

ITU Regional Cyber Security Forum for Asia-Pacific & Seminar on the Economics of Cybersecurity



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Presentation

- Current Legislations
- Regulatory Mandate
- Telecommunication & Internet Services
- Telecommunications & ICT Policies
- Current status of Cyber Crime & Anti Spam Legislations
- Cyber Security Concerns
- Recommendations

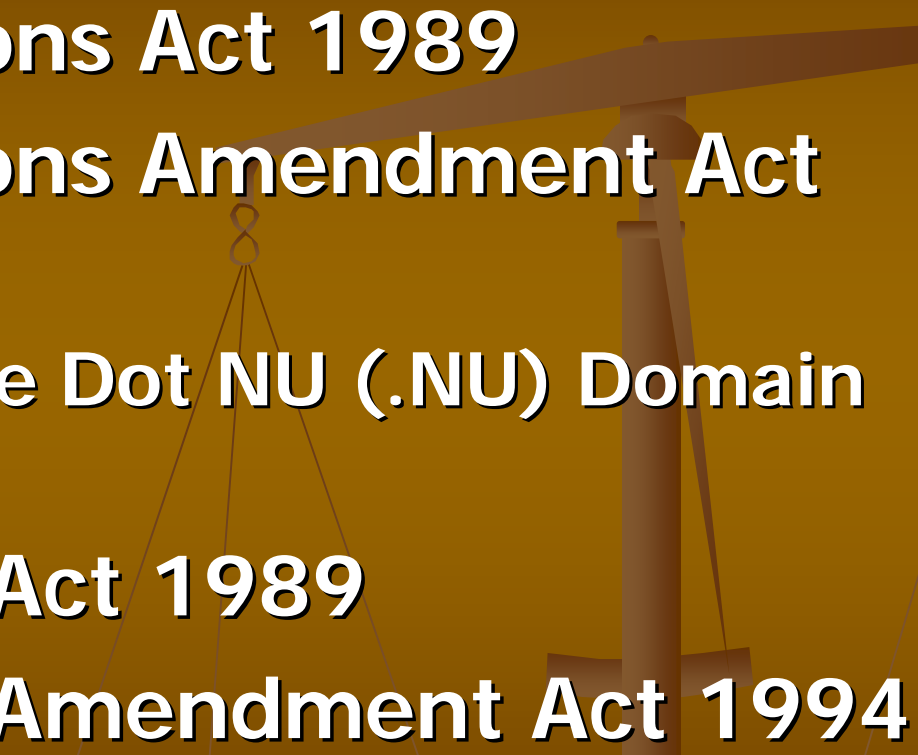


INTRODUCTION

- **Geographical Location**
 - 19.2 Degrees South – 169.52 West
 - 154 sq km (100 sq miles)
 - “Rock of Polynesia”
- **Population**
 - 1,600 in Niue
 - More than 20,000 abroad
- **Government**
 - Self Governing Nation
 - Constitutional Relationship with New Zealand
 - 20 Member Assembly
 - 4 x Cabinet Ministers
- **Main Industries**
 - Tourism, Fisheries & Noni.



Current Legislations

- **Communications Act 1989**
 - **Communications Amendment Act 2000**
 - **Legislating the Dot NU (.NU) Domain Name**
 - **Broadcasting Act 1989**
 - **Broadcasting Amendment Act 1994**
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Regulatory Mandate

Legislations

- Legislated under the office of the Minister for Telecommunications & ICT
- Enacted through the Office of the Director of Telecommunications.
- Whilst Telecom Niue is a monopoly Telecommunication Service Provider & the Regulatory Authority, the situation is not exploited e.g.
 - Any tariff increase will require Cabinets approval.
 - Costs for WiFi connections is determined by the ISP.

Dual Role Reality

The dual role is placing enormous pressure on the “One Man” unit and whilst the situation was accommodating with telecommunication services, the Internet and all related applications and mitigations needs requires Niue to establish a stand alone Regulatory Authority.

Telecommunication Services

- Telecom Niue is 100% Government SOE
 - National & international telephone & Facsimile services
 - Leased Bandwidth
 - Mobile & WLL Telephone Services
 - Maritime Radio Communications
 - 24 hour POC for S&R Operations
 - Contracted to Niue Civil Aviation for Technical Services
 - 'Dial the Weather Forecast' Services
 - Other Essential Services
 - Niue Disaster Management Council
 - Niue ICT Development Committee



National Telecommunication Policy Plan

ITU funded project (2000) providing technical assistance to review, update and formulate national telecommunication policies.

- Universal Services Obligation
- Monopoly, Competition, Privatization ...
- Quality of Service – Services Standards...
- Service Provider & Customers Protection
- Tariff etc....
- Needs reviewing and updating to incorporate changes in technology, applications and telecommunication and Internet services in today's ICT market.

Internet Services

- Provided by the Internet Users Society –Niue (IUSN)
- Internet access via dial up and WiFi (largely WiFi).
- Both Dial-Up and WiFi services available in Alofi, the capital
- WiFi currently available to 75% of villages in Niue - services also limited due to blind spots.
- Total Internet customers is approximately 450, including approximately 250 in government services.
 - 85% of Government employees are computer literate
 - 60% women, 40% men.
 - Computer classes starts at Year 5 @ Primary School
 - IT is a compulsory subject at Niue High School
- UNDP ICT4D E-Government Project.
 - As of December 2007, all Government departments, Corporations on WiFi were transferred to The Government Broadband services – objective being "**security**" and improve efficiency in government services.

Niue SPAM Overview

- There is a lot of spam received every day.
- Approximately 99% of spam is from outside.
- About 20% of mail is spam (My work terminal).
- 1% local – mostly chain letters.
- Uncertain of Spam measured at ISP.
- Problems:
 - Spam takes up Bandwidth.
 - Time spent to delete spam mail.
 - Viruses very damaging & costly.
 - Cost in \$terms is high and could be very high if users don't take the necessary precautions!

Pacific Island Internet Statistics

Country	Pop	No. ISP	Users	Delivery
PNG	5.7 million	4	51K+	LL, DU, BB
Fiji	906K	4	20.5K+	LL, DU, WF, BB, DSL, WMax, EVDO, CDMA, VSAT
Samoa	180K	4	8000+	LL, DU, BB, WF
Kiribati	106K	2	1000+	DU, WL
Tuvalu	12,000	2	400+	DU, WF – (WLBB & DSL in progress)
Tonga	100K	2	1,200+	DU, WL, WiMax, ADSL, KU VSAT trial
Cook Is	8,600	1	1940+	LL, DU, BB, WF, WiM, ADSL2
Niue Is	1,600	1	460+	LL, DU, WF, WFB, BB, VSATs
Tokelau	1,400	1	540+	DU, WF
Nauru	13,000	1	350+	DU, WF
Solomon Is	560K	1	2000+	LL, DU, WF, DSL, BB, GPRS (GSM), HF
Marshall Is	60K+	1	1,500+	DU, ADSL
Tahiti	275K	1	30K+	LL, DU, ADSL, BB, WL, WM, VSATs
N. Caledonia	264K	5	28K+	DU, DSL, GPRS, WM & WF
Norfolk	1,800	2	450+	DU, WL, BB
W & Futuna	13K	1	710+	DU, ADSL
Vanuatu	209K	1	7.5K+	DU, WL, BB
Palau	22K	2	3000+	DU, WL, BB, WL, ADSL

99% of these pacific islands are made up of thousands of very small inhabited islands spread over thousands kilometers of ocean or over rough terrain (PNG) which makes delivery of POTs still a challenge, and today, Telcos and ISPs have a bigger challenge to deliver data services not only to urban, near urban but to rural/remote economies!!

National ICT Policies

■ Niue ICT Development Committee (NiDC)

- Niue Government identified ICT as an essential “Tool” and prerequisite to enhancing and developing Niue’s social and economical future.
- Cabinet appointed and approved committee to spearhead ICT development initiatives in Niue.
- Policies coordinated through the Information Services Office (ISO) – Department of Administration.
 - GON Information Systems Policy
 - GON Computer Usage Policy
 - Content Keeper applied to all government computer terminals.
- Striving for a Computer Literate Economy
 - Niue Computer Society offers Computer Training courses for Government employees, NGO’s and residential population.
 - Supporting Education - Launching of the One Laptop Per Child (OLPC) project in August 2008 - A “*world first*” with every student in Niue will own a laptop.
- Government Initiative – Niue Dev. Bank offers Micro Loans for procurement of computers – Import duty waived.

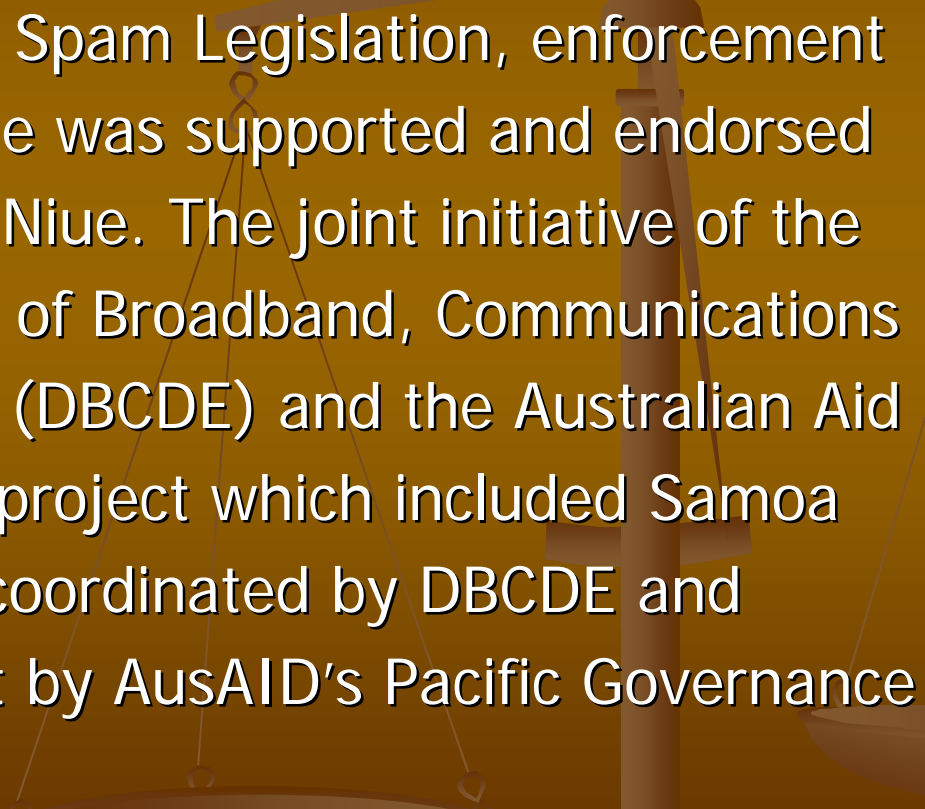
Cyber Legislation

- Recommendations from an ITU, APT & PITA Regulatory Forum held in Fiji in 2006 for the Pacific islands – highlighting the importance of cyber security and the need for PIs to formulate legislations to help address illicit use of the Internet & to protect users etc.
- The ITU conference held in Auckland 28-30 March 2007 endorses and recommended the formulation of cyber legislation in each Pacific island country.
- Legislations to use existing international Model Laws and also adopting other countries' national cyber related legislations.
 - Acknowledged the Cook Islands & Tonga for sharing draft legislations - regional support & cooperation.
 - The assistance of Professor T. Angelo & his team & Niue Crown Law Office.
- The purpose of the Bill is to provide Niue (and other PIs) with legislation that addresses various situations arising from internet use.
- Bill is set to go to Parliament.

Anti Spam Legislations

Developing Spam Legislation in Niue

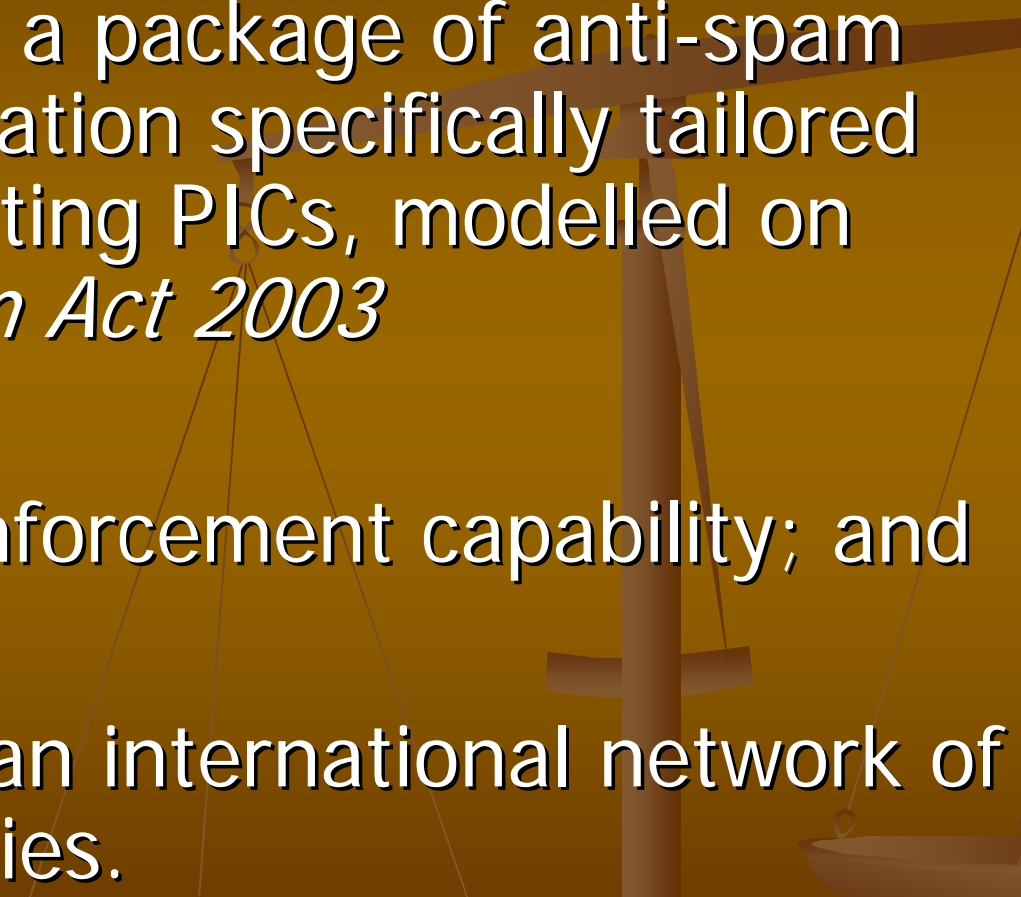
The need to formulate Spam Legislation, enforcement and cooperation in Niue was supported and endorsed by the Government of Niue. The joint initiative of the Australian Department of Broadband, Communications & the Digital Economy (DBCDE) and the Australian Aid Agency (AusAID), the project which included Samoa and Vanuatu is being coordinated by DBCDE and Galexia, funded in part by AusAID's Pacific Governance Support Program.



Objectives

- To improve the capability of Pacific Island countries to engage in e-commerce;
- To maximise the potential for a consistent legislative and regulatory approach developing in the Pacific region;
- To enable Pacific nations to act against spam both domestically and internationally; and
- To reduce the potential for the establishment of spam 'havens' in the region that undermine global efforts to minimise spam.

Three Key Stages

- Development of a package of anti-spam policy and legislation specifically tailored for the participating PICs, modelled on Australia's *Spam Act 2003*
 - Building local enforcement capability; and
 - Participation in an international network of enforcing agencies.
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Consultation Process

- Consultants from DBCDE & Galaxia Pty Ltd have visited and carried out consultations with key stakeholders in Vanuatu, Niue & Samoa:
 - In Niue, consultancies with:
 - The Minister & Niue Crown Law
 - Telecom Niue
 - Parliament Bills Committee
 - Niue ICT Development Committee
 - Government Departments & Corporations
 - Private Sector, NGO's, Civil Society
 - ISP Management (IUSN) were out of the country but .NU ccTLD Manager responded to communiqués from the consultants.
 - First Draft Niue Anti Spam Legislation with Niue's Crown Law Office Niue to go through the draft before producing the draft Bill to go to Cabinet.
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E-Security Concerns/Issues

- ALL users passwords are designated by the ISP.
- Government Department & Services, (especially schools) Businesses, Homes & Visitors using the Internet should be protected from spam, viruses, illicit use and illegal contents.
- International Reputation – illegal contents carried over the .NU sites.
- Security of Information send & received over WiFi services
- Protection from Hackers
- DoS – Denial of Service attacks.
 - The recent case in the Marshall Islands where an unusual huge volume of e-mails overloads the ISP servers affecting Internet/E-mail services highlights the vulnerability of SIS from these cyber attacks!
- How to mitigate against all the above attacks?

Security Regulatory Requirements

- A need to review existing legislations e.g. Communications Act, is the current Act adequate to accommodate new regulations that will help address spam, security etc.
- Policies, regulations and legislations that helps provides and addresses security concerns thus complimenting ICT applications – conducive to enhancing Niue's social and economical development.
- A need to educate the population (users) on:
 - Good Practices – What to do & What Not to do?
 - Important to start early – work with students in schools.
 - User and Information Security & Protection
 - Password security etc.
- Monitoring & Policing
 - The need to have a regulatory unit with adequate resources to effectively carry out the monitoring and

Challenges

- **How to Monitor, Police & Enforce the Cyber, Anti SPAM & Cyber Security Policies & Legislations?**
 - Niue does not have the human resources and the capability today to enable to police to enforce these legislations.
 - Niue needs to implement an educational and promotional campaign about the importance of protection and security of information using the Internet as well as protecting of citizens and users of the Internet.
 - The importance of educating Government, Politicians and key stakeholders to learn of and understand the potential gains Niue will gain out of ICT but to also understand the potential risks if Government, Service Providers, Regulators and Users do not work together to help address these E-Security challenges.

Recommendations

■ Regional & International Cooperation is Essential

- Niue is a member of the Pacific Islands Telecommunication Association (PITA) working in close association with the ITU, APT, ICANN, DBCDE, and other organization's to assist SIS, PICs not only to help formulate necessary legislations, but also ICANN & GAC development e.g. DNS etc.
- HRD & Capacity Building – this is an essential component. PITA will welcome assistance from any organization that will help train and develop its operational and technical personnel. PITA coordinates the PacNOG IT workshops/training which is fundamental to developing SIS/PICs operational and technical expertise.
- Some PIs are currently working with DBCDE, and discussions with DBCDE & ACMA, to formulate a working relationship (MOU?) with PITA to assist SIS, PIs with cyber legislations and other related applications.
- Is it time to consider the possibility of having a Pacific region CERT unit?

Conclusion

- **The Government of Niue:**
- Supports and recommends the formulation of E-Security Legislations and at the same time seeks the assistance of international organizations such as ITU, PITA, APT, DCDBE etc. to work with Niue and other SIS.
- Acknowledges with appreciation the technical assistance and financial support provided by the Australian & New Zealand Government - ITU, PITA, APT, PacNOG, SOPAC, ICANN, DCDBE, ACMA & Galexia Ltd, UNDP etc. in the regulatory, legislations & IT projects as well as provision of training for IT personnel.
- Recognizes the importance of trying to safe guard against potential risks and threats to communications medium which holds significance input into our future social, economical, political and cultural development and sustainability.

“Thank You” 😊

