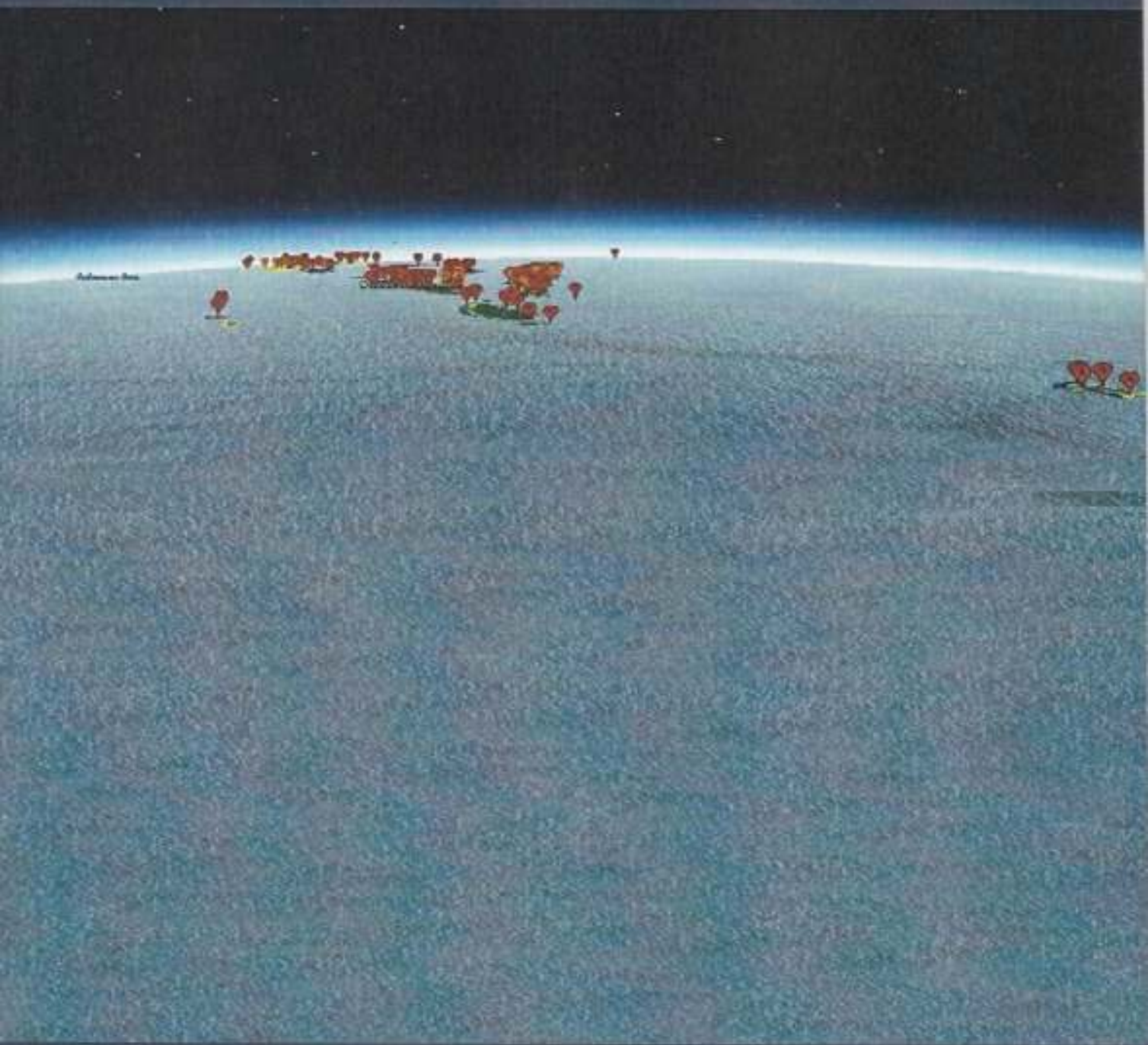




Telecommunications
Commission
Solomon Islands



Annual Report 2018



ANNUAL REPORT 2018

Table of Content

1.0 Commissioners' Overview	2
2.0 The Telecommunications Regime	3
3.0 The Telecommunications Market	6
4.0 International Connectivity	18
5.0 Activities of the Commission	19
6.0 International Affairs.....	24
7.0 Telecommunications and ICT Developments	26
Appendix 1. Statement of Cash Receipts and Payment	30
Appendix 2. Our Telekom	31
Appendix 3. Bmobile Vodafone	32
Appendix 4. Satsol	33



1.0 Commissioner's overview

2019 will the tenth anniversary of the legislation which created the Telecommunications Commission and gave it national responsibility for administering the telecommunications services sector, independently of the Government.

In accordance with the review provisions in the Telecommunications Act 2009, this will be a time to reflect on what impact the Act has had, and to begin consideration of what details, if any, need adjusting for the future. The main aspects of the legislation's performance as at the end of 2018, are noted in the body of this report.

For the Commission, the most noteworthy feature of the regime thus far is that the significant improvements in the country's communications over the last decade have been entirely driven by private sector competition. The most prominent investments have come through the major providers, Our Telekom, Bmobile-Vodafone and Satsol. Their commitment of capital and the resultant growth of the telecommunications market since 2009 is a vindication of Parliament's termination of public service oversight of the sector, and ministerial involvement in the commercial aspects of telecommunications.

The success of this liberalisation policy in Solomon Islands, has been noted worldwide especially by international agencies and those developing countries where public sector controlled telecommunications continues to be plagued by poor investment decisions, corruption, and systemic mal-administration.

In Solomon Islands, the Government still has international telecommunications policy functions of course and the 2018 milestones are noted in this report. In addition, as the result of the Australian Government's generous financial support, the Government will soon have an in direct ownership role in relation to the Coral Sea submarine cable coming on stream at the end of 2019.

Most important of all, it is the Government which is responsible for the National ICT Policy, a bundle of proposed new measures and amendments to existing laws, policies, and institutional arrangements, which are vital to the country's effective participation in the global economy in the internet era. The Policy, prepared by experts after a public consultation, and first tabled with Ministers in mid-2015, and formally adopted by Cabinet 2017, remains substantially unimplemented however.

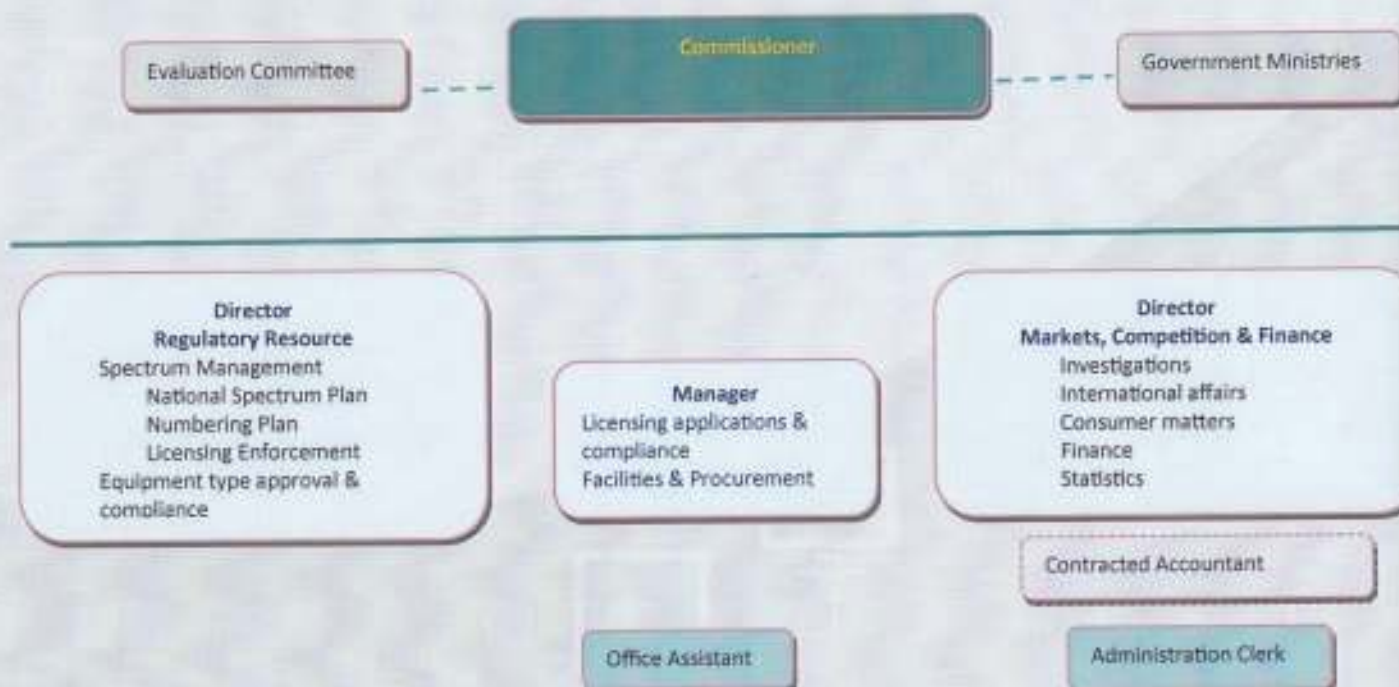
2.0 The Telecommunications Regime

TELECOMMUNICATIONS COMMISSION SOLOMON ISLANDS

The Telecommunications Commission as an independent expert statutory authority, charged with the economic and technical management of the telecommunications sector in Solomon Islands.

The Commission's core functions are to regulate and facilitate the development of the telecommunications, to manage Solomon Island's radio-frequency spectrum resource, and to safeguard competition and the interests of consumers. The Commission is funded independently of parliamentary budget appropriations, through services licences fees paid to the Commission by the operators. In the exercise of its statutory powers and functions the Commission is not subject to the direction and control of government ministers.

The Commissioner, in consultation with the statutory Evaluation Committee, is responsible for the strategic and operational management of the organisation. The Commission office is made up of one commissioner, three professional staff, two support staff and a contracted accountant. The Commission's structure is illustrated below:



THE EVALUATION COMMITTEE

The Evaluation Committee constituted under section 7 of the Telecommunications Act 2009, maintains financial administrative oversight of the Commission. The Committee reviews the Commission's budgets and activity plans annually.

The members of the Committee who hold office *ex officio* are:

Mr. Frank Paulsen (Chairman) – Chairman, Solomon Island Law Reform Commission
Mr. Denton Rarawa – Governor, Central Bank of Solomon Islands
Mr. Jeremy Bartlett – Chairman, Solomon Islands Chamber of Commerce & Industry

INSTITUTIONAL STRENGTHENING

Under the statute, the Commission is obliged to generally seek to develop expertise and experience in telecommunications regulation among nationals of Solomon Islands. The Commission's three national professional staff members, have been with the Commission since its inception. They each receive specialised training in keeping with their roles and professional qualifications and expertise. This training is most often undertaken in conjunction with the Commission's participation in events run by the International Telecommunications Union (ITU), the regional body the Asia-Pacific Telecommunity, (APT) and the Pacific Islands Telecommunications Association (PITA).

Commission technical staff attended the technical training organised by the Pacific Network Operator Group (PacNOG22) in Honiara in June 2018. This training covered routing concepts, classifications of different routing protocols, Internet routing architecture, and network infrastructure design principles. The training also included practical work based on existing and planned Internet Protocols. The workshop also addressed the key concepts and policies involved in establishing and maintaining network security. The nature and structure of network attacks and the motivation that drives such on-line malicious activity were also examined, along with processes that can be used to identify, mitigate and respond to such attacks.



In September, the Commission was pleased to be the in-country host for the ITU-Radio Communications workshop (PRW-18) held in Honiara in September 2018. This brought together all Pacific Region's regulators for training on radio-spectrum management software, which the Commission staff were first in the region to be proficient on.



The ITU Asia-Pacific Centre of Excellence Training on Competition, held in Bangkok, Thailand in September 2018, was another important event attended by Commission staff. The training objective was to build the knowledge and skills of the regional regulators in relation to competition issues in the digital applications environment, using established analytical models and tools.

COE 2018   
 COMPETITION ANALYSIS IN DIGITAL
 APPLICATIONS ENVIRONMENT
 17-22 SEPTEMBER 2018



The Commission was also represented at the workshop held in Suva in December 2018 and supported by ITU, APT and Government of Australia. This workshop addressed climate change and disaster management. Telecommunications and ICT are crucial in developing the National Emergency Telecommunication Plan (NETP) for Solomon Islands.



3.0 The Telecommunications Market

OVERVIEW

Telecommunication services continue to be the single most important driver of economic growth and diversification in Solomon Islands. The overall gross revenue from telecommunications services increased marginally from SBD\$376.3 million in 2017 to SBD\$379.8 million in 2018. This reflected both the competition for customers and the continuing network upgrades to mobile and fixed wireless services in Western Province, Malaita Province, and Honiara.

The strong competition, between the two mobile operators in particular, with discounted data plans and service bundles, also resulted in average revenue per user for the mobile sector declining from some SBD\$808 in 2017 to SBD\$788 in 2018.

Active mobile connections in 2018 rose to 482,029, an increase of 4% compared with 2017. This is largely attributable to better signal coverage and access in the rural areas, which has added new customers and made available new data plans and service bundles. The increase in connections has also raised the national mobile penetration rate to 80% compared with 78% in 2017. The ongoing competitive discounts in data plans and bundles has also stimulated new demand for internet access and usage.

The introduction of 4G (LTE) services in Honiara by Our Telekom saw mobile data user numbers increase slightly by 0.2% to 114,023. The Upgrade of 3G services in Malaita and Western province also enabled more connections for data use with a penetration of 20% in 2018. The mobile network upgrade from 3G to 4GLTE services in Honiara contributed to the steady rise in call minutes, internet usage and volume of data traffic respectively. Residential fixed line service maintained its declining trend, with only 7,430 active users.

Overall in 2018, the communications sector contributed 3% to national Gross Domestic Product as reported by the Central bank of Solomon Islands. The uplift in new connections is expected to continue in 2019.

The Appendix to this report, provides a telecommunications services coverage map, which can also be downloaded via the Commission's website at www.tcsi.org.sb

MARKET PERFORMANCE INDICATORS

Indicator	2010	2018
	Actual	Actual
<i>Mobile Subscribers</i>	115,500	482,029
Mobile penetration (calculated)	20%	80%
Mobile coverage (calculated)	20%	95%
Fixed lines	8,400	7,430
<i>Internet Subscribers</i>		
Mobile (3G/4GLTE)	8,205	114,249
Wireless (hotspot)	127	79
ADSL	1,359	987
DSL	1,163	143
<i>Internet Penetration</i>		
Mobile (Broadband)	1.80%	20%
Fixed line (ADSL)	0.2%	0.16%
Internet providers (Active)	1	3
Gross Total Revenue (SBD) \$million	106	380
Number of mobile network service providers	2	2
Contribution to GDP	*	3%

*Not available

COMPETITION

Competition in mobile telecommunications services has flourished in Solomon Islands over the last eight years. The direct results of this competition are greater service coverage, lower prices, improving service quality and a wider range of services.

The year shows total mobile subscriptions rising steadily to reach 482,029 subscribers, representing an annual growth rate of 4%. The number of subscribers is expected to rise again in 2019 as demand for mobile data services grows in response to the wider availability and utility of smartphones.

In 2018 competitive activity was very much focused on improved data coverage, with the competition for data services between the two mobile telephony providers being added to by the fixed wireless operator Satsol, and some small locally focused ISP type start-ups.

Direct competition between the two established telephony operators remained robust during 2018 as both operators continued to upgrade their infrastructure for 3G and 4G services. In the second phase of its business transformation project, Our Telekom expanded its 3G services in Guadalcanal, Makira, Isabel and Choiseul.

The Our Telekom project rollout is in the map provided below.



In 2018, Bmobile focused its investments in shoring up its power supply systems. Bmobile invested approximately SBD\$5 million in new generation hybrid diesel/battery/solar gensets, which will result in substantial savings of fuel, and foreign exchange, and bring up the site uptime to >95%. In the first phase the generators are being deployed in Malaita and in Guadalcanal. The second phase is planned for 2019 / 2020 for Central and Western province. The additional site rollout planned in 2018 was delayed due to various issues pertaining to site acquisition and Landowner issues.

SATSOL the fixed wireless broadband provider also made major progress upgrading its infrastructure and wireless services to 4G/LTE in Honiara and Western Province. In 2018, SATSOL reported the achievements and progress in wireless ISP services as follows;

- Piloted an LTE-based wireless broadband service and confirmed 30% coverage of the Honiara urban area. The service to be launched in 2019 will target households and businesses.
- Deployed a Honiara-wide secure network for the Australian Federal Police (AFP) personnel resident in Solomon Islands, providing Internet and secure networking for all their residences and offices.
- Conducted a successful pilot of IP-TV to measure performance prior to deployment in 2019
- Launched Islands.Net, a significant new satellite Internet service for rural customers (households, schools and businesses) based on Kacific Ku-band. The service is upgradable to Ka with the launch of Kacific-1 in 2019 and will provide

a low cost and high throughput alternative to the undersea cable in areas that cannot be reached with terrestrial links.

- Deployed a C-band hub at their teleport, offering the Solomon Islands Government a single hop solution for critical in-country government applications. The single-hop C-band can be combined with Islands.NET for Internet to provide a complete solution for provincial government offices, which has been installed in 10 locations in 2018. Auki and Gizo network in the pictures below.



SATSOL also established its presence in other parts of the Pacific and is expected to continue this regional expansion in 2019.

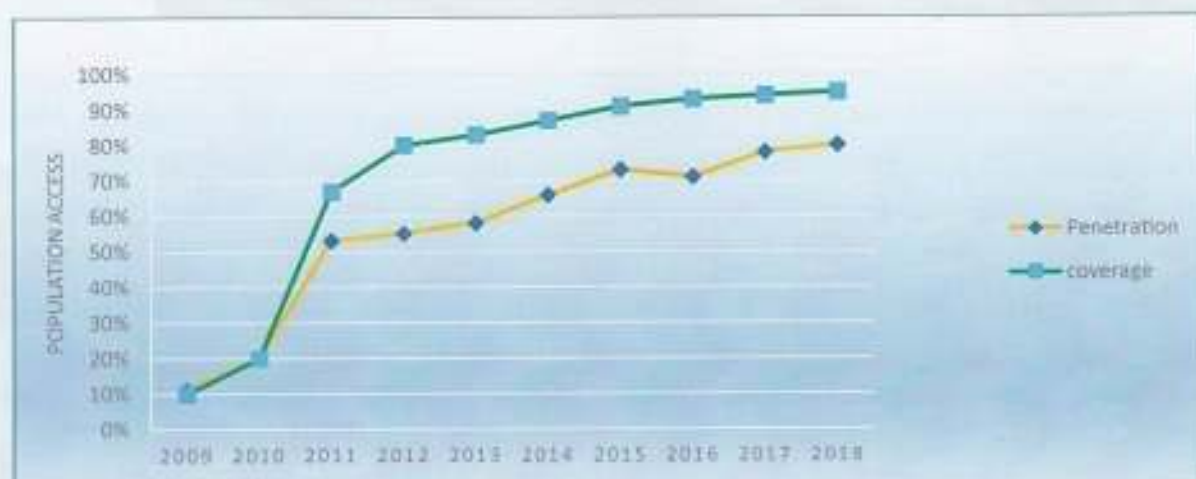
MOBILE SERVICES PENETRATION

The geographical coverage and population penetration graph below tracks the uptake of mobile services up to 2018. Our Telekom and Bmobile Vodafone are the two GSM mobile network providers of mobile services, and mobile connectivity.

Mobile penetration is measured as the number of subscriptions as a ratio of the total population and gives the percentage of population who actually have a mobile phone. The 2018 mobile penetration rate of 80% in 2018 compares with 78% in 2017.

Clearly, coverage and penetration continue to grow at a satisfactory rate, reflecting the improving affordability of services and handsets, and the utility of data services in particular. The availability of dual SIM devices may also be a factor in mobile subscription growth, giving consumers choices in relation to the competitive services on offer.

The improvement in technology for 3G+ and 4G mobile networks is also contributing to this growth.



CONSUMERS AFFAIRS

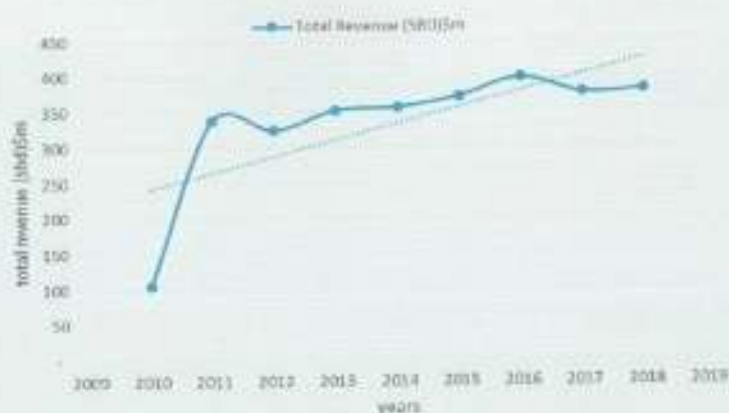
Notwithstanding the rapid uptake and use of mobile telephony and internet access services in recent times, high levels of consumer dissatisfaction with the local service elements of telecommunications are not apparent. Very few complaints are made to the Commission.

During 2018, the Commission maintained its policy of assisting complainants to address full formed complaints to their service provider, as the first step towards resolving individual problems. This feedback from the market directly, is an important part of the competitive process since in most cases, the customer has a choice of supplier. The Commission experienced a high level of cooperation from all service providers in addressing and resolving individual complaints. Most service drop-offs are the result of generalized outages or poor data speeds, often the result of technical problems outside the local operators' control.

TCSI continues to monitor and collect data on the quality of handsets sold in the local market by retailers who are not telecommunications service providers, because of concerns that some devices may be unauthorised copies. While less expensive than the real thing available through Our Telekom and Bmobile vodafone, some of the cheap devices may not be fully functional for very long. The Commission expects to discuss the results of its enquiries with the relevant government ministries during 2019.

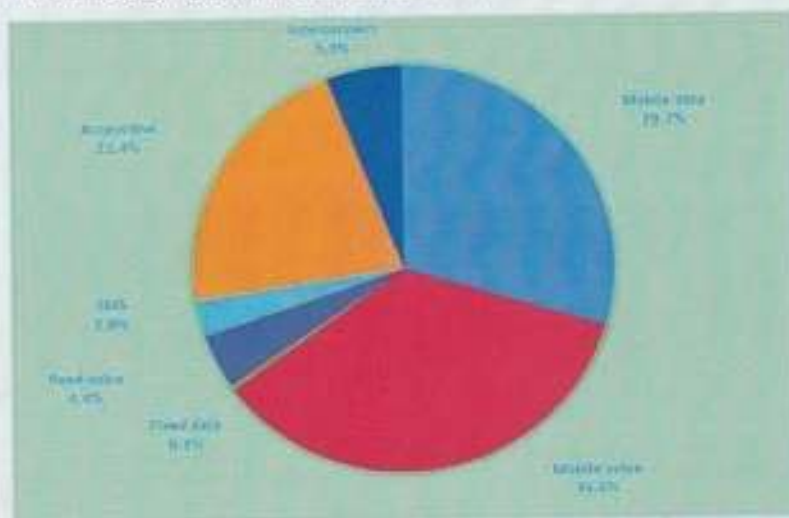
GROSS REVENUE TREND

The graph below shows historical telecommunication revenues since 2010. In 2018, revenues improved from SBD\$376m in 2017 to SBD\$380m. The increase is largely attributable to the improvement in in service coverage, the increase in new connections, and the provision of new and innovative services which have stimulated consumption of data and voice service bundles. The trend is expected to continue in 2019.



Revenue Share

The chart below shows revenue share for particular telecommunications services in year 2018.



Revenue by Type

In 2018 revenue from mobile telephony represented 35% of the overall gross revenue with mobile data contributing around 30%. The sector's total gross revenue in 2018 contributed 3% to the national GDP growth of 3.9% as reported by the Central Bank of Solomon Islands.

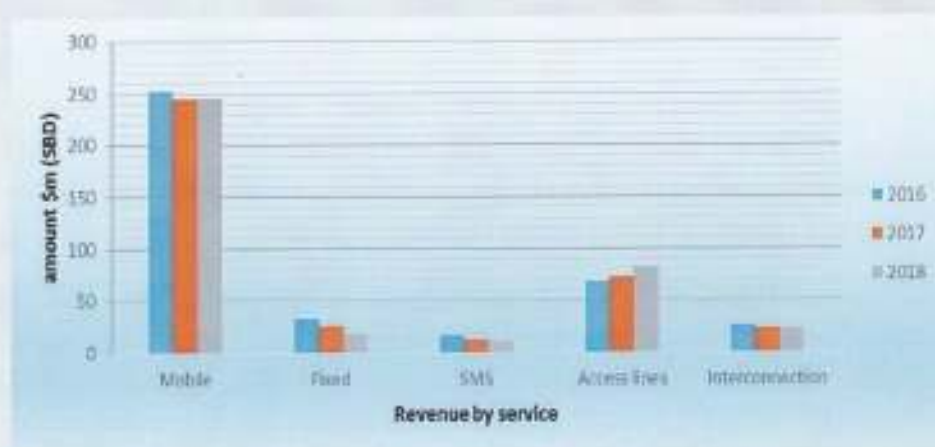
Historically, revenue from mobile calls has been the dominant component of overall telecommunications revenue. However, as data demand and use grows, a shift from voice and text calls to data is becoming apparent. This has been facilitated by consumer use of "over-the-top" communication services, such as Viber, Skype and Facebook which are convenient to use and are effectively seen as transaction "free" by the consumer.

Presently there is no specific breakdown by prepaid and post-paid within mobile revenue, of mobile data use, and mobile telephony use. Revenue from mobile was slightly above revenues

from data as a result in growth of 2G services in rural areas. As illustrated by the graph, mobile data revenue is increasing, indicating that users in 3G and fixed wireless coverage areas are now substituting mobile data services for mobile calls, no doubt helped by the competitive prices for data bundles.

For 2018, SMS revenue declined by 10% as the telecom sector is continuing to experience a decline in SMS usage. The impact of OTT services on the use and growth of the SMS service shows SMS traffic falling in 2018 and this can be expected to continue to decline in the coming years.

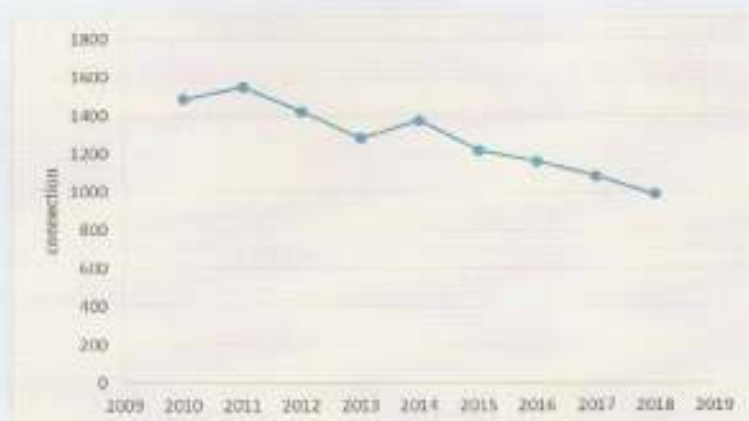
The graph also shows a declining trend in revenues from fixed line telephony, but overall revenues from the use of fixed lines actually increased because of their function for internet access.



FIXEDLINE INTERNET

Notwithstanding the increase in revenues for fixed line internet access, the number of fixed line connections declined by some 9% in 2018. Our Telekom and Satsol were the two commercial providers of fixed access, with 80% of users using Our Telekom's ADSL capable fixed line network. Satsol operates a satellite based fixed wireless internet access service.

Although the number of fixed access users (ADSL and Wireless) remained fairly static, the download and upload speeds were some 5-12Mbps higher than mobile data network speeds. Commercial customers and government are the main users of fixed internet access, which overall, continues to carry the greater volume of internet downloads nationally.

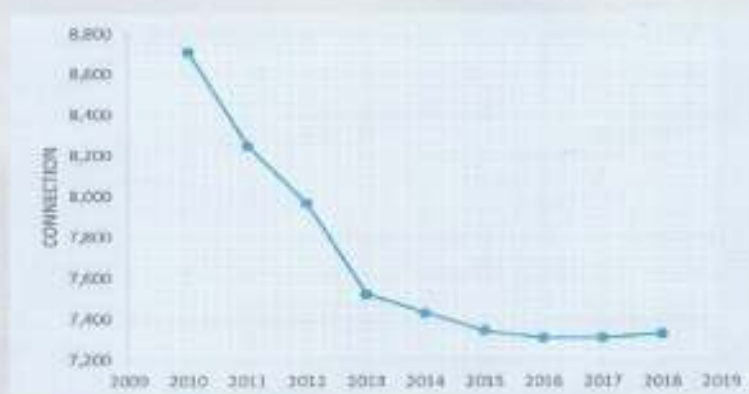


FIXED WIRELESS INTERNET

The satellite data broadband service, ISLANDS.NET offered by SATSOL to certain remote and provincial areas, where mobile connection is reached. The principal usage of these services was from the Government provincial offices connecting to Honiara. The services are popular with the schools and clinics in rural areas and the demand for fixed wireless internet is expected to expand when the submarine cable comes into service in 2020.

FIXED LINE TELEPHONY

Solomon Telekom remains the only the fixed line telephony provider. The traditional voice service on the fixed network is gradually declining in popularity however. Commercial customers of this service are concentrated in Honiara, with minimal use in the provincial centres. The graph below shows the declining trend for the fixed line network since 2010. Following on from the decline in previous years, by the end of 2018 there were a total of 7,430 subscribers.



MOBILE INTERNET

The competition in mobile data in 2018 was very strong as illustrated in the graph below.

Mobile data subscriptions enabled internet access through the deployed mobile data technologies via mobile phones, tablets or through dedicated data-only connections such as a dongle or router which utilizes a mobile SIM card to connect to a mobile data network.

The graph shows mobile data subscriptions from 2014 to the end of 2018 for both mobile network operators. The graph also reflect the significant increase in the mobile broadband subscribers by 53% from some 74,457 subscribers in 2014 growing to over 114,249 subscribers by the end of 2018. The subscription base is expected to continue rising in 2019.

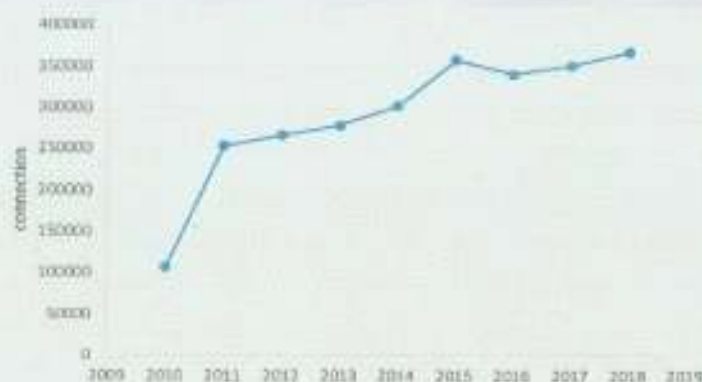
The growth in data subscribers has been boosted by the ongoing upgrade of mobile networks by the mobile operators across Solomon Islands to support 3G and 4G/LTE technologies. This has attracted an increased subscriber base along with consumer friendly promotional bundles providing cheaper and reasonable speed capacity allowing them to surf the internet more conveniently. This figure is anticipated to increase over the years as mobile internet use is becoming increasingly popular across the populated provinces in Solomon Islands.



MOBILE TELEPHONY

Mobile telephony user numbers continued to rise during 2018. A revenue decline of 2% for the year may be attributable to some users only activating their use when the mobile providers made special price offers. The fact that most rural areas only had access to 2G services was also a factor. It was noted that the national mobile penetration rate of 80% relates to a population where 80% live in the rural villages.

The graph below shows the trend increase in mobile users since 2010:



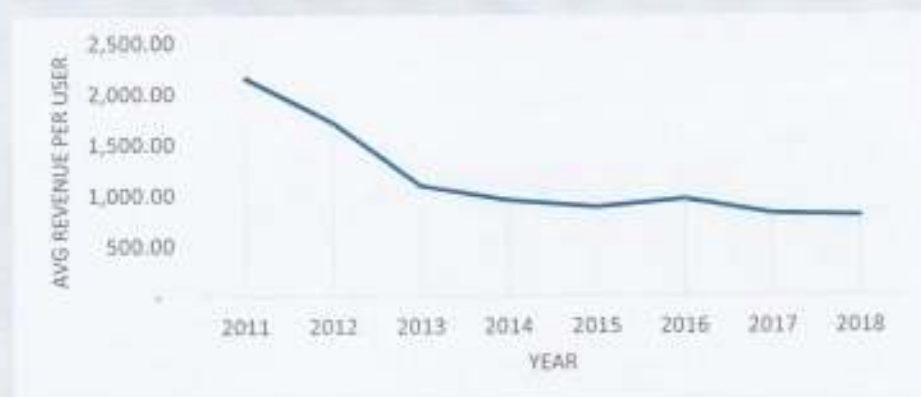
DOWNLOADS MOBILE vs FIXED

The total volume of data downloads from mobile continue to increase and is expected to grow at a faster rate when the submarine cable land. The sharp increase in 2018 is attributed to the mobile network operators recent upgrading of network coverage to 3G and LTE (4G) services.

The graph below showed the total volume of data downloads in terabytes of 1,370 for mobile and 876 for fixed line in 2018. The substantial increase was for mobile of some 111% compared to 105% in 2017. On the other hand data downloads from fixed line increase by 23% for 2018 and reflecting declining rate from 32% for 2017. Noting from the graph, 3G upgrade is for Malaita and Western province and LTE (4G) is in Honiara for period of 2017/2018.

AVERAGE REVENUE PER USERS (ARPU)

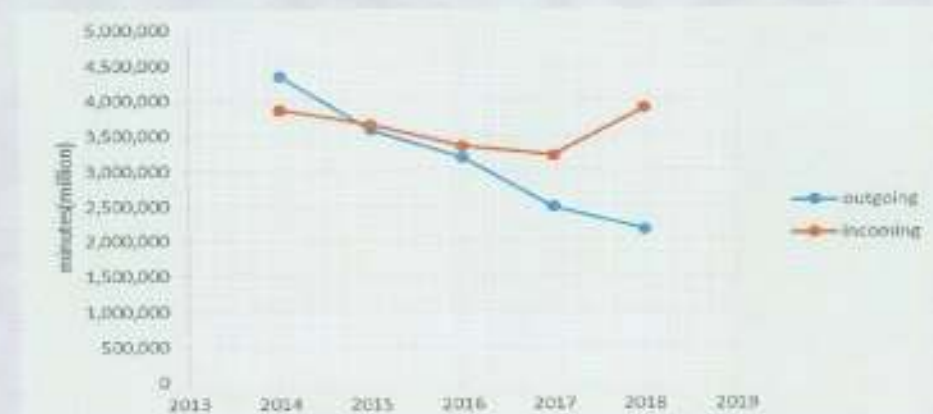
Average revenue per user in 2018 was SBD\$788 a reduction from \$808 in 2017. The statistics suggest that on monthly basis, many individual wage and salary earners were spending as much as 30%-40% of their after-tax income on mobile credits. The graph shows that (ARPU) across all telecom services has been steadily declining.



INTERNATIONAL TRAFFIC

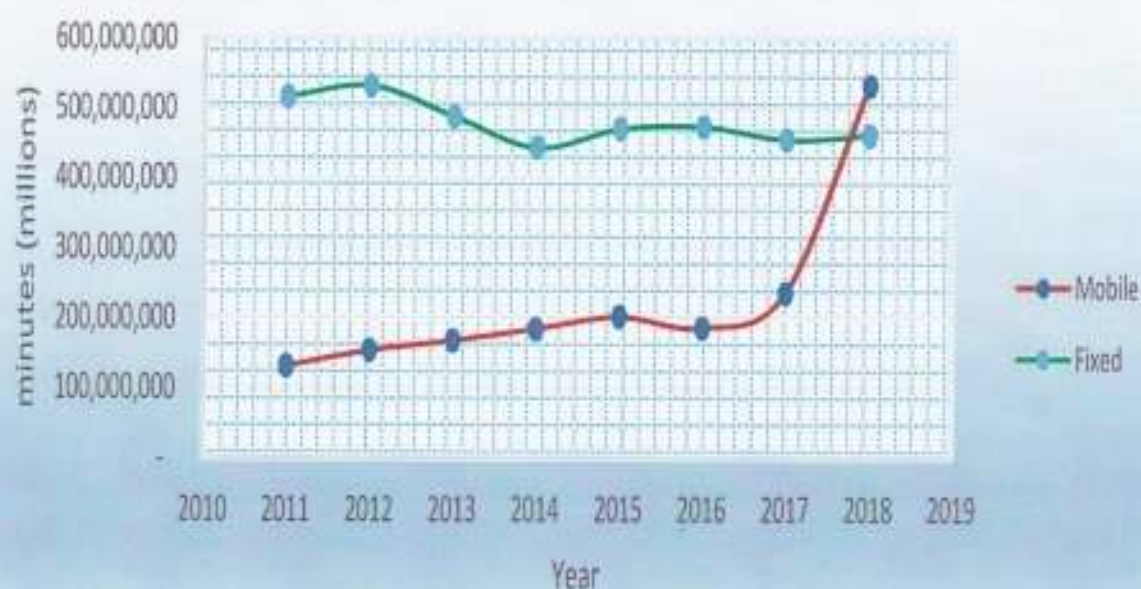
The graph below illustrates the history of international call traffic from 2014 to 2018. It shows that in 2018, incoming traffic continued to outpace outgoing traffic. The incoming traffic grew by 21% in parallel with a 13% reduction for outgoing traffic. The overall traffic reported in minutes for the year was 2.2million outgoing to 3.9million incoming. The increase is highly likely attributable to Bmobile-Vodafone's branding arrangements for international roaming.

The declining volume of international calls clearly indicates that consumers are turning away from using fixed line telephony due to the relatively expensive calling rates, compared with other OTT alternatives such as Facebook, Skype, Viber and other social media services. These online services are now a more economical means of communicating overseas.



MINUTES USED

As indicated by the graph below, the total number of minutes used by all telecommunications services continues to rise especially for mobile traffic. This year was the first time mobile service traffic surpassed fixed services traffic. Mobile minute usage accounted for 53% overall, an increase of 126% over 2017, whilst fixed services traffic increased by 1.4%.



4.0 International Connectivity

INTERNATIONAL CONNECTIVITY

Solomon Islands continued to rely exclusively on satellite for its international gateway during 2018. So although domestic costs remained effectively moderated by competition, the country still does not enjoy the benefits which some other Pacific nations have in terms of faster internet access speed and lower charges for international interconnectivity, because their connections are via high capacity undersea cable.

This situation will be overcome in the years ahead with the arrival of the two planned undersea cable projects, and a number of new high throughput satellite constellations. The new capacity of the Coral Sea Cable alone, will be some 2,000 times larger than the country's current usage.

Notwithstanding the arrival of the planned undersea cables, the established mobile network operators will still require satellite and microwave connectivity for telecommunications distribution around provincial locations. In addition the new international Low Earth Orbit, and Near Earth Orbit constellations will be accessible from throughout Solomon Islands, meaning that local internet connectivity can be achieved without a ubiquitous nationwide network. Moreover the new satellite services will have very low signal latency, making them comparable with cable services for sensitive applications such as financial transactions.

International bandwidth capacity reported for 2018 was 1,400MB, compared with 900MB in 2017.



5.0 Activities of the Commission

(The activities requiring specific report further to Section 23 of the Telecommunications Act 2009.)

DETERMINATIONS, ORDERS AND DIRECTIONS MADE

No formal Determinations, Orders or Directions were gazetted during 2018.

STEPS TAKEN IN CONNECTION WITH UNIVERSAL ACCESS

Extending telephony infrastructure to certain areas can be uneconomic for a network operator if the locations are remote and the population small. Nevertheless, a plan to pursue universal access can be developed if the Commission considers such a plan is warranted. Such schemes were once common internationally in the monopoly fixed line era, when consumer prices for telephone calls were usually subject to price controls.

In the era of competitive mobile telephony services, competition is the primary driver of service pricing and coverage rather than regulatory command. And as observed in this and previous Commission annual reports, in Solomon Islands, there has been a very satisfactory growth rate in telephony coverage as a result of effective competition. Moreover, in those truly remote locations which still lack telephony, often the problem is the ability of the local population to pay cash for the services, rather than the cost the operator faces in putting in a connection.

Accordingly the Commission has thus far resolved not to develop a "supply-side" access subsidy plan, that is where consumers nationwide, and, or, willing donors, subsidize the companies building telephone towers in specifically identified rural locations. The Commission has however indicated that amendments to the Act could permit the development of a "demand-side" scheme, whereby certain users in remote locations might have their take up of services subsidized.

Internet access is also fast becoming more important to Solomon Islanders than traditional voice calls and text messaging, and therefore any access plan which only addressed telephony, would be regressive. Given the likelihood of the country having high speed, high capacity connection to the Internet via undersea cable in the near future, the Commission is open to all new ideas to pursue universal broadband internet access.

But achieving that at a faster rate by supply-side subsidy intervention could cause undesirable competitive and investment distortions. Under the very open licensing and frequency assignment regime operating in the country, local SMEs as well as the established operators are able exploit the plethora of wireless options for international connectivity which are imminent in the medium term, (2020 to 2021).

Already the Commission is aware of strong interest from local and regional investors in single location service provision in traditional rural market locations in the Solomons. Any scheme to get things going at a faster rate, with a supply-side subsidy scheme which in any way

advantaged the big operators would probably foreclose these new opportunities, and the small-scale, local economic growth they have the potential to stimulate.

APPLICATIONS, DISPUTES AND COMPLAINTS FILED

In 2018, as a result of the adjudication on interconnect disputes between Our Telekom and Bmobile Vodafone concluded a new interconnection agreement, effective from 1st January 2018 with a term of 2 years.

INVESTIGATIONS UNDERTAKEN

Commission made enquiries with the mobile operators about their data practices and their marketing claims about data plan benefits, as the result of complaints received about top-up bonuses not being credited to data plans. The Commission was satisfied with the operators' responses.

PROCUREMENT AND OUTSOURCING ACTIVITIES

The only material procurement during 2018 was the replacement of the office printer.

MATERIAL LITIGATION

No material litigation eventuated during 2018. The Commission continued to retain legal counsel in relation to a number of matters with future litigation implications.

STATUTORY OBJECTIVES AND 2019 PLAN OF ACTIVITIES

As demonstrated by the detailed statistics and other information in this report, during 2018, satisfactory progress was made towards the principal objectives in the Telecommunications Act in terms of improvements in the "... availability, affordability, quality of service and kinds of telecommunications services in Solomon Islands"

During 2019 the Commission's plan of activities will include:

- Resolving an appropriate form of licence, and appropriate licence conditions for the Government owned entity to undertake the operation of the Australian sponsored undersea cable to Solomon Islands.
- Considering the introduction of general licensing conditions suitable for the expansion of the wholesale market for broadband capacity, and fee regulations for licensing applications and retail and wholesale services.
- Continuing the national signal testing and GIS coverage mapping programme.
- Maintaining surveillance of the competition and fair trading aspects of the telecommunications services and product markets.

SUMMARY OF INCOME AND EXPENDITURE

Under the Telecommunications Act, the Commission is to be funded primarily by annual telecommunications licence fees and special levies. The annual fee level is currently set at the statutory maximum of 2% of a licensee's gross revenue.

The Commission's statutory rolling budget is for three years, and is approved by the Evaluation Committee annually. For financial year ended 2018, the budget variance for income was due to the Gazetted supplementary licence fees imposed on operators until the end of 2019, for anticipated legal costs.

	Actual	Budget*	Variance
Income	8,991,466	8,739,388	(252,078)
Less: Expenditures	(8,645,104)	(8,218,521)	426,583
Surplus	346,362	520,867	174,505

*3 years rolling budget

The statement of cash receipts and payments for financial year 2018 appears in *appendix 1* to this report.

LIST OF LICENCES IN FORCE AND EXEMPTIONS ORDERS

There were no exemption orders applied for or granted in 2018.

The number of active licensees providing services were:

Type of Services	Type of Licence	No. of Licensee
Fixed telephony	Individual	1
Fixed Internet (ADSL + DSL)	Individual/Class	3
Mobile (Voice) 2G	Individual/Class	2
Mobile (Voice + Data) 3-3.9G	Individual/Class	2
Leased lines	Individual/Class	3
TV	Individual/Class	2

The most active licensees were; Solomon Telekom, Bmobile Vodafone and Satsol. The substantially inactive class licensees numbered 28.

SUMMARY OF RADIO FREQUENCIES ALLOCATED

The radio spectrum licences issued during 2018 were:

Type of Radio Spectrum Licence	Licensees	Licences
Amateur	8	8
Aeronautical	1	5
Maritime	57	111
Land mobile	3	3
VSAT Satellite	5	6
Handheld	None	None
Fixed Station	3	3
Broadcasting (Sound)	5	5
Television (Assigned)	5	5

LIST OF INTERCONNECTION AND ACCESS AGREEMENTS FILED

During the first quarter of 2018, as a result of the draft adjudication issued by the Commission towards later part of year 2017, the two mobile network operators, Our Telekom and Bmobile filed a new interconnection agreement, effective as of 1st January 2018, with a term of 2 years.

INTERNET COUNTRY CODE TOP LEVEL DOMAIN (ccTLD .SB) MANAGEMENT

During 2018, Our Telekom remained in its role as the delegated administrator of the country code top level domain "sb". The Company and the Commission continue to monitor international best practice for the purposes of developing specific management policies appropriate to Solomon Islands' stage of economic and technical development.

The implementation of the new ccTLD administrative model is a priority matter in this regard for 2019.

RADIO SPECTRUM MANAGEMENT

The population of the National Spectrum Management Data Base using the ITU SMS4DC software and the APT AFIS Web based software made substantial progress in 2018. The completion of the national spectrum management data base will enhance the administrative aspects of spectrum management in Solomon Islands.

The Commission continued with its spectrum monitoring and licensing interference compliance enforcement program by actively deploying its radio frequency signal monitoring equipment. No major signal interference issues were reported to or investigated by the Commission.

SUMMARY OF REGULATED PRICES

There were no regulated prices for telecommunications services during 2018.

6.0 International Affairs

INTERNATIONAL TELECOMMUNICATIONS UNION (ITU)

The Plenipotentiary (PP) Conference is the highest decision-making body of ITU, the United Nations specialized agency for ICTs. Held every four years, the Conference is the key event at which ITU Member States build consensus on key international ICT issues, elect leaders for the Union's top posts, and decide on a roadmap for ITU's work over the next four-year period, including strategic and financial plans. PP-18 takes place from 29 October to 16 November, and is being held at the Dubai World Trade Centre, Dubai, UAE.

Minister for Communications and Aviation Hon MP Peter Shannel Agovaka, and the Permanent Secretary Mr. Moses Virivolomo attended the meeting, the first delegation to attend this body from Solomon Islands since 1990.



Speaking at ITU plenipotentiary meeting, Minister acknowledges the traditional honours of Dubai for hosting the event.

Hon MP Peter S. Agovaka present country paper at PP-18

Minister & PS meeting other Pacific Leaders at the PP-18

ASIA PACIFIC TELECOMMUNITY (APT)

This year, the 15th APT Telecommunication/ICT Development Forum (ADF-15) was held in Colombo, Sri Lanka hosted by the Telecommunications Regulatory Commission of Sri Lanka (TRCSL). At the ADF-15 meeting, discussion was done for some lessons learned and impact of the project recipients of EBC funding. However, the meeting focus mainly on;

- Connectivity: Developing the digital Infrastructure;
- Innovation: Enabling conducive environments and harnessing the benefits of new technologies;
- Trust: Promoting security and resilience through ICT;
- Capacity Building: Promoting inclusiveness and enhancing expertise; and
- Partnership: Solidifying strategic cooperation with stakeholders.



The meeting was attended by the Director Markets.

ICANN BARCELONA

The ICANN63 annual general meeting took place on 20–26 October 2018, in Barcelona, Spain. ICANN63 is hosted by the Ministry of Economy and Business, responsible for the development of digitalisation in Spain. As a member country to ICANN, a delegation consist of the GAC member – Director Resources TCSI, PS and Minister of Communications and Aviation, attended the meeting.



Director Resources- Wilson Leguvaka, PS – Mases Virivoloma, Minister – Peter S. Agovaka

7.0 Telecommunications and ICT Developments

Coral Sea Cable (CS2)

The International Coral Sea Cable System (CS2) will link Honiara in Solomon Islands and Port Moresby in PNG to Sydney Australia. CS2 comprises a 4 fibre pair cable from Australia through the Coral Sea to a Branching Unit that separates the 4 pairs into separate two pair paths. Then 2 pair branch cables will extend from the Branching unit to Honiara and Port Moresby respectively where they will terminate at landing facilities and terminal equipment.

This is a powered repeated system engineered to provide a minimum of 10 Terabits/s over a single pair of fibres so each country has a potential 20 Terabit/s capacity with today's established cable technology. Each country's fibres are completely independent of the other right through the system and the only linkage from Port Moresby to Honiara is via the Sydney Landing Facilities.

The project also includes the Solomon Islands Domestic Cable Network (SIDN) which will link Auki, Noro and Taro back to Honiara using unpowered cable. The long stretch from Honiara to Noro requires amplification at each end to span the distance successfully so has a maximum capacity of 12 x 100Gb/s or 1.2 Terabit/s. The other spans all support 10 Terabit/s maximum capacity.

Taro is selected as the 4th landing point in order to bring services to the far end of the Solomon Islands and place critical infrastructure in the best location for a future expansion of the system to Arawa in Bougainville where it would join the PNG domestic network as a useful bridge between the countries and an important diverse path in the event of serious failure on the Sydney International route. The Domestic Network will be managed by Solomon Submarine Cable Company (SSC). The cable is envisaged to be ready for service (RFS) by January 2020.



The construction of the cable landing station and land ducts and beach manhole and vaults was done towards later part of the year.



Commissioner Bernard Hill inspecting the Naro Landing site



SSC Honiara landing station construction

ICN2 cable

The planned Interchange Cable Network 2 (ICN2) will connect Honiara to Port Vila and Luganville in Vanuatu. The system will comprise a trunk (Honiara – Port Vila) and branch (Luganville) architecture, with an approximate length of 1,630 km. The trunk portion is repeated, while the branch is un-repeated. A dual end power feed configuration adds resiliency to the design by allowing either end of the trunk to power the entire system, in case of a complete power failure at the other end.

This system has been modified from the original ICN2 system proposed in 2015. The modifications to the system include adding a Cable Landing Station (CLS) in Luganville, Vanuatu and moving the Cable Landing Station in the Solomon Islands to a site location to be determined. The areas under consideration will require some additional survey and negotiations for landing rights of way.

With an expected design capacity of 10 Tbs between the cities of Honiara and Port Vila, ICN2 will provide Solomon Islands with a high-bandwidth global connection through Interchange's ICN1 system, with onward connectivity to Fiji and the Southern Cross Cable Network (SCCN). ICN2 will be complimentary to the Coral Sea Cable and provide interconnection and redundancy services to the system in case of system outages. This redundancy should attract new investment into Solomon Islands due to the increased reliability inherent in the availability of multiple network connections.

ICN2 Cable has a Class Licence issued. It is anticipated that the cable will be ready for use by November 2019.



NATIONAL CYBERSECURITY WORKING GROUP

A national cyber security working group have been endorsed by the Cabinet to coordinate all issues related to Cybersecurity and Safeguarding Electronic Transactions in Solomon Islands. The forming of the group resulted from the Pacific Region Infrastructure Facility (PRIF) recent consultation visit to Honiara.

The consultation focused on the need to identify the critical assessment of the environment for cybersecurity and electronic transactions – ‘e-transactions’ and develop an action plan for a way forward on the development of cyber and e-transaction frameworks. The group was led by the Ministry of Communications and Aviation and Attorney General’s Office.

ICT FOR GIRLS EVENT – ITU

Solomon Islands Girls in ICT Day Conference Program was held on 26th April 2018 to mark the event ITU’s International Girls in ICT Day. The event was jointly hosted by the IT Society of Solomon Islands (ITSSI) and its affiliate; Women in IT Solomon Islands (WITSi), Ministry of Communications an Aviation and TCSI. The Girls in ICT event celebrate globally by International Telecommunication Union’s (ITU) members. This the first time that Solomon Islands will be joining the member states of ITU to commemorate this day.

The Girls in ICT Day aims to create a global environment that empowers and encourages girls and young women to consider careers in the growing field of ICTs, enabling both girls and technology companies to reap the benefits of greater female participation in the ICT sector. It was attended by lots of student girls from schools in Honiara and also other women working in the ICT sector.

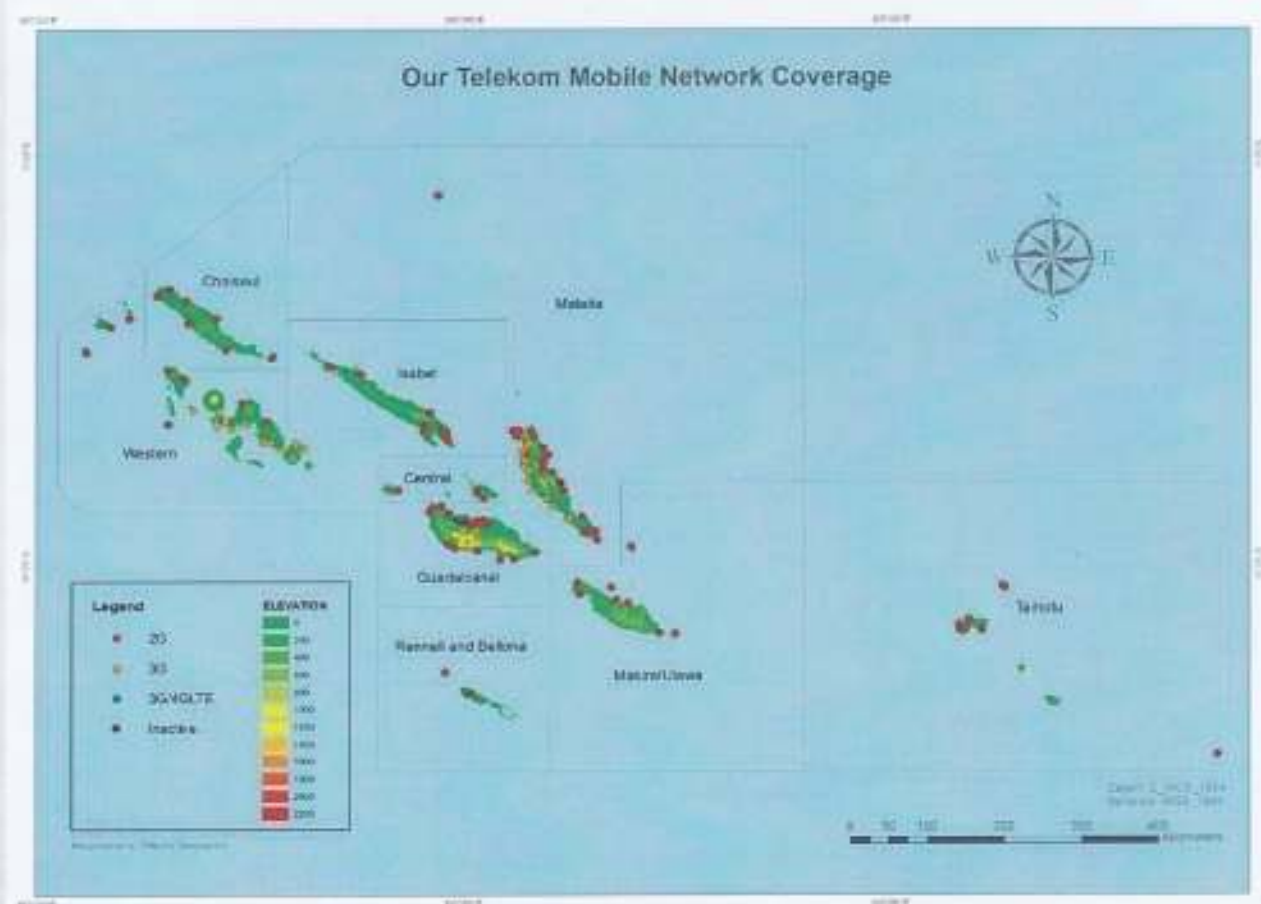


Appendix 1. Statement of Cash Receipts and Payment

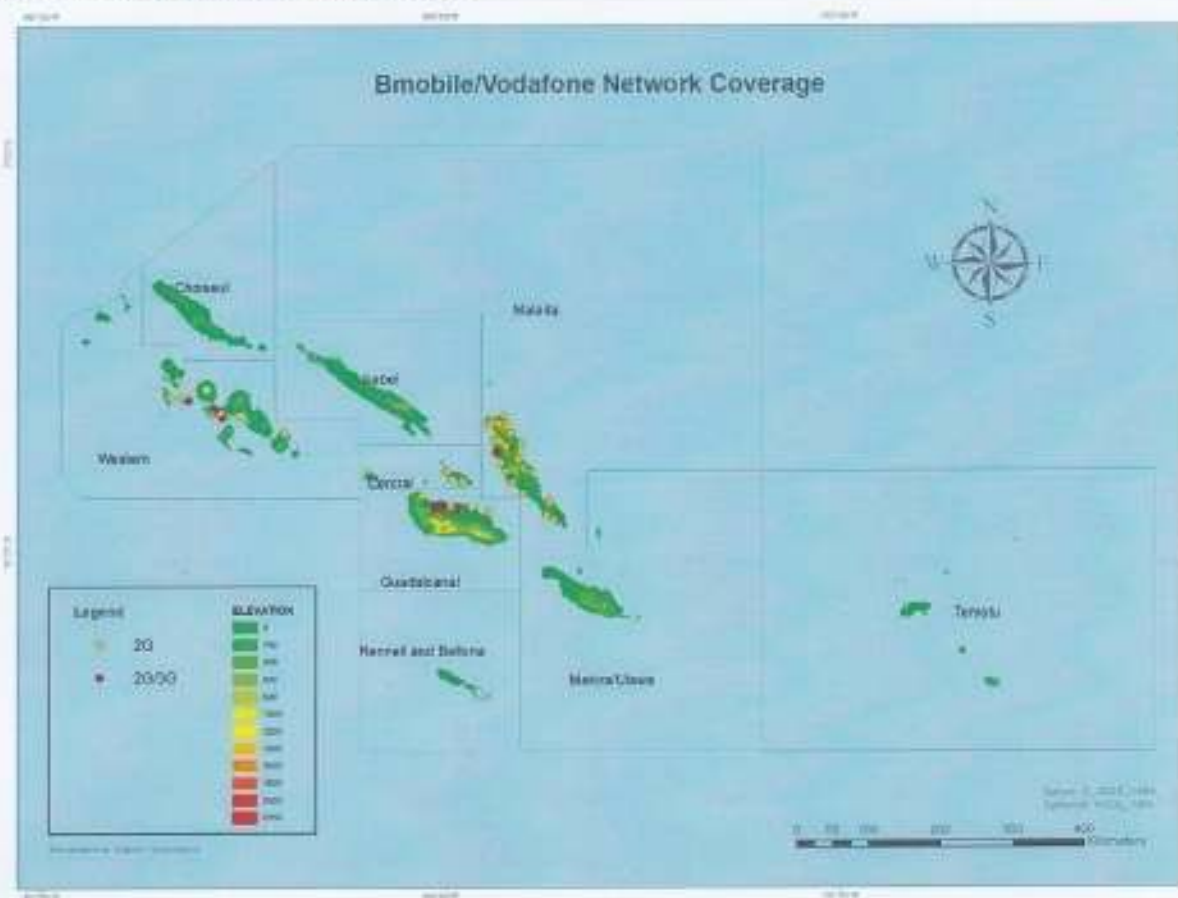
STATEMENT OF CASH RECEIPTS AND PAYMENTS FOR THE YEAR ENDED 31 DECEMBER 2018

	2018	2017
	(SBD)	(SBD)
RECEIPTS		
Services licence fees	7,680,007	7,224,773
Radio spectrum application fees	117,632	104,500
Supplementary fees	791,328	-
Other income	402,499	401,653
Total receipts	8,991,466	7,730,926
PAYMENTS		
<u>Operational expenses</u>		
Commission remuneration	4,747,296	4,784,355
International membership subscriptions	225,421	344,753
Office premises rent	640,080	693,480
Telecommunications	340,071	400,902
Utilities-electricity, gas & water costs	333,080	271,303
Stationery, printing and publications	110,922	194,198
Transport maintenance & operation	208,554	219,525
Bank & tax charges	5,680	3,791
General repair & maintenance	9,038	-
Insurance	63,975	79,465
Regulatory functions & training	247,428	329,230
Workshops & participation	489,151	361,078
Services contracts	8,800	181,935
Accounting Services	581,980	568,600
Legal Fees	368,112	-
Office supplies	73,914	39,657
Miscellaneous	76,925	55,766
	8,530,428	8,528,037
<u>Capital Expenses</u>		
ICT equipment		
ICT maintenance	3,675	15,805
Office equipment	107,124	4,227
Furniture & fittings	3,877	-
Spectrum Equipment & Software		
	114,676	20,032
Total payments	8,645,105	8,548,069
Net increase/(decrease) in cash and cash equivalent	346,362	(817,143)
Cash at beginning of the period	653,001	1,470,144
Unrealised exchange rate difference on foreign currency conversions	-	-
Cash at end of the period	999,362	653,001

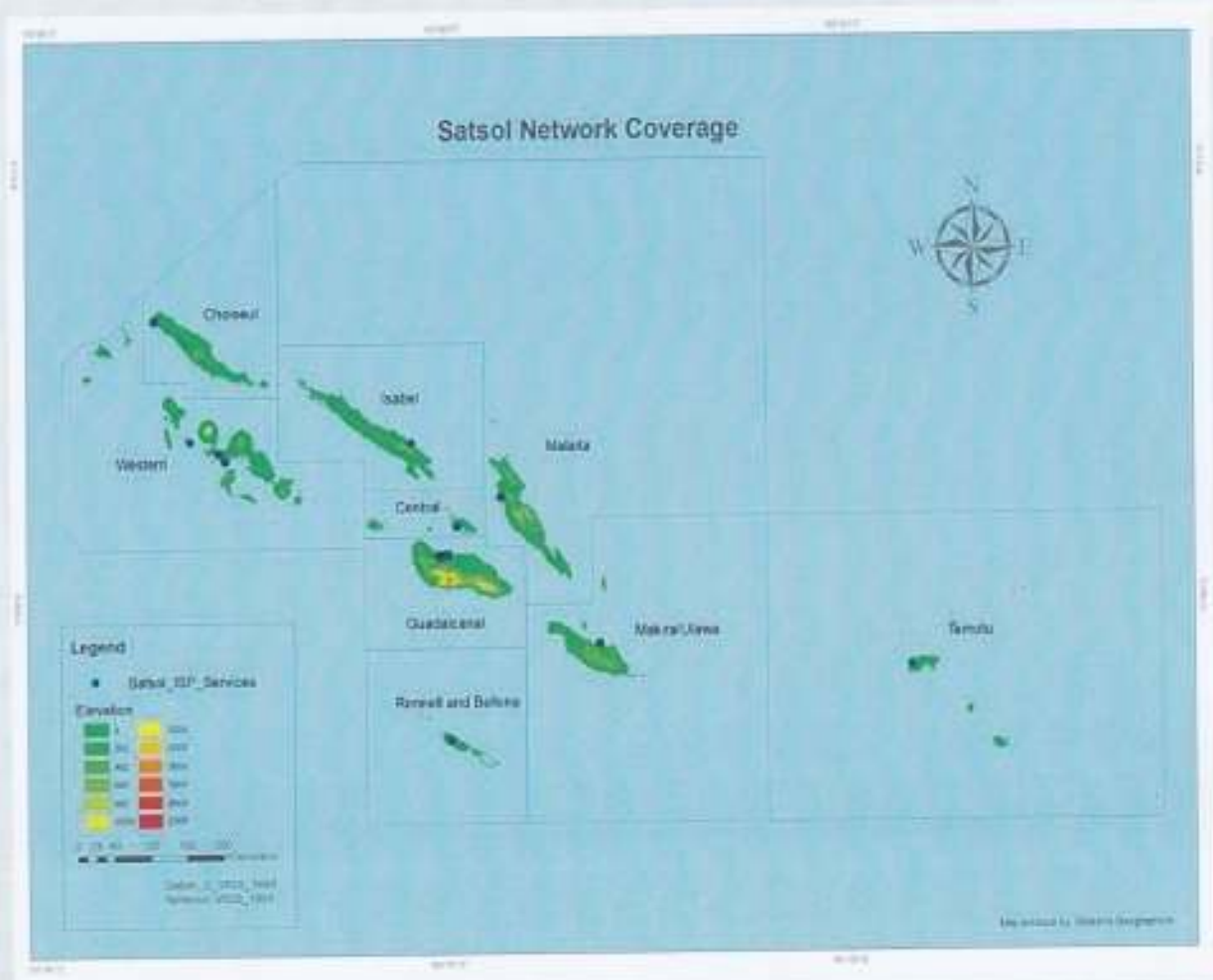
Appendix 2. Our Telekom



Appendix 3. Bmobile Vodafone



Appendix 4. Satsol



TELECOMMUNICATIONS COMMISSION SOLOMON ISLANDS
The Telecommunications sector regulators



Telecommunications
Commission
Solomon Islands



Annual Report 2018