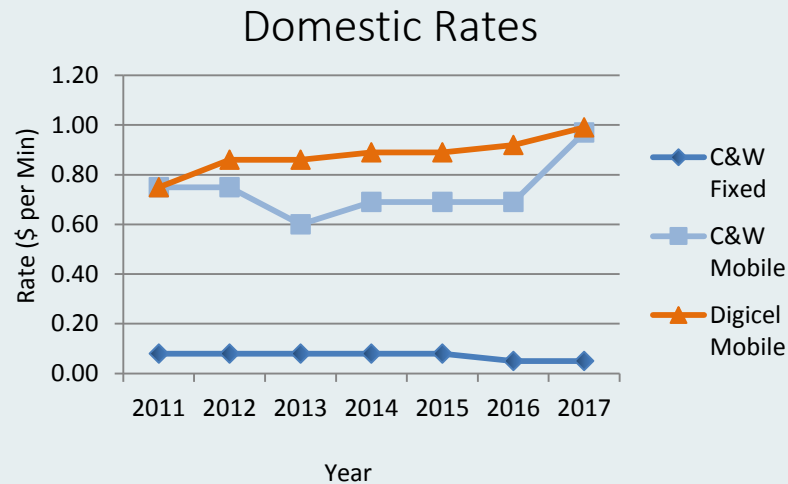


FIGURE 5

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, Cable and Wireless' and Digicel's rates increased in 2016 and 2017 while Cable & Wireless' fixed line rates reduced.

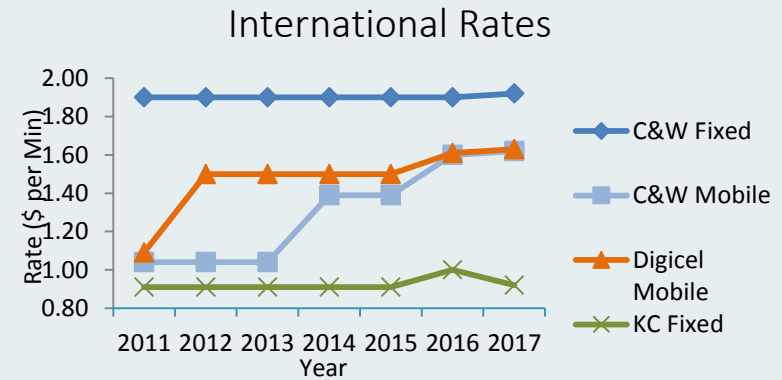


FIGURE 6

The international rates in Figure 6 are the daytime rates for calls to the USA for all providers. Cable and Wireless and Digicel recorded an increase to their rates in 2017. However the rates for Karib Cable was reduced in 2017.



FIGURE 7

Figure 7 shows Cable & Wireless' and Karib Cable's fixed line to mobile rates for 2011 to 2017. The rates remained unchanged going forward from 2013 to 2015. However, Karib Cable recorded a decrease in 2017.

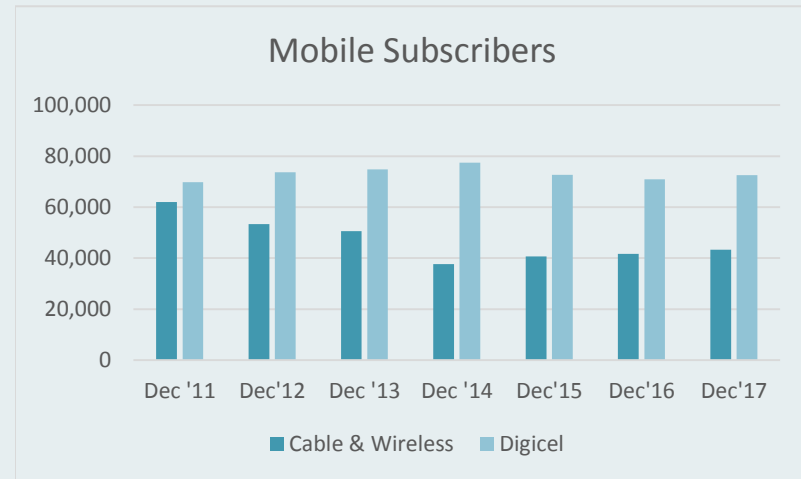


FIGURE 8

It is noted that Cable & Wireless' and Digicel's mobile subscribers slightly increased in 2017.

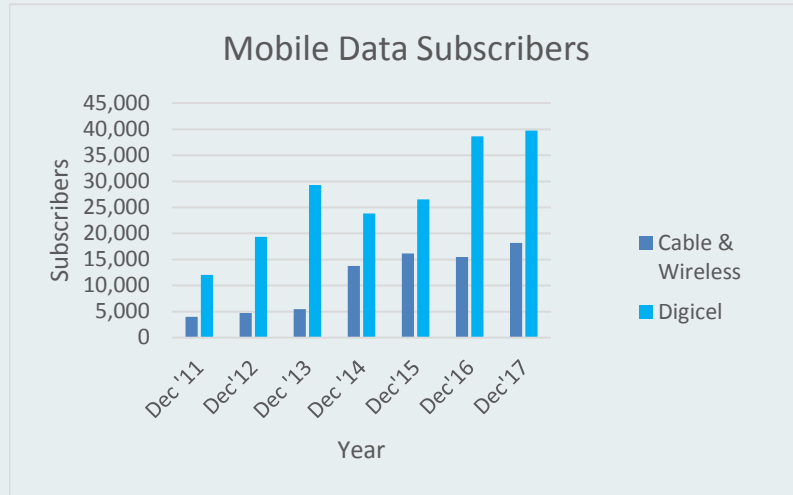


FIGURE 9

Figure 9 shows a comparison of the total Mobile Data Subscribers for Cable & Wireless and Digicel. We saw an increase to Cable and Wireless' and Digicel's data subscribers in 2017.

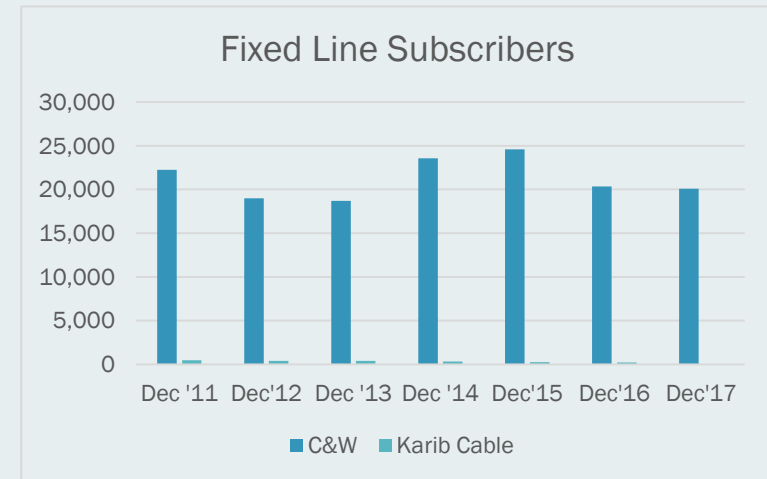


FIGURE 10

Figure 10 shows a comparison in Fixed Line Subscribers for Cable & Wireless and Karib Cable. In 2017, Cable & Wireless and Karib Cable recorded a decrease for the Fixed Line Subscribers.

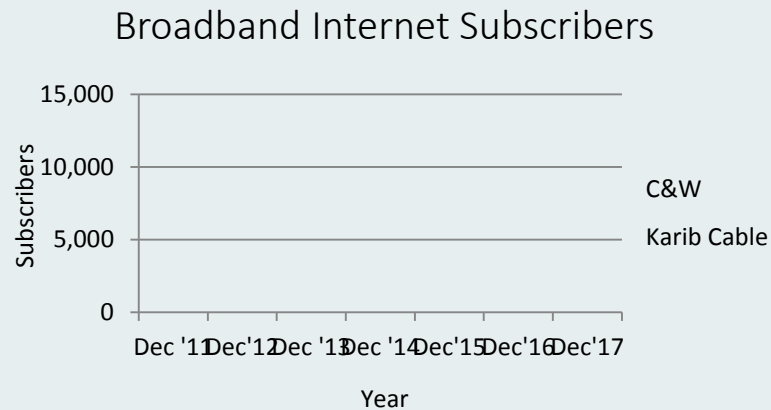


FIGURE 11

Figure 11 shows the number of Broadband Internet Subscribers per provider. Cable and Wireless experienced a slight decline in broadband subscribers in 2017, however there was an increase in broadband subscribers for Karib Cable within this year.

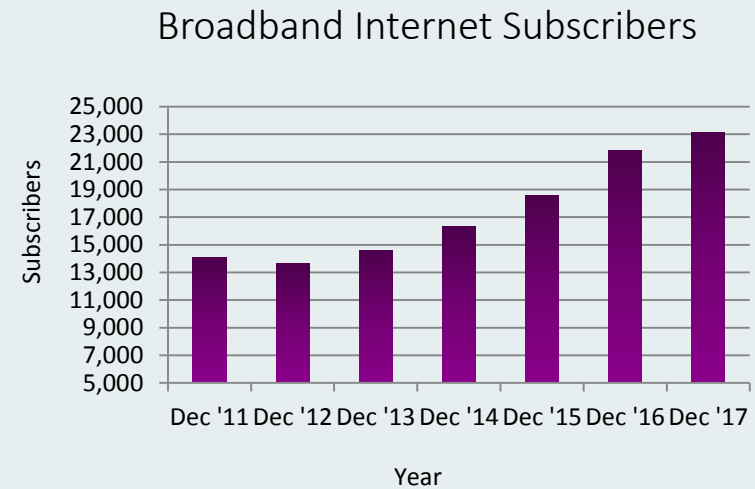


FIGURE 12

Figure 12 shows the number of Broadband Internet Subscribers from 2011 to 2017 on a whole. There has been a slight decline in 2012, however there has been an increase in the Broadband Internet Subscribers from 2013.

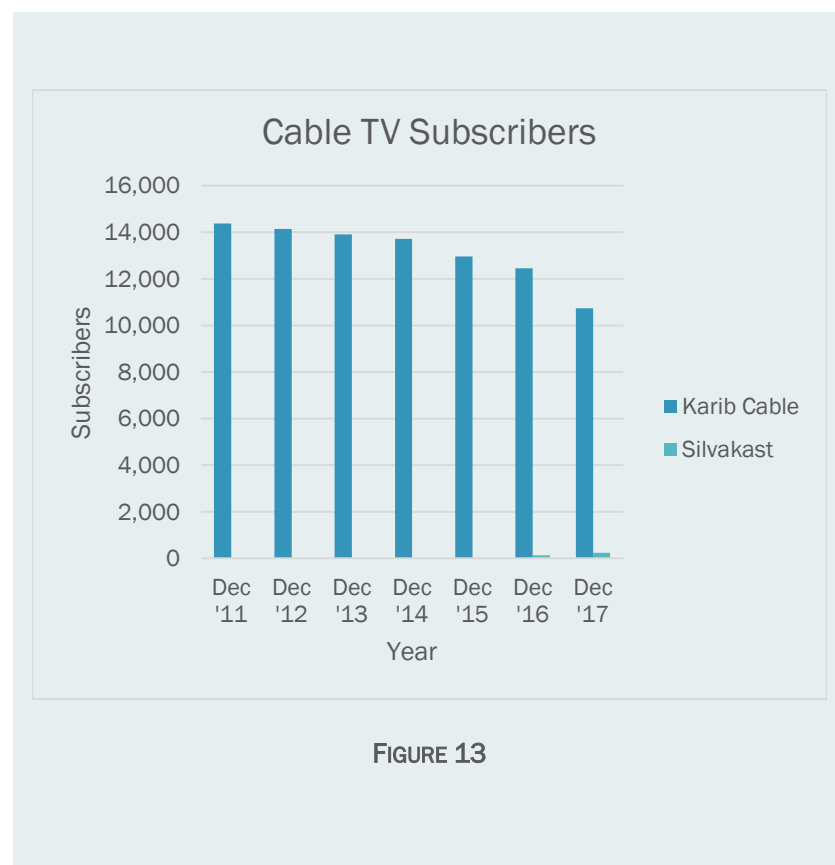
**FIGURE 13**

Figure 13 shows that Karib Cable (Columbus Communications) experienced a slight decrease in Cable TV subscribers in 2017 while Silvakast experienced a slight increase in Cable TV subscribers during 2017.

			2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Cable & Wireless (W) Ltd	Fixed Line Subscribers	Residential	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
		Business	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
		Total	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
	Internet Subscribers	Dialup	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
		ISDN	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
		ADSL (Residential)	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
		ADSL (Business)	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
		Total	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
	Mobile Subscribers	Post paid	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
		Prepaid	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
		Total	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
Digicel	Mobile Subscribers	Post paid	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
		Prepaid	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
		Total	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
Karib Cable(Columbus Communications)	Cable TV Subscribers	Residential	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
		Business	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
		Free Service	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
		Total	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
	Internet Subscribers	Residential	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
		Business	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
		Free Service	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
		Total	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
	Fixed Line Subscribers	Residential	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
		Business	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
		Free Service	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
		Total	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
SilvaKast	Cable TV Subscribers	Residential	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
		Business	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx	xxxxxxx
		Total											

Table 5 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 2017 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.

		2010		2011		2012		2013		2014		2015		2016		2017	
		New	Renew	New	Renew	New	Renew	New	Renew	New	Renew	New	Renew	New	Renew	New	Renew
Individual Type Licenses	Fixed Public	1	N/A	1	N/A	0	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	1	N/A	1	N/A	0	N/A	0	N/A
	Subscriber Television	2	N/A	1	N/A	0	N/A	1	N/A	1	N/A	1	N/A	1	N/A	1	N/A
	Int'l Simple Voice Resale	1	N/A	0	N/A	0	N/A	0	N/A	1	N/A	0	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	1	1	1
Class type Licenses	Private network/services	1	N/A	1	N/A	1	N/A	0	N/A	0	N/A	1	1	1	1	1	1
	Internet services	0	N/A	0	N/A	0	N/A	0	N/A	0	N/A	0	N/A	0	2	1	1
	Radio Broadcast	8	N/A	1	N/A	0	N/A	0	3	1	5	1	6	1	7	1	8
	Value Added Services	0	N/A	0	N/A	0	N/A	0	N/A	1	N/A	1	N/A	0	0	0	0
	Community radio	0	N/A	0	N/A	0	2	0	N/A	0	N/A	1	1	2	3	2	4
	Television Broadcast	0	N/A	0	N/A	1	N/A	0	N/A	0	N/A	0	N/A	0	1	0	2
	Maritime mobile	0	19	3	42	4	67	35	31	35	31	1	16	1	26	3	44
	Land mobile	3	212	5	267	3	172	2	155	3	204	0	10	10	20	12	287
	Aeronautical radio	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
	Aircraft station	1	16	2	17	2	17	4	17	3	17	1	18	1	17	1	18
	Amateur Radio station	36	36	38	60	27	80	25	84	26	82	8	47	20	20	23	14
	Citizen Band radio	0	5	0	1	0	1	0	0	0	0	2	3	0	0	0	0
	Family Radio Band	2	1	1	0	1	5	1	3	1	3	1	2	2	1	1	1
	Ship Station	28	131	44	170	27	122	15	182	18	157	46	177	41	184	40	163
Miscellaneous	CPE Dealers reg. fee	18	17	17	44	15	18	14	16	10	17	2	10	5	18	5	20
	Exam Fees for Radio Operators	0	N/A	2	N/A	0	N/A	1	N/A	1	N/A	0	N/A	0	N/A	0	N/A
	Type Approval fee		N/A	3	N/A	16	N/A	22	N/A	27	N/A	56	N/A	85	N/A	102	N/A
	Ship station Operators	25	32	17	55	25	9	27	7	29	21	17	40	16	28	18	30
	Aircraft Station Operators	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TABLE 5 Table 5 outlines the number of licences issued from 2010 to 2017. 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 our own due to the mandate given to ECTEL on certain issues.

However, the Universal Service Fund allows for some flexibility at the national level and the NTRC SVG has strategically utilized the available resources for maximum benefits via practical and needed projects that meet the needs of our 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 to ensure that the telecommunications regulatory framework and other ICT initiatives robustly meet current and future demands.

10. Result Indicators 2017

1. To execute the 5th annual NTRC's \hat{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.

The competition was completed. The 2017 competition was restructured to obtain entries from the public. The 2017 competition consisted of two categories which included the Secondary Category and the Open Category. There was an increase in the number of entries for the competition from 25 to 50.

2. To seek international funding for two USF projects in collaboration with other NTRCs. This objective carries over from 2016.

This task is incomplete as the NTRC has worked along with the staff at the Ministry of Finance and the Ministry of Foreign Affairs for the majority of the year in an effort to source funding for these projects but we were not successful. The NTRC will however, make some adjustment to the scope of works and continue working along with the relevant Ministries in 2018 to seek the necessary funding for these projects.

3. Finalise the Draft National Broadband plan after public consultation process and seek approval from Cabinet for its adoption and execution.

The Draft National Broadband plan was finalised after public consultation, however it is pending 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.

This objective was not achieved in 2017. Cable and Wireless indicated that network upgrades have delayed the process while Digicel has indicated that resources had to be redirected to Hurricane hit islands.

5. Working jointly with ECTEL and the Ministry of Finance, Economic Planning, Sustainable Development and Information Technology in having the new electronic communications bill and relevant subsidiary regulations enacted.

This is incomplete as ECTEL decided to make further adjustments to the draft EC bill in 2017. The NTRC will continue to work with ECTEL and the Ministry responsible for Telecommunications with the aim of having the new electronic communications bill and relevant regulations enacted in 2018.

6. Working jointly with the Ministry of Finance, Economic Planning, Sustainable Development and Information Technology in having new licences issued to Cable and Wireless and Columbus Communications.

This is incomplete as ECTEL did not complete the final licence templates in 2017. It is expected that these will be completed in 2018.

7. Launch the IOS version of the NTRC connect app.

This is incomplete as the NTRC encountered difficulties with incorporating the navigational features in the app. It is envisioned that the work will be completed in 2018.

8. Expand the MyApp program to cater for two summer events with one being held in the Grenadines.

This task is complete. The MyApp programs were held in Petit Bordel and Union Island. The program in Petit Bordel ran for the period July 24, 2017 – August 25, 2017. Whereas, the program in Union Island ran for the period July 24, 2017 – August 18, 2017.

11. Major Objectives for 2018

1. To execute the 6th annual NTRC's i2 Competition.
2. To seek international funding for USF projects.
3. To seek approval from Cabinet for the adoption and Execution of the National Broadband Plan that was finalized in 2017
4. Working jointly with the Ministry of Finance, Economic Planning, Sustainable Development and Information Technology, in having new licences issued to Cable and Wireless and Columbus Communications.
5. Working jointly with ECTEL and the Ministry of Finance, Economic Planning, Sustainable Development and Information Technology, in having the new electronic communications bill and relevant subsidiary regulations enacted.
6. Launch the IOS version of the NTRC connect app.
7. To update the Vincy prices app to include new and improved features.
8. To facilitate geospatial training, in collaboration with the World Bank and ITSD, on the OpenStreetMap (OSM) Platform which is a crowd-sourced open map, and open map data tool that is edited by volunteers worldwide.
9. To conduct a National ICT Survey in St. Vincent and the Grenadines on behalf of the Caribbean Regional Communication Infrastructure Program (CARCIP).

10. To work along with ECTEL and the other NTRC's to implement the Integrated Spectrum Management and Monitoring System

11. To host the 2018 myApp summer program in Bequia.

12. 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.

The US Agency for International Development

Coursera Coursera provides universal access to the world's best education, partnering with top universities and organizations to offer courses online. Every course on Coursera is taught by top instructors from the world's best universities and educational institutions. Courses include recorded video lectures, auto-graded and peer-reviewed assignments, and community

	discussion forums. When you complete a course, you'll receive a sharable electronic Course Certificate.				
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 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).	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		
		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.	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.		
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.	ITU International Telecommunication Union ITU works closely with all standards organizations to form an international uniform standards system for communication.	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.		
		Land Mobile A mobile service between base stations and land mobile stations, or between land mobile stations			

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	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.
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	USAID	
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.		

13. Annex B

Audited Financial Statements 2017