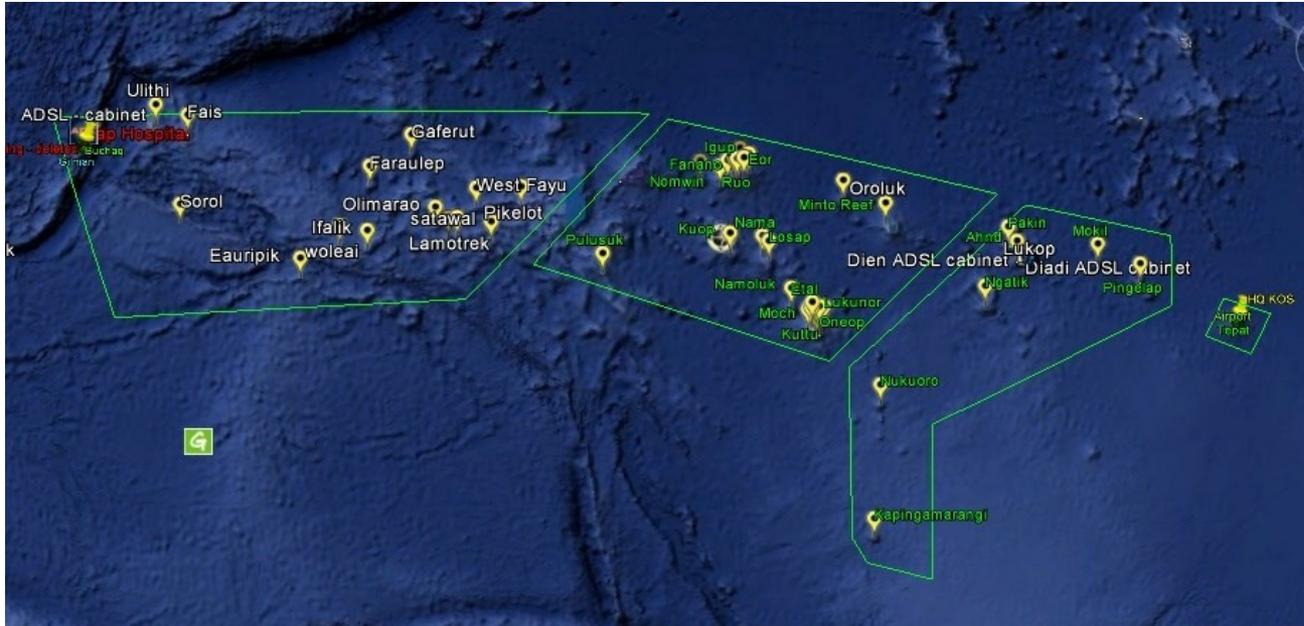


ITU/PITA Workshop on “ Submarine Cable  
Access in the Pacific Islands Countries”  
Holiday Inn Hotel, Suva, Fiji,  
31 July-3 August 2017



**Federated States of  
Micronesia**



Source: FSMTC Nov 30, 2015 PacNOG Country Report

The FSM Telecommunications Corporation (FSMTC) provides services on more than thirty islands separated by nearly 2,700 kilometres of ocean. Main population centres on Pohnpei, Chuuk, Yap, and Kosrae have fixed line, mobile, cable TV, and broadband networks. In 2015 FSMTC supported around 17,000 mobile subscribers and 24,000 Internet subscribers.

Source: <https://beta.peerpac.org/app/FSM>

Subscribers count:					
ITEM	ISLAND	POPULATION (Y2000 census)	PSTN subs count	Mobile subs count	Internet Subs
1	Pohnpei	34,486	5,384	6,838	9374
2	Chuuk	53,595	1,414	6,465	3768
3	Yap	11,241	1,770	3,057	4827
4	Kosrae	7,686	1,085	566	5493
5	<b>TOTAL</b>	107,008	9,653	16,926	23462

Source: FSMTC Nov 30, 2015 PacNOG Country Report

# Agenda

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- FSM Telecom Act 2014 Amendment
  - Market Liberalization
  - Telecom Regulation Authority
  - Wholesale Open Access Entity
- FSM Connectivity Projects
  - Yap Spur to SEA-US
  - Chuck Spur to HANTRU-1
- Yap Cable Update
  - SEA-US Opportunity
  - Civil Works in Yap
  - Progress pictures
- Chuuk Cable Update
  - Chuuk to Pohnpei HANTRU-1
  - Civil Works in Chuuk
  - Progress pictures
- Schedule Yap and Chuuk
- East Micronesia Cable (EMCS)

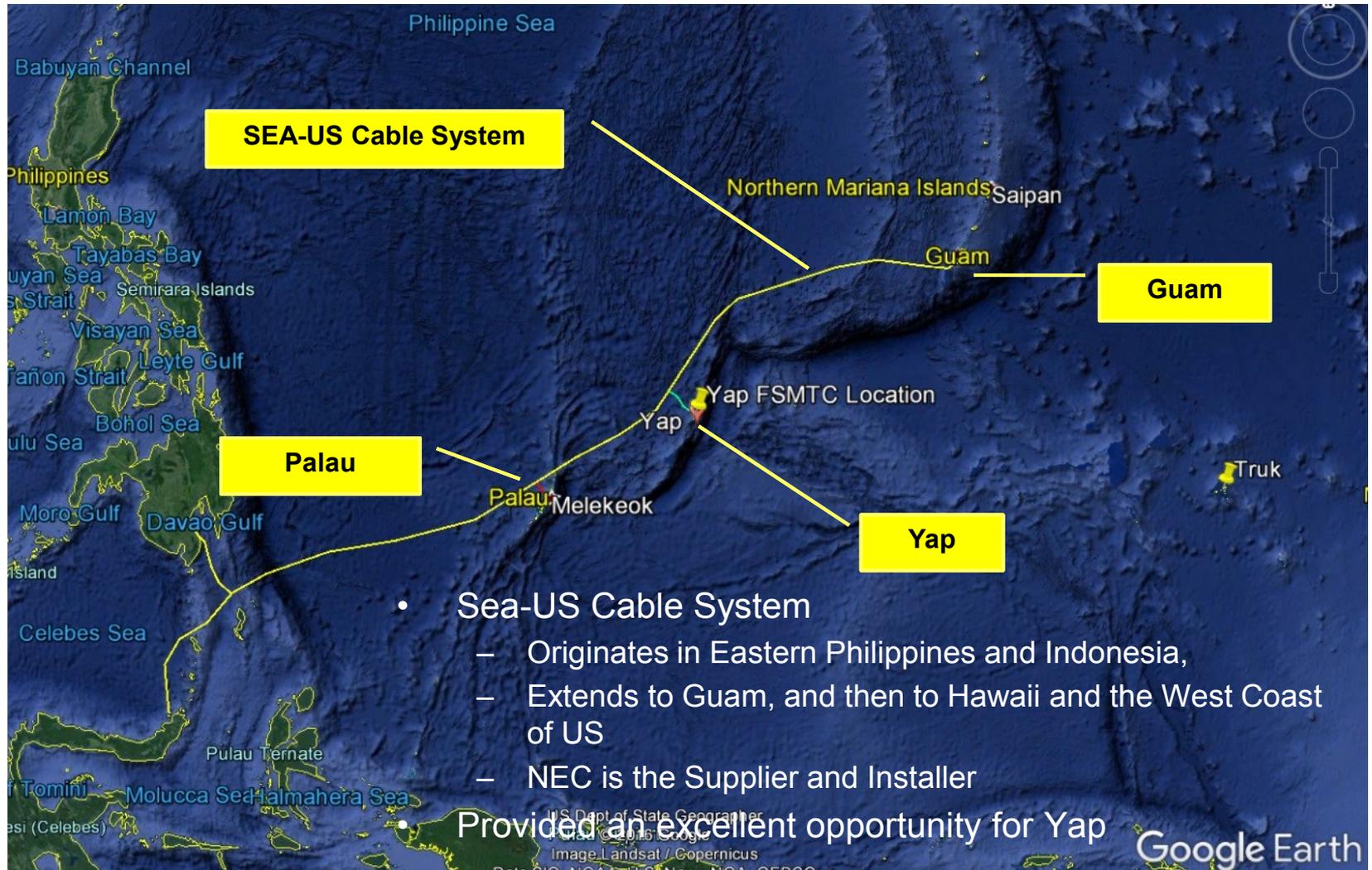
- FSM Telecom Market Reform (Open for Competition)
  - Step 1 – 2014 Telecom Act Market liberalization
    - Establishment of the Authority
      - Chief Executive and 2 members appointed by President
      - Independent of Government and Secretary
    - Opens FSM for multiple Telecommunications license holders
    - Establishes rules for competition and licensing
  - Step 2 – Establishment of the Authority
    - 2017 Interim Chief Executive appointed
  - Step 3 - Wholesale Open Access Entity for submarine cables
    - 2017 OAE – FSMT Cable Corporation incorporated
    - 2017 OAE – Board of Directors and CEO
  - Step 4 – Define and adopt Market Reform Plan to attract a second entrant
    - 2017 Terms of Reference for Advisory work

# FSM Connectivity Projects

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- 2015 World Bank signs Financing Agreement -
  - \$USD 44 million (SDR32.1m)
  - Yap spur to SEA—US to Guam – 337Km
  - Chuuk-Pohnpei Spur to HANTRU1/Pohnpei to Guam – 801Km
- 2017 World Bank approves Financing for EMCS –
  - FSM-Nauru-Kiribati - \$USD16.2 + \$US20m (Kiribati) and
  - ADB will provide financing for Nauru.
  - Connects Kosrae

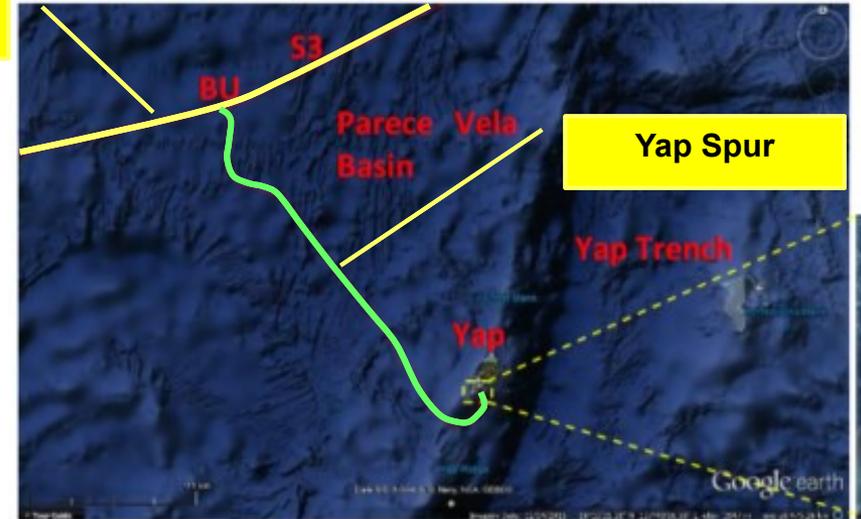
# Opportunity from SEA-US Cable System



# Yap Spur to SEA-US

## SEA-US Cable System

- Yap Spur
  - Single Fiber Pair Repeated Cable Branch of 315.9km in length
  - 5 Wavelengths 100Gbps/each
- Landing Point
  - Magachgil – Private Property
  - Stub Piping into Ocean
  - Articulated Piping Beyond to Reef
  - Beach Manhole and 36 Hand Holes along Route
- Fronthaul
  - ~7200 meters in length
  - Single Duct Installation
  - 4 Manholes and 36 Handholes



# Civil Works Progress on Yap



Beach Manhole  
Works

Beach Manhole  
Partially Poured

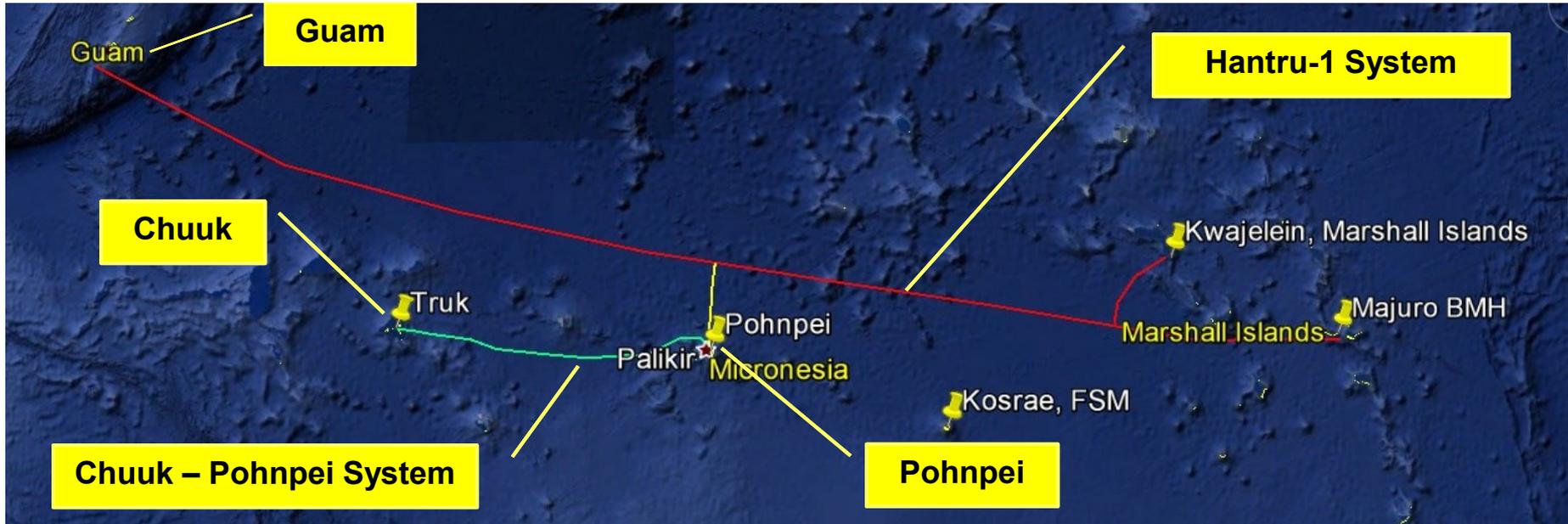


Trenching for  
Seaward Ducts



Beach Manhole  
Complete  
Awaiting Backfill

# Chuuk – Pohnpei Cable System



- Chuuk – Pohnpei Cable System
  - Cable System between Chuuk and Pohnpei
  - NEC is System Supplier and Installer
  - Ties into existing Pohnpei – Hantru Branch
  - International Connectivity via Hantru-1 System and Guam

# Chuuk – Pohnpei Cable System

- Chuuk – Pohnpei Cable System
  - Approximately 1200km in length
  - Single Fiber Pair
  - Contains Repeaters
  
- Landing Point
  - Located on Mino Mori Family Property
  - Stub Piping into Ocean
  - 200m of Articulated Piping Beyond to Reef
  - Beach Manhole and 6 Hand Holes along Route
  
- Fronthaul
  - ~1200 meters in length
  - Primarily on Airport Property
  - Two Duct Installation
  - 4 Manholes and 36 Handholes



# Cable Landing Station

- Cable Landing Station
  - Facility where the telecom equipment and other for the submarine cable system is installed.
- Location
  - Plan is to use the FSMTC site adjacent to the airport for the Cable Landing Station for the Chuuk – Pohnpei Cable System
  - This will likely be a Pre-Fabricated Modular Facility.
- The Fronthaul Duct work terminates in a Cable Vault adjacent to the CLS.



**Planned CLS Location at FSMTC**

# Civil Works Progress on Chuuk



Installation of PVC 2 ea. 6" C-900 pipes, formworks and bracing for the 1st Pre-cast of the Seaward Duct



Concrete Pouring of BMH top slab



Finishing works for BMH

# Schedule Yap and Chuuk

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- Beach Manhole and Seaward Ducts
  - Complete BMH and Seaward Ducts August 15
- NEC Wet Plant Installation Schedule
  - Cable Load of the Installation Vessel July 30 – August 9
  - Transit to Yap August 29
  - Yap Cable Landing September 2
  - Yap Wet Plant Installation Sept 3 – Sept 7
  - Transit to Chuuk Sept 8 – Sept 12
  - Chuuk Cable Landing September 14
  - Chuuk – Pohnpei Cable Installation Sept 15 – Oct 2
- Fronthaul Route Installation
  - Complete Fronthaul December 2017
- Cable Landing Station
  - Complete Construction/Renovation January 2018
  - Install Equipment February 2018
- Systems Ready for Service 1<sup>st</sup> Quarter 2018

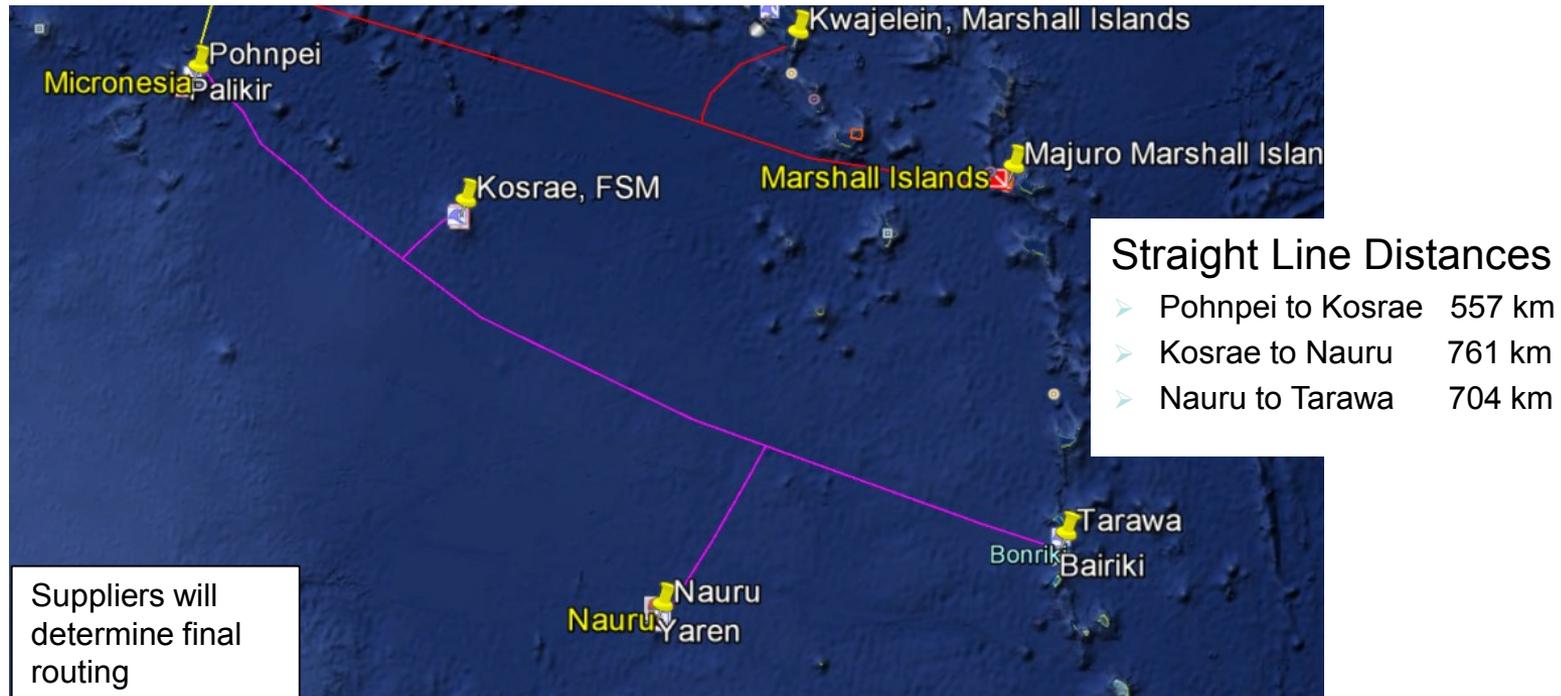
# East Micronesian Cable

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- Created Steering Committee responsible for implementation of the cable project
- Hired Joint Project PMU
- World Bank Approved in May Funding for FSM and Kiribati shared cost of the cable system
- Environmental and Social Impact Studies completed in October 2016
- Will connect the fourth FSM State of Kosrae

# East Micronesian Cable

## Pohnpei – Kosrae – Nauru - Tarawa



Courtesy of Tourgee Consulting LLC & MICTDD, Kiribati

- Fiber Pair with Shared Spectrum
- Typical branching system with repeaters
- Power Feed Equipment (PFE) at Kosrae, Nauru & Tarawa
- Optical Add Drop Multiplexer (OADM) Branching Units (BU) with power feed path switching



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**THANK YOU!**