

Development of the Federated States of Micronesia National ICT Policy



Public Consultation

Federated States of Micronesia
December 13-20, 2010

ICT Defined

- Information Communication Technologies
- Cell phones
- Internet
- Computers
- TV
- Radio
- ADSL
- Anything technology that transmits and receives information
- Laptop computer
- Fiber
- IT – Information Technology—need “communication” service, information
- Telecommunication
- Satellite
- Infrastructure, technologies, services, applications,

Workshop Plan

1. Foundation
 - What does ICT mean to you?
 - Why do we need a National ICT Policy?
 - What is the role of the Decision Maker/Stakeholders
 - What is in a National ICT Policy?
 - What is the process for developing and implementing a National ICT Policy?
2. Overview of Draft FSM ICT National Policy
 - Working Group Activities
 - Presentation of Group Recommendations/ Input

Why do we need a National ICT Policy?

What does ICT mean to you?

Why a Policy?

- Convergence and the changing roles of ICT in the economy and society
- Involves all aspects of public sector, private sector, communities – work and play
- ICT (or lack of) impacts all
- ICT Social and Economic Development Potential
- Barriers in Cost , Access, Capacity, Technical and Policy Infrastructure
- With or Without a policy – ICT technology and services will evolve...good or bad?

Why a Policy?

- We need to chart directions for ICT development
- National ICT Policy:
 - Clearly states FSM's ICT Vision
 - Helps us navigate towards achieving the Vision
 - Maps Goals, Objectives, Strategies to reach Vision
 - Provides an overarching policy to coordinate and harmonize the ICT direction of all sectors in FSM
- Plan of Action:
 - Outlines the Activities, Responsibilities, and Measurements for Evaluation
 - Gives input back to Policy

Role of the Decision Maker

Vital to Successful Social and Economic ICT Development

- Setting the Agenda: creating the national vision for ICT
- Promoting the Vision: across multisectors
- Creating an enabling environment – transparent, efficient regulatory/ legal frameworks
- Assuring a Secure ICT environment
- Promoting ICT sector development liberalized or not:
 - ✓ Access - to infrastructure and services
 - ✓ Affordable – fair cost
 - ✓ Quality - reliable
- Promoting 'demand side' - ICT literacy, capacity building

Role of the Decision Maker

Vital to Successful Social and Economic ICT Development

Reflection

Vital to Successful Social and Economic ICT Development

Sharing the Vision

- Who is your core team?
- Who are the stakeholders?
- Who are the other political drivers?
- Who doesn't yet see the vision?

Implementing the Vision

- Who's doing the work?
- What are they doing?
- How do you communicate with them? How frequent? Systematic reporting?
- How clear are the policy indicators for monitoring progress?

“...in the absence of good leadership, ICT policy is unlikely to deliver...But where ICT policy making and implementation is backed by **strong, stable, credible leadership that has a powerful vision for ICTs' development contribution**, that contribution is likely to emerge.”

--University of Manchester, Center for Development Informatics,
March 2010, Workshop on Delivering Coherent ICT Policies.

ICT Policy Content and Process

Substance:
The objectives, goals and general direction

Key Issues:

- Access and Infrastructure
- HRD and Public Awareness
- Legal and Regulatory Framework
- Governance and Supply of Public Services
- Industry Growth
- Traditions, Cultures and Language

From "Assessment and Review of the Existing National ICT Policies of the Pacific Island Countries", ICB4PAC Honiara, April 2010

ICT Policy Cycle

- Nice Framework to think about where you are in the policy cycle
- Reality → very complex, many variables, moving parts, resource constraints
- Reality Check, build benchmarks, measure again indicators



Structure:
The framework of the plan

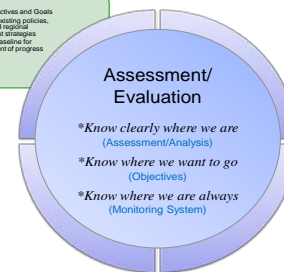
Key Elements:

- Vision
- Goals and Objectives
- Strategies and Activities
- Timetable
- Institutional Responsibilities
- Resources Available
- Monitoring, Evaluation, Review

From "Assessment and Review of the Existing National ICT Policies of the Pacific Island Countries", ICB4PAC Honiara, April 2010

ICT Policy Cycle

- Define Objectives and Goals
- Assessing existing policies, national and regional development strategies
- Establish a system for measurement of progress



Process:
Ongoing Cycle

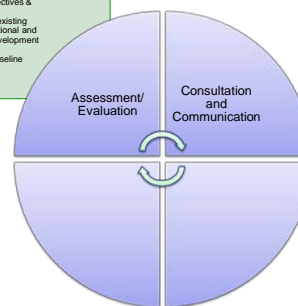
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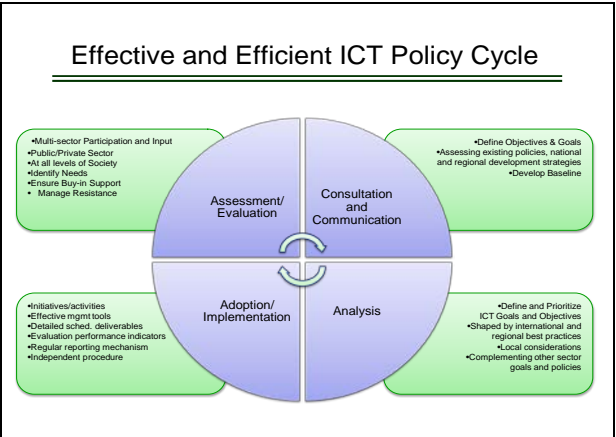
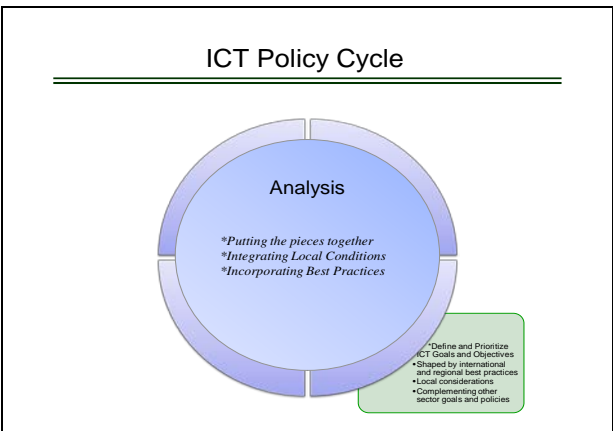
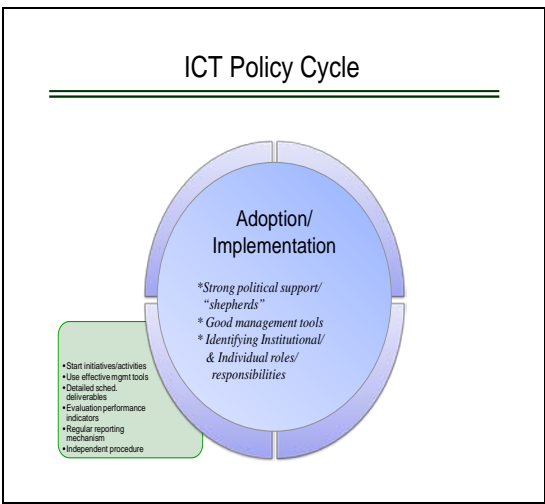
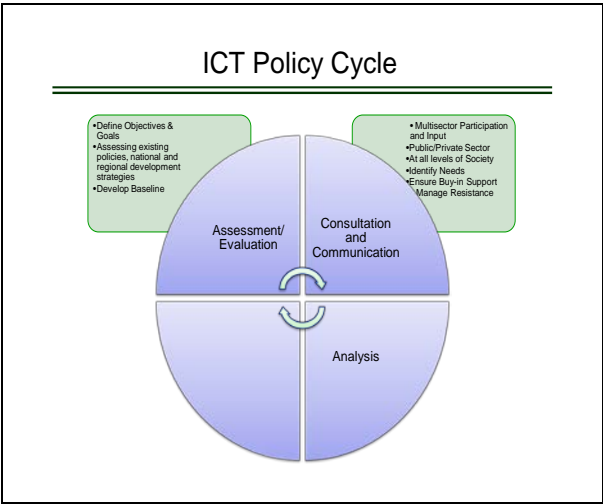
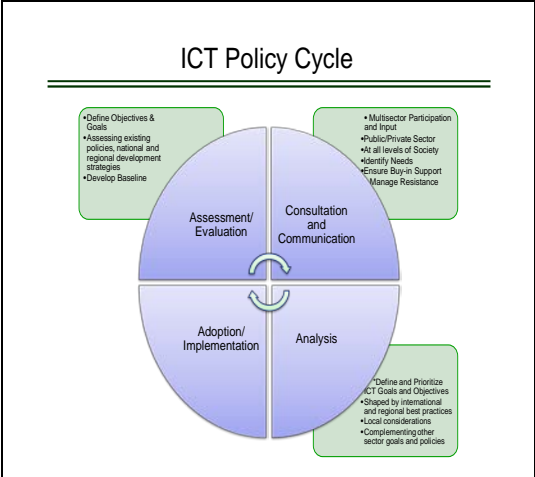
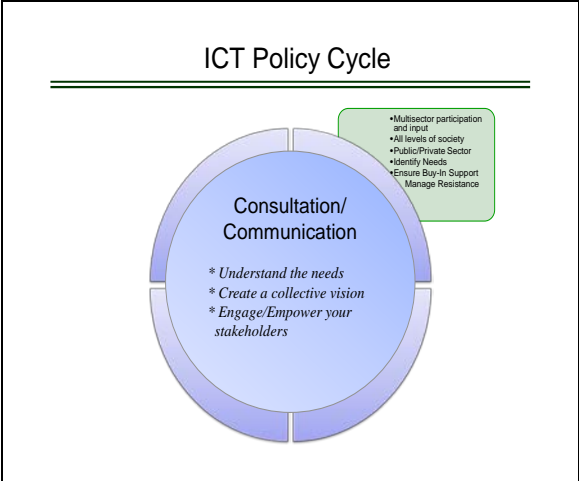
- Assessment/Evaluation
- Analysis
- Consultation
- Adoption
- Implementation

From "Assessment and Review of the Existing National ICT Policies of the Pacific Island Countries", ICB4PAC Honiara, April 2010

ICT Policy Cycle

- Define Objectives & Goals
- Assessing existing policies, national and regional development strategies
- Develop Baseline

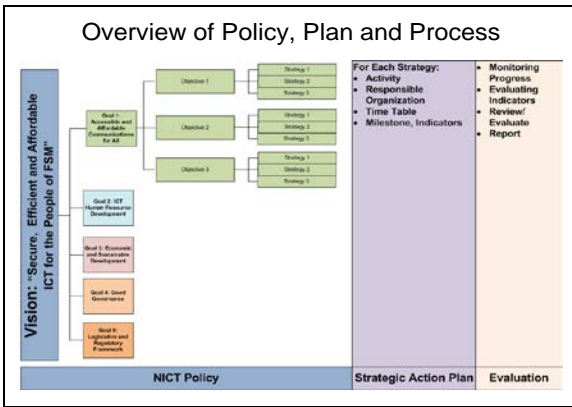




Overview of Draft FSM NICT

Vision, Goals, Objectives

- ## Goals
- To enact on our vision, 5 Goals have been identified:
1. Achieve Accessible and Affordable Communications for All
 2. Strengthen ICT Human Resources and Increase Human Resource Development Opportunities through ICT
 3. Improve Economic Growth and Sustainable Development through ICT
 4. Utilize ICT for Good Governance
 5. Create an Enabling ICT Environment through Policy Reform and Improvements in Legal Frameworks.



Goal 1:

Achieve Accessible and Affordable Communications for All

Policy Statement:

All citizens will have equitable access to affordable and secure ICT. The Government will play a leading role in building a networked society where organizations and individuals have equitable access to ICT-enabled resources.

Vision

"Secure, Efficient and Affordable ICT to achieve equitable communication for the People of FSM"

With this vision we aim to empower citizens, enhanced democratic values and promote social and economic sustainable development. The expansion, diversification and effective application of ICT will establish a transparent, responsive and accountable government; develop skilled human resources; enhance social equity; ensure cost-effective delivery of services through public-private partnerships and provide enhanced opportunities for education, health and emergency management services; and enable a knowledge based society to secure a brighter future for all.

Objectives for Goal 1

GOAL 1: Achieve Accessible and Affordable Communications for All

Policy Statement: All citizens will have equitable access to affordable and secure ICT. The Government will play a leading role in building a networked society where organizations and individuals have equitable access to ICT-enabled resources.

The objectives for this goal are:

Objective 1 – Establish mechanisms for ensuring non-discriminatory access to ICT regardless of level of income, education, age, rural or urban, gender and people with special needs

Objective 2 – Develop mechanisms for increasing access to ICT by maximizing resources through shared use of facilities, subsidized ICT and decreasing the cost of ICT equipment and services for rural, underserved and public service sectors

Goal 2:
Strengthen ICT Human Resources and Increase Human Resource Development Opportunities through the Use of ICT

Policy Statement:
To implement and sustain the national ICT vision, the Government is committed to prioritizing ICT workforce development and strengthening the overall workforce knowledge skills and abilities by increasing human resource development opportunities through the use of ICT.

Objectives for Goal 3

GOAL 3: Improve Economic Growth & Sustainable Development through ICT

Policy Statement: ICT will be utilized by the Government and the private sector to maximize economic growth and social development.

The objectives for this goal are:
Objective 1 – Utilize ICT to maximize economic growth
Objective 2 – Utilize ICT to enhance sustainable development
Objective 3 – Utilize ICT to maximize efforts in improving Energy, Transportation, Agriculture and Food Security
Objective 4 – Promote the use of ICT for Education, Health , Public Safety and Environment
Objective 5 – Promote the use of ICT for Language and Culture Perpetuation

Objectives for Goal 2

GOAL 2: Strengthen ICT Human Resources and Increase Human Resource Development Opportunities through the Use of ICT

Policy Statement: To implement and sustain the national ICT vision, the Government is committed to prioritizing ICT workforce development and strengthening the overall workforce knowledge skills and abilities by increasing human resource development opportunities through the use of ICT.

The objectives for this goal are:
Objective 1 – Provision of ICT training for Political Leaders, Policy Makers and Regulators
Objective 2 – Develop ICT-savvy workforce
Objective 3 – Support and participate in regional ICT human resource development initiatives

Objectives for Goal 3

GOAL 3: Improve Economic Growth & Sustainable Development through ICT

Policy Statement: ICT will be utilized by the Government and the private sector to maximize economic growth and social development.

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Objective 1 – Utilize ICT to maximize economic growth
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Objective 4 – Promote the use of ICT for Education, Health , Public Safety and Environment
Objective 5 – Promote the use of ICT for Language and Culture Perpetuation

Goal 3:
Improve Economic Growth and Sustainable Development through ICT

Policy Statement:
ICT will be utilized by the Government and the private sector to maximize economic growth and sustainable development.

Goal 4:
Utilize ICT for Good Governance

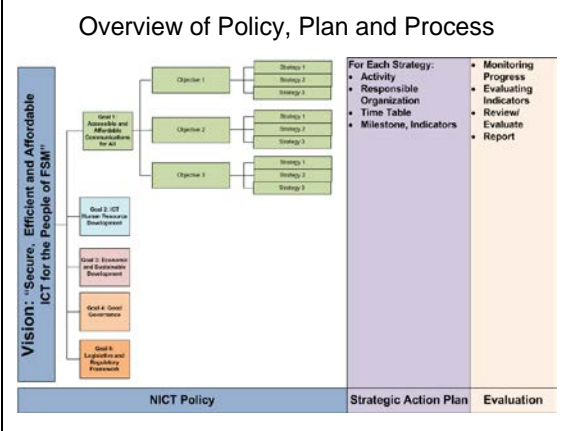
Policy Statement:
Every effort will be made to ensure that ICT systems and processes are used to enhance government accountability, efficiency, effectiveness and transparency of delivering public services to all and proactively combat corruption.

Objectives for Goal 4

GOAL 4: Utilize ICT for Good Governance

Policy Statement: Every effort will be made to ensure that ICT systems and processes are used to enhance government accountability, efficiency, effectiveness and transparency of delivering public services to all and proactively combat corruption.

The objectives for this goal are:
Objective 1 – Develop of an e-Government System and Process
Objective 2 – Improve Government Efficiency through Good Governance Patterns
Objective 3 – Protect citizens’ rights relating to cybercrime, child protection and the right to information
Objective 4– Improve Internal Government ICT Infrastructure and Support



Goal 5:
Create an Enabling ICT Environment through Policy Reform and Improvements in Legal Frameworks

Policy Statement:
 Government will establish new laws for ICT and develop a strong regulatory framework that supports a technology-neutral ICT enabling environment and market.

**Structure of the Draft
 FSM NICT Policy**

Objectives for Goal 5

GOAL 5: Create an Enabling ICT Environment through Policy Reform and Improvement of Legal Frameworks

Policy Statement: Government will establish new laws for ICT and develop a strong regulatory framework that supports a technology-neutral ICT enabling environment and market.

The objectives for this goal are:
Objective 1 – Enable fair competition in the telecommunication market that is conducive to achieving accessible affordable communications for all
Objective 2 – Establish an independent ICT Regulatory Authority to provide oversight and management of the ICT Sector
Objective 3 – Adopt pricing, policies and regulation to promote universal access

FSM NICT Policy Structure

Table of Contents

- i. Foreword*
- ii. Acknowledgement*
- iii. List of Acronyms*
- 1. Executive Summary
 - 1.1. Vision
 - 1.2. Goals
- 2. Background
- 3. Guiding Principles
- 4. Policy Context

FSM NICT Policy Structure

Table of Contents (Continued)

- 5. Objectives and Strategies for Goal 1
- 6. Objectives and Strategies for Goal 2
- 7. Objectives and Strategies for Goal 3
- 8. Objectives and Strategies for Goal 4
- 9. Objectives and Strategies for Goal 5

- 10. Expected Outcomes

- I. ANNEX I: Plan of Action
(to be developed through consultative process)

WORKING GROUPS
Afternoon Activities

Note on: Further Review and Input

1. Participants may also email additional comments to workshop facilitators.
2. Contribution of each State will be carried over in sequence to the next workshop to share in the development of the Action Plans.

WORKING GROUPS
Morning Activities

Breakout into Groups:

- Group 1: Accessible and Affordable Communications for All
- Group 2: ICT Human Resource Development
- Group 3: Economic Growth and Sustainable Development
- Group 4: Good Governance
- Group 5: ICT Policy Reform and Legal Frameworks

- Group 6: Background
- Group 7: Guiding Principles

Group Activity:

1. Select a leader to facilitate group and report back to everyone
2. Select a recorder to take notes and submit to workshop facilitators
3. Review Goal, Objectives and Strategies: Record input, suggestions for modification
4. Prepare Summary of Recommendations

Regional Policy Trends



WORKING GROUPS
Afternoon Activities

Continue Group Activities
Group Activity – Work on Action Plan (Same Groups)

These items will make up the Action Plan:
Identify Activity for Each Strategy
Identify Who is Responsible for Each Activity
Identify Timetable for Each Activity
List Indicators (% of, X established, etc.)

Major Task to Complete for Group:

1. Identify the Responsible Organization or Person that should be involved in the completion of the activities involved
2. Select priority strategies to focus on to come up with the four items listed above.

Regional Policy Trends
(From ICT Regulator News, ITU - May 2010)

<ul style="list-style-type: none"> ▪ New Era in Regulator Reform ▪ The Regulator ▪ Competitive Markets ▪ Ownership ▪ Licensing ▪ Spectrum Management 	<ul style="list-style-type: none"> ▪ Infrastructure Sharing ▪ VoIP ▪ Universal Access to Broadband ▪ Enforcement ▪ Dispute Resolution and Appeals
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ICT REGULATORY NEWS 
Recent regulatory trends from around the globe

Open Access Policies

"Open access policies seek to make it easier for new competitors to enter and compete in broadband markets by requiring existing carriers to lease access to their networks to their competitors, mostly at regulated rates."

Inter-Modal Competition

- "The highest prices for the lowest speeds are overwhelmingly offered... (United State and Canada) ..markets structured around ..competition between one incumbent owning a telephone system and one incumbent owning a cable system."
- "The lowest prices and higher speeds are almost all offered by firms in markets where, in addition to an incumbent telephone company and cable company, there are also competitors who entered the market, and built their presence, through use of open access facilities."
- Pacific scenarios: monopolies owning all services, competition without open access, etc.

Open Access Policy Issues

Commonwealth of the Northern Marianas Islands:

- Fiber to Guam owned by IT&E (PTI)
- Fiber service monopoly, unregulated
- High cost between (January 2010)
 - Guam-CNMI (T-1 = \$6,500/mo) (120 Miles) vs.
 - Guam- Honolulu (T-1 = \$2,500) (3820 Miles)
- Cripples Competitive Service Providers
- Not best interest for consumers
- Fiber does not always lower cost to consumer

Sustained Investments

- "Large, long term investments have played a role in some of the highest performing countries"
- Pacific Fiber Investments
- Others?

Open Access Policy Issues

Republic of Palau:

- Benefits of competition not always realized
- Palau National Communications Corporation incumbent carrier not required to provide interconnection to local exchange
 - Update: now able to connect but too high cost
- PNCC would also like enhanced telecommunication policies to provide safeguards for PNCC
- ICT policies to address sequencing, or the order of implementation, to achieve intended benefits

Public Investment – Fine Line

- "Public investments in next generation networks, permissible...should be oriented towards providing "passive, neutral, and open access infrastructure"
- 7.2 B U.S. Broadband Stimulus Funds
- Australia/New Zealand's announcements
- European Union – networks
- Could the Pacific fiber (FSM or RMI) be owned by the government and leased to vendors at an equal, regulated amount? (once there is liberalization)

Broadband for CNMI

"IT&E gets \$8M ARRA grant-Increased broadband services in CNMI, Guam

The U.S. Department of Commerce's National Telecommunications and Information Administration has awarded an \$8 million grant to IT&E to increase broadband services in the CNMI and Guam.

Gov. Benigno R. Fitial said yesterday that although the \$8 million will be shared between the CNMI and Guam, he is optimistic the expansion of broadband access will spur economic growth, create jobs, and improve education and health care for the islands."

Saipan Tribune, 4/30/2010

Summary.....

- Overwhelming data regarding benefits of competitive markets, open access policies, etc.
- However, even with competition and infrastructure (e.g., fiber connectivity) there is no guarantee of better services, access and cost without enabling policy and regulatory framework

Broadband for American Samoa

"U.S. Department of Agriculture last week awarded ASTCA more than \$95 million for the Broadband Linking the American Samoa Territory (BLAST) Project with a \$10 million loan, \$81 million (\$81,034,763) grant and \$4.4 million (\$4,462,000) private investment.

In addition, the USDA will provide an additional \$13.1 million in private investment to provide matching funds. Funding of individual recipients is contingent upon their meeting the terms of the loan, grant, or loan/grant agreement, according to USDA."

Samoa News, Wednesday March 10, 2010

Summary.....

Focus on...

- Not just infrastructure development
- Not just sector reform
- But also building the "demand side"
 - Policies and programs to support:
 - ICT workforce development,
 - ICT Applications: distance learning, telehealth
 - ICT Education: curriculum development, certification requirements
 - ICT Infrastructure for public sector

Capacity Building for the "Demand Side"

- Policies and projects to support workforce development, in workplaces, schools, curriculum development, end user equipment grants, etc.
 - You don't just suddenly know how to integrate "ICT" in your life – work/play, etc.
 - How about providing affordable capacity – to use, learn, integrate into work/play?
 - Build/develop/strengthen the market need

Infrastructure and Policy Opportunities

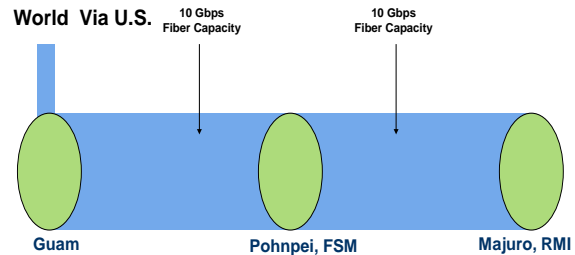
*Many telecom policies in the islands
have a provision for universal service –
but difficult to achieve*



Public Service Telecommunications: ICT for Social and Economic Development

- A focus on public service vs. universal service
- "Public service telecommunications" is the use of ICT for the purposes of education; public awareness and participation; research; economic development; health, medical services, and welfare; and emergency management by government, education, health, and other non-profit organizations."

Micronesian SFOC Plans - Fiber Capacity

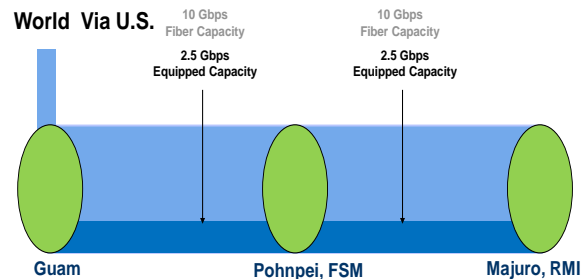


FIBER LOCATION	FIBER CAPACITY	EQUIPPED CAPACITY	WIRED CAPACITY	AVAILABLE CAPACITY
FSM POHNPEI	10,000 Mbps			
RMI MAJURO	10,000 Mbps			

Institutional Network (INET) State of Hawaii

- Cable Franchise Agreement allow counties the ability to request use of the cable network;
- Public Education Government (PEG) Channels
- State of Hawaii – developed the Institutional Network (INET) – Cable company provided dark fiber to government for public service use
- Investment in equipment but no recurring cost
- Significant cost savings
- Over the years the State has upgraded equipment to increase capacity
- Sustainable

Micronesian SFOC Plans - Equipped Capacity

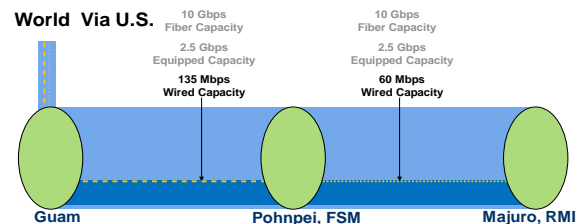


FIBER LOCATION	FIBER CAPACITY	EQUIPPED CAPACITY	WIRED CAPACITY	AVAILABLE CAPACITY
FSM POHNPEI	10,000 Mbps	2,500 Mbps		
RMI MAJURO	10,000 Mbps	2,500 Mbps		

Applying INET Model to Micronesian SFOC Network

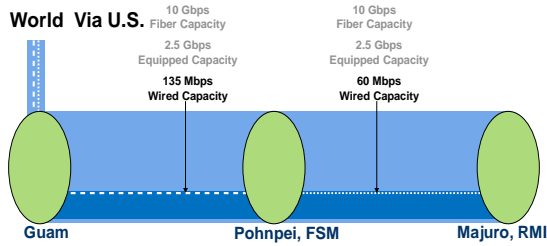
- Kwajalein Cable System Network (March 2010)
- MINTA & FSMTC
- To own 8 wavelengths of 10 Gbps each
- Significant increase in total capacity for countries (FSM current total is 17 Mbps)
- Both Countries paying for the fiber and capacity but initially will be wired and equipped for lower bandwidth
- Unused capacity will exist on the network; small investment can be made to support public service telecommunications

Micronesian SFOC Plans - Wired Capacity



FIBER LOCATION	FIBER CAPACITY	EQUIPPED CAPACITY	WIRED CAPACITY	AVAILABLE CAPACITY
FSM POHNPEI	10,000 Mbps	2,500 Mbps	135 Mbps	
RMI MAJURO	10,000 Mbps	2,500 Mbps	60 Mbps	

Micronesian SFOC Plans - Available Capacity

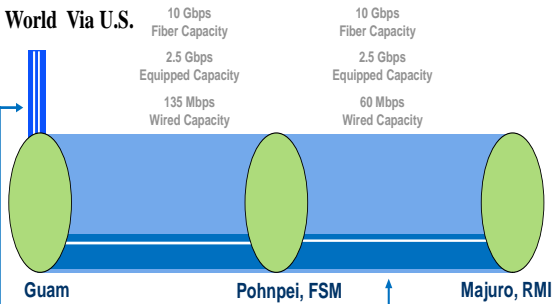


FIBER LOCATION	FIBER CAPACITY	EQUIPPED CAPACITY	WIRED CAPACITY	AVAILABLE CAPACITY
FSM POHNPEI	10,000 Mbps	2,500 Mbps	135 Mbps	2,365 Mbps
RMI MAJURO	10,000 Mbps	2,500 Mbps	60 Mbps	2,440 Mbps

Universal Service / Public Service Telecoms

- Opportunities exist with strong advocacy from public stakeholders, clear telecom direction and policy to maximize resources and infrastructure already in place for enhanced public service telecommunications – ICT for Development

Micronesian SFOC Plans Benefiting from Available Capacity



- Purchase Needed Equipment
- Purchase Additional Capacity out of Guam
- 10 Gbps fiber capacity – no additional cost to Carrier
- Pay Carrier Same Amount as existing services, no loss of revenue
- Support Public Service Applications – Health, Education, Government
- Build Capacity – Build Demand

Universal Service / Public Service Telecoms

- Opportunities exist with strong advocacy from public stakeholders, clear telecom direction and policy to maximize resources and infrastructure already in place for enhanced public service telecommunications – ICT for Development

Universal Service / Public Service Telecoms

- Existing models of Universal Service cannot be easily transposed to Pacific Islands because of different environments including small markets, developing economies, vast distances and remoteness, infrastructure cost, lack of enabling telecom policies
- In the U.S. Pacific Territories and Freely Associated States there are varying levels of development and stages of liberalization
- Donor support remains key

Long Distance Phone Rates

Am. Samoa	Blue Sky	\$0.10
	ASTCA	\$0.20 peak, \$0.18 off-peak
FSM	FSMTC	\$0.75 peak, \$0.47 off-peak (for pre-paid)
Guam	GTA	\$0.10
RMI	NTA	\$1.25 peak, \$0.50 off-peak
Palau	PNCC	\$0.35
CNMI	IT&E	\$0.04

*calls to United States

Internet Rates

American Samoa	Blue Sky	\$24.95 MRC, Unlimited Access
	ASTCA	\$15 setup, \$20 MRC, 50 free hours \$0.50 each additional minute
FSM	FSMTC	\$19.95 setup, \$19.95 MRC, 10 free hours \$1.95 each additional hour
Guam	GTA	\$20 setup, \$13.95 MRC, Unlimited Access
RMI	NTA	\$15 setup, \$10 MRC \$0.03 each minute
Palau	PNCC	\$15 setup, \$15 MRC, 4 free hours \$2.50 each additional hour
CNMI	IT&E	\$25 MRC, Unlimited Access
Hawaii	Road Runner	\$31.95 MRC, Cable Broadband
	Hawaii Tel	\$19.99 MRC, DSL

U.S. Broadband Definition

(source: Broadband.gov)

What is Broadband?

The term broadband commonly refers to high-speed Internet access that is always on and faster than the traditional dial-up access.

How is broadband different from dial-up service?

- Broadband service provides higher-speed of data transmission. It allows more content to be carried through the transmission "pipeline."
- Broadband provides access to the highest quality Internet services—streaming media, VoIP (Internet phone), gaming, and interactive services. Many of these current and newly-developing services require the transfer of large amounts of data that may not be technically feasible with dial-up service. Therefore, broadband service may be increasingly necessary to access the full range of services and opportunities that the Internet can offer.
- Broadband is always on. It does not block phone lines and there is no need to reconnect to network after logging off.
- Less delay in transmission of content when using broadband.