



Government of
The Republic
of Vanuatu



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'Promoting safe, Inclusive, Sustainable and Economical Internet Environment'

1. INTRODUCTION

TRR in implementing its functions under the TRR Act and is performing at its best to ensure there is proper and appropriate framework for the internet market development for this country. In doing so, TRR facilitated a number of meetings and forums with stakeholders involved including the above mentioned forum to discuss Internet matters that are currently at TRR's priority list to address. And one of which is the Management and administering of .vu hence, the principles and policies of Vanuatu's ccTLD.

On 28th November 2017 TRR organized its third Regulatory Internet Symposium at Mele Golf Club in Vanuatu. The meeting promoted a theme **'Promoting safe, Inclusive, Sustainable and Economical Internet Environment'** for the people of Vanuatu which is in line with the current Vanuatu National Cyber Security Policy and the National ICT Policy where priority action plans were placed on the OGCIO and the TRR's responsibilities (refer to mentioned policies on this link <https://ogcio.gov.vu/index.php/publications/policies>). Many stakeholders of the Internet Community in Vanuatu were invited to be part of the forum meeting and as a result, 10 main stakeholders including three international participants were presented:

- APNIC
- Bank South Pacific
- Vanuatu Police Force Rep
- TVL
- Global Pacific Telecom
- V Solutions
- Digicel Vanuatu Ltd
- Wantok Ltd
- VITUS
- Asia Pacific Network Information Centre (APNIC)
- TRR
- Keith Davidson

TRR and its national stakeholder holders were also fortunate to have Mr. Keith Davidson, ccTLD specialist from New Zealand and Mr. Adli Wahid, Cyber Security Analyst and Mr. Klee Aiken External Relations Manager from the Asia

Pacific Network Information Centre (APNIC). These international representatives were invited to share experience and best practices and to guide on discussions on topics outlined below. It is an intensive forum discussion that was held to achieve the stated objectives for the forum.

Main discussions were centered on Internet Security Matters and other related topics that were linked to cybersecurity issues in Vanuatu.

2. OBJECTIVES AND EXPECTED OUTCOME OF THE FORUM

This annual forum was organized for the Internet Community in Vanuatu to meet and discuss freely the aspects of Internet market development in Vanuatu focusing mainly on internet security. It was anticipated that from that meeting, TRR would be in a better position to address and spend its time on what is relevant, urgent and appropriate to focus on in the internet activities that are of benefit to the consumer. It was also an avenue and opportunity where by stakeholders discussed and deliberated on whether there is a need of resurrect an Internet Exchange point.

It was also an opportunity for the Internet Community to discuss the relevant and linking issues to internet security. Discussion revolved around issues like data security, data location, social media, general Vanuatu experience on internet security, Vanuatu National CERT. Discussions on ccTLD and IXP were also topics of interest in this forum.

Having a national CERT would not only build trust in Vanuatu online business transactions but would also be a step forward for Vanuatu on internet security.

3. PRESENTATIONS

There were three (3) main presentations and 4 break out group discussions that took place during that time.

Best Practices for ccTLD – Keith Davidson (ccTLD specialist)

The first presentation was done by Mr. Keith Davidson. In this session Keith discussed the ccTLD policies especially to do with name restriction policies. He share the experiences and policies for the .au and .nz. Australia have a very restricted name policy and only markets its second level domain .com.au within Australian registered companies while New Zealand has a very open name policy where anyone can be registered by anyone on a first-come-first-serve policy. The current .vu ccTLD Regulation states that a restricted list be maintained under Schedule 3 of the Operational Guidelines. The attendees broke into 4 groups to consider what they thought would be appropriate for the future of .vu, and all 4 groups came back with the opinion that there should be restrictions applied to cultural and significant place names, and to restrict insulting or rude words. But none had a plan as to who should decide on what names should be included on a restricted list, or how it could be policed, or who should pay the costs.

Cyber security – “Safe and secured Internet content” – Adli Wahid

This presentation done by Adli Wahid who is Security Specialist at APNIC was on three main aspects of cyber security; Goals for Internet Security, Location of Data and Threats. He started by running a role play on how a company would respond to a ransomware attack. The discussions on this attack scenario provided some insights on the proper processes in dealing with such security breach situations. A number of topics covered as listed below;

Goals for Internet security

- Confidentiality
- Integrity
- Availability

Location of data

- At Rest

- In motion
- In use

Threats

- Lost phone or laptop
- Database dump (SQL injection & insider)
- ATM Skimmer
- Point of Sale Malware
- Ransomware
- Key logger/Remote Access Trojan
- Phishing/Fake certificates
- DNS hijacking
- Route hijacking

Security controls

- Technical controls
- Policy/Procedure
- People
- Trust

Security Mantras (Discipline)

- As strong as the weakest link
- Principle of least privilege
- Don't become tomorrow's headline

Impact of Security Incidents

- Malware causing financial loss
- Data breaches in organizations
- Critical vulnerabilities in software
- Distributed denial of service attack

Internet Security Ecosystem is the key (Distributed systems, responsibilities, conversation, collaboration and problem solving) A multi-stakeholder approach.

- Users
- Public safety
- Regulators
- Operators
- Vendors
- Software developers
- CERTs

Incident Response Cycle

- Preparation

- Detection and Analysis
- Containment, Eradication and Recovery
- Post incident activity

Capabilities Development

- Training
- Mentoring
- Train the trainer
- Community events
- Internship/site visit
- Trust groups (information sharing)
- Joint activities

Internet Security is a serious matter to be considered and Vanuatu still does not have any appropriate legal framework around the internet in general, privacy and cyber security. Having said that, the current work done on the setting up of a national CERT, the establishment of the National ICT Policy and Cyber Security Policy and the .vu ccTLD Regulation has set Vanuatu in the right direction of taking steps to combat cyber security threats.

Making and Executing Cyber Security Strategy – Klee Aiken - APNIC

Klee presented on developing clear strategies in dealing with Cybersecurity on a national level. He covered the following Cybercrime

- Law enforcement
- Connectivity
- Domestic readiness (Policy and Laws)
- Regional harmonization
- Digital economy
- Standardization of security standards approach

For Vanuatu, the following strategies have been established or are ongoing by TRR, OGCIO and the Ministry of Justice;

- International cooperation on cyber security
- Road map outlined in the goals of the Vanuatu National Cyber security policy
- International providers (Fintel and Equinix)
- National CERT
- Regional Police – Cyber Pasifika
- Cybercrime legislation now under consultation
- Capacity building is ongoing
- Child Online Protection to be included in the National Child Protection policy

IXP Peering – Keith Davidson

Peering is a process by which two or more Internet Service Providers connect and exchange internet traffic. It allows them to directly hand off traffic between each other's customers, without having to pay a third party to carry that traffic across the Internet for them. Keith Davidson used an imaginary country called Gonewonderland was used.

Keith outlined a peering scenario was used where multiple ISPS in Gonewonderland peer their traffic to improve latency and the benefits it brings to the ISPs and their customers. He also suggested that other services can be placed

at the IXP like a root server instance, a Google or Akamai caching server. Another useful aspect would be to have servers from Apple, Microsoft and Android that carry updates and patches be placed at the IXP so that all updates for customers' devices can access the updates locally which is cheaper than downloading them from the servers hosted outside.

In Gonewonderland big ISP verses small ISP was also an issue but they came to understand that technically you get what you give and give what you get situation with the exception of some heavy traffic users like gaming sites. Technically this approach is easy and efficient but the major obstacles lie within the CEO level.

Group Discussions

Four break out groups discussions were organized during the meeting, the discussion was mainly on .vu policies and principles. The main issue of discussion was whether or not a restricted name policy can be implemented for the .vu ccTLD. All the groups favour the implementation of such list to protect specific names that are unique to certain groups or organizations in Vanuatu.

4. ACTIONS

There were a number of actions required by stakeholders who have attended the meeting to work on. Some of which are listed below.

1. All stakeholders prefer to maintain a restricted list which in line with the .vu ccTLD Regulation under Schedule 3 of the Operational Guidelines.
2. A list of restricted names will need to be developed based on policy criteria
3. Internet Security is a serious matter to be considered in Vanuatu. The Vanuatu CERT is in current progress for proper set up and needs to be prioritized.
4. The Vanuatu draft Cybercrime law is still under consultation and also need to be finalized.
5. The Vanuatu Internet Exchange (VIX) need to be properly managed to benefit the users of internet in Vanuatu.

5. CONCLUSION

This Regulatory Internet Symposium has shown that there is great interest in the development of the Internet in Vanuatu. Key issues of note were:

- The need to implement a restricted list of names in the .vu ccTLD Registry.
- Online fraud through phishing, hacking, ransomware and other security breaches is on the rise in Vanuatu and so there is an urgent need to set the Vanuatu CERT, finalize the Vanuatu Cybercrime legislation and continue awareness programs though out Vanuatu on cybersecurity issues.
- An IXP is beneficial to everyone, the ISP and the users and there is a need to improve the current status of VIX

All presentations and videos from these forum can be found on these links:
<https://www.youtube.com/watch?v=V9DfrkfTVQg>