



# Enhancing Access to Submarine Cables in the Pacific : Workshop Summary

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# Pacific islands: Need for speed affordably



	LTE
Cook Islands	Yes
Niue	No
Marshall Islands	Yes
Micronesia	No
PNG	Yes
Tuvalu	No (Yes by Aug 2017)
Vanuatu	Yes
Kiribati	Yes
Tonga	Yes
Samoa	Yes
Solomon Islands	No
Tokelau	Yes
American Samoa	Yes





# Pacific Islands: Bandwidth and Cable



	International bandwidth capacity (in Mbps)	Submarine Cable	Number of international Cables	Wholesale price (US\$ per Mbps)
Cook Islands	500	No	0	
Niue	48	No	0	
Marshall Islands	2500	Yes	1	50
Micronesia	4000	Yes	1	
PNG	15040	Yes	2	1200
Tuvalu	95	No	0	1592
Vanuatu	1418	Yes	1	
Fiji	20000	Yes	3	50
Kiribati	200	No	0	
Tonga	1210	Yes	1	100
Samoa	1500	Yes	1	500
Solomon Islands	785	No	0	
Tokelau	25	No	0	
American Samoa	1300	Yes	1	500

**International bandwidth usage, in Mbit/s:** 'Average usage of all international links including fiber-optic cables, radio links and traffic processed by satellite ground stations and teleports to orbital satellites (expressed in Mbit/s). All international links used by all types of operators, namely fixed, mobile and satellite operators should be taken into account. The average should be calculated over the 12-month period of the reference year. For each individual international link, if the traffic is asymmetric, i.e. incoming traffic is not equal to outgoing traffic, then the higher value out of the two should be provided. The combined average usage of all international links can be reported as the sum of the average usage of each individual link.'



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**25 YEARS**  
OF ACHIEVEMENTS



# Pacific Islands: Cables existing and upcoming



	Name	Status	Amount (in US\$ Millions)	Investment Type	Owner	Inter-island submarine cable connectivity existing or planned
<b>Cook Islands</b>	Manatua Cable ( Samoa-Cook Isls-Niue-French Polynesia)	Upcoming	25	ADB loan	Consortium (Samoa-Niue-Cook Isl-French Polynesia)	Yes
<b>Niue</b>	Manatua Cable ( Samoa-Cook Isls-Niue- FP)	Upcoming	5.2	MFAT grant and government of Niue	Consortium (Samoa-Niue-Cook Isl-French Polynesia)	Only 1 island
<b>Marshall Islands</b>	Guam-Majure- Pohnpei (2 sites)	Existing	22	RUS loan + MINTA equity	MINTA	Yes
<b>Micronesia</b>	Guam-Majure- Pohnpei (1 site)	Existing	13	RUS funded loan	FSMTC	Yes
<b>Micronesia</b>	Koshei-Pohnpei build (Kiribati-Nauru) East	Upcoming	16	World Bank Grant	FSMTCC	Yes
<b>Micronesia</b>	Chuk-Phonpei NEC	Upcoming	18	World Bank Grant	FSMTCC	Yes
<b>Micronesia</b>	Yap-Guam IRU 15 years (100 Gbps * 5 wavelength);	Upcoming	15	WB grant	FSMTCC	Yes
<b>Papua New Guinea</b>	APNG 2	Existing	30	Telikom PNG Limited	Telikom PNG Limited	Yes
<b>Papua New Guinea</b>	PPC-1	Existing	90	Telikom has a 20 years IRU with PPC-1 for 10Gigs	Telikom PNG Limited	Yes
<b>Tuvalu</b>	WB proposal	Under consideration				Yes

**Note: Amount here refers to cost incurred by the Islands and not the cost of complete cable unless specified**





# Pacific Islands: Cables existing and upcoming



							Inter-island submarine cable connectivity existing or planned
	Name	Status	Amount (in US\$ Millions)	Investment Type	Owner		
Fiji	Southern Cross (SCCN )	Existing	45	Southern Cross	Consortium (SPARK-SINGTEL-OPTUS-Verizon)	Yes	
Fiji	Tonga-Fiji	Existing	0	WB, ADB, Government of Tonga	TCL	Yes	
Fiji	Samoa-Fiji	Existing	0	Government of Samoa (Now BlueSky) and AS Government	BlueSky and AS Government	Yes	
Fiji	Vanuatu-Fiji	Existing	0	Local investment and commercial banks	Interchange Cable Ltd	Yes	
Fiji	SXNEXT	Upcoming	Not known			Yes	
Kiribati	Koshei-Pohnpei build (Kiribati-Nauru) East micronesian cable	Upcoming	20	WB grant	Bwebweriki Corp (government owned)	Yes	
Tonga	Tonga-Fiji	Existing	24	WB, ADB, Government of Tonga	TCL	Yes	
Samoa	SAS & ASH Cable	Existing	25 (incl American samoa)	Government of Samoa (Now BlueSky) and AS Government	BlueSky and AS Government	Yes	
Samoa	SSCC	Upcoming	40	WB, ADB loan and Private sector	SSCC	Yes	
Solomon Islands	SICC	Upcoming	30-40	Private consortium and Government		Yes	
Tokelau		Not planned				No	
American Samoa	ASH Cable	Existing	25 incl Western Samoa	Government of Samoa (Now BlueSky) and AS Government	BlueSky and AS Government	Yes	
American Samoa	Hawaiki	Upcoming					

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# Cable Landing Stations Regulations



	Is access to cable landing station open?	Are the prices regulated by government or regulators?	Applicable telecoms license for submarine cable landing station
<b>Cook Islands</b>	Yes	Not known	No
<b>Niue</b>	Yes	Not known	No
<b>Marshall</b>	No	Regulated	Yes
<b>Micronesia</b>	Yes	Yes	Yes
<b>Micronesia</b>	No	No (decided through public consultation)	yes
<b>Papua New Guinea</b>	Yes	The prices are not directly regulated however it is a declared services where certain rights and obligations (see NICTA Act Part VII) applies. Of which two key access obligations -services must be available on a non discriminatory basis & cost base. In the event that Access seeker is commercially unsatisfied then they report to Regulator for intervention. In other words its a negotiate and arbitrate model	Yes (Gateway License)
<b>Tuvalu</b>	N/A	N/A	N/A
<b>Vanuatu</b>	Yes	Under consultation	
<b>Fiji</b>	Regulated	Regulated	Yes
<b>Kiribati</b>	Yes	Not known	Yes
<b>Tonga</b>	Yes	Regulated	Yes, New license
<b>Samoa</b>	Yes	No	Yes
<b>Solomon Islands</b>	Yes	Don't know yet	Yes
<b>Tokelau</b>			
<b>American Samoa</b>	Yes	No	Yes





# Challenges to submarine cable access in the Pacific



- Financing
  - How best use grant funding?
  - How to cover annual OpEx?
- Technology upgradation
- Maintenance and repairs
- CLS location
  - Land ownership / custom title
  - Distance from Beach Manhole
- Environmental factors
  - Topography
  - Natural disasters
- Limited resources & technical capabilities
  - Human Resources
  - Power
- Wholesale pricing
  - Market size
  - Competitiveness vis-à-vis satellite or existing cables
  - Low utilisation
  - Retail affordability
- National fibre distribution
  - Aging infrastructure
  - Inter-island connectivity
  - Financing
- Policy & regulation
  - Political risk / interventions
  - Permits and licenses
  - Underdeveloped regulatory framework





**Thank You**

