



IG M003/02-2015/P003 - ISSUES FOR DISCUSSION AND CONSIDERATION:

INDUSTRY BRIEFING MEETING at TRR, Wednesday 25 FEBRUARY 2015, 10.00 – 11.00 AM

**INTENDED FUTURE ARRANGEMENT AND MANAGEMENT OF .VU COUNTRY CODE
TOP LEVEL DOMAIN**

1 Purpose

This briefing paper is prepared for all appropriate stakeholders for discussion and consideration of the intended future arrangement and management of .vu country code Top Level Domain (ccTLD), including registration of .vu domain names.

It is to be considered and discussed at the TRR Stakeholder Meeting at TRR's Offices on Wednesday 25 February 2015 from 10.00 – 11.00 AM. This paper follows on from and outlines some key points of TRR's Consultation Paper on Regulation for the management of .vu country code Top Level Domain (ccTLD), issued on 17 December 2014.

TRR considers this briefing and pre-consultation period close meeting an essential and beneficial one, to gain stakeholder understanding and ascertain industry wide support on the new draft Regulation.

It provides background information of some .vu domain name issues, areas of concern identified and actions taken by Telecommunications and Radiocommunications Regulator (TRR) to date, and the current administration's issues and views. Additionally, it includes discussions

on the significance of, and need for, establishing an appropriate ccTLD model and its rules or regulatory framework for managing and administering “.vu” Internet domain names and the associated domain name system’s technical infrastructure. The TRR approved model is provided in Annex A and recommendations are based on this structure for stakeholder consideration. Annex B provides a full description of the model.

2 Background

Domain name services are a critical part of the Internet’s basic infrastructure. They provide users with useful, meaningful addresses that make navigating the Internet’s vast wealth of information resources possible. Without Internet domain services, the Internet would be effectively useless for the majority of its users.

Under the relevant international body International Corporation of Assigned Names and Numbers (ICANN) best practice guidelines, Internet country domains are generally treated as public resources whose managers have a duty to serve the community. We can think of domain names as similar in function to telephone numbers or postal codes. Organisations and individuals apply for the use of a domain for a period of time (generally 1 year), and renew it as desired. They are subject to certain technical, legal and policy or regulatory requirements, as are the organisations providing domain registration services to the public. The same is true of the overall domain governance bodies.

Telecom Vanuatu Ltd. (TVL), as a follow on from telecommunications sector monopoly days, currently manages Vanuatu’s Internet domain. The ccTLD management was automatically assumed by TVL given its former single country operator status. TVL operates with an agreement with the relevant international body – ICANN. TVL is recognised formally by the Internet Assigned Numbers Authority (IANA), ICANN’s technical body, as the manager of the .vu domain. While there have been few significant complaints concerning its technical management services, opening of the Internet services market requires that, we consider how Vanuatu’s Internet domain (.vu) can best be managed to promote an open, competitive, equitable or fair Internet domain market environment.

Under the TRR Act section 7, 4(e), TRR may make regulations for the management and administration (including the exclusive management and administration) of country code top level domain names for Vanuatu and domain name registration for Vanuatu. Since 2011, and under this mandate, TRR has made several observations, assessments and interventions on the ccTLD management and operations, and is currently in the process of redeeming appropriate rights held totally by TVL, especially domain policy setting, in order to better and more appropriately establish and organize new ccTLD management arrangements. TRR consulted publically on the future arrangements and management of .vu ccTLD in October 2012. The

limited feedback at that time was not sufficient to implement any major ccTLD management change, but TRR has had regular discussions with present/former TVL staff and its present/former CEOs, to reach the understanding outlined in this paper, and the way forward from hereon.

In view of the new Government National Information Communications Technology (ICT), Universal Access and Cybersecurity Policies in the country, having regard to the continued growth in the number of users in the local Internet community, and considering the vital importance of the Internet service in the context of globalization, considering also that the .vu ccTLD is a strategic resource of public interest, and is therefore related to national sovereignty, TRR, with the support of the Government through the Office of the Government Chief Information Officer (OGCIO), is working with the objective of realizing improved, secured and equitable ccTLD ".vu" resource management.

3 Administrative and Technical Management Issues of .vu ccTLD

The Internet is a global phenomenon. Vanuatu's economy and international image could be affected by any shortcomings in the way it manages its country domain. Because domain name services must be available at all times – even in the event of natural disasters – the technical management requirements and customer expectations are extremely high. There are few organisations in Vanuatu currently capable of providing domain name services that meet these strict requirements. TVL is one of them.

TRR acknowledges the good work that TVL has done as ccTLD manager, but in order to now develop a liberalized and competitive domain market on behalf of the local Internet community, it is appropriate and timely to transition the .vu ccTLD management to the independent regulator, TRR, until the appropriate framework is established, while preserving the technical operation of the .vu registry services with TVL. TRR acknowledges and commends TVL for currently managing and administering the operations of the .vu domain name space and associated services.

While TVL continues to perform satisfactory services overall, some .vu domain name issues identified by TRR to date are discussed below.

3.1 ccTLD as a Public Trust or Service

All ccTLD are designated by ICANN to operators who will operate them in the best interests of the local communities they serve. Operators should strive to tailor operations to best serve the users. These ccTLD operators should adhere to ICANN's best practices for ccTLD managers¹ and

¹ <http://archive.icann.org/en/cctlds/centr-2nd-best-practices-20may01.htm>

ensure minimum technical standards are met, strive for best practice at all times, and operate with policy that suits local requirements of the country. Operators of ccTLD are there to serve their communities. Operators of ccTLD are the local stewards for their community's place on the Internet. The wants, desires, and needs of their communities are the core focus of ccTLD operators, who most times also bear the technical Registry function.

Issue: TVL's objective for .vu domain name management and services is one of profit making which is paramount to TVL over public service. This, in turn, creates a conflict of interest and makes it challenging for TVL in a competitive environment, to develop impartial domain policies in order to maintain the public service aspect and to make the domain names services competitive and equitable for all users, in terms of pricing of domains.

TRR wishes to ensure through the new ccTLD management arrangements that the .vu resource is managed as a public resource and that the .vu 'Registry' management by the registry operator or manager is one also of public service and that domain names services are competitive and equitable for all users.

3.2 Model and Policy or Regulatory Framework of .vu ccTLD

There are no currently established and publically available national policies guiding all parties operating in the .vu domain name space and covering important domain administration aspects which include:

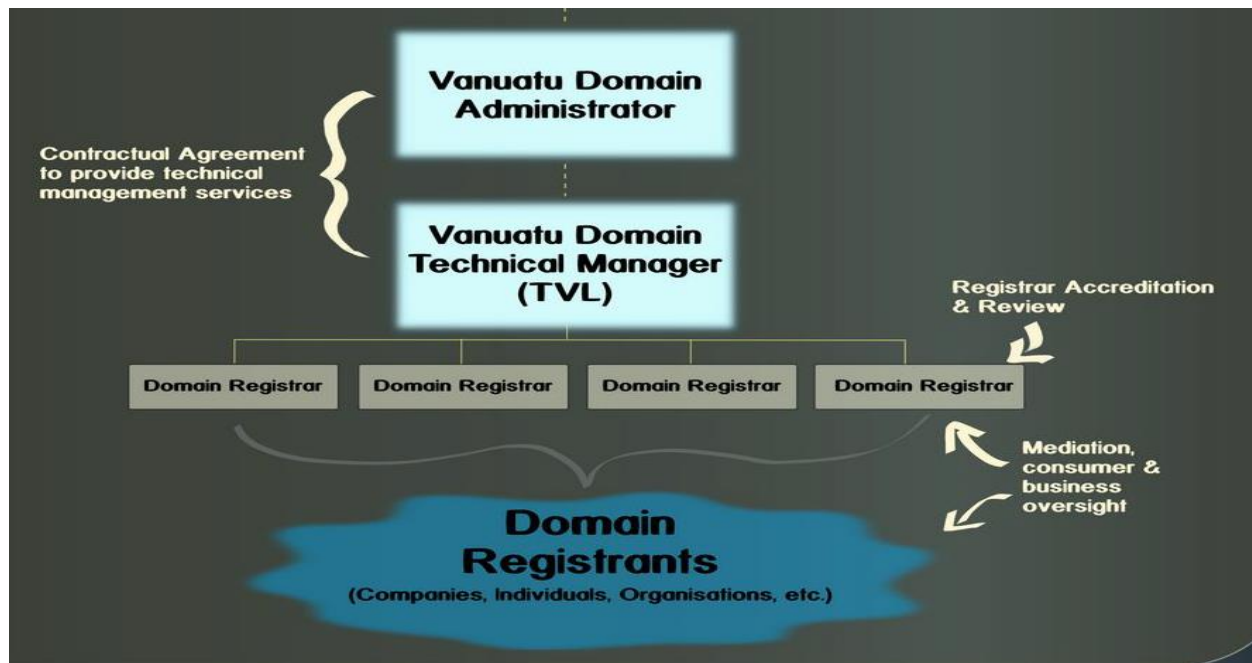
- Roles and Responsibilities of parties operating in the .vu ccTLD domain name space
- Registration of .vu domain names
- Domain name fees
- Domain naming policy for the .vu ccTLD domain (including use of Second and Third Level Designators - 'Child zones')
- Child zone creation in the .vu ccTLD
- Changes to .vu policies (including procedures for changing existing policies)
- Contact details for the .vu Registry and for the domain name subscribers
- Dispute resolution
- Moderated domain names

Internet domains in a given ccTLD should be accessible to customers wishing to use them according to reasonable and well-understood policies and/or regulations. Organisations registering domains (registrars) on behalf of their clients (registrants) therefore require a clear and simple technical and administrative framework to operate within the .vu domain name space.

Issue: TRR is of the view after some years of monitoring and assessment its .vu mandate, that TVL does not have appropriate and formal domain policies or guidelines which are publically available. TRR has informed TVL several times already that TRR is the organisation for domain

name policy setting and by end of 2014, would go to consultation or implement a new .vu domain policy or regulatory framework, for which TVL must adhere to. Annex A contains the TRR approved model for organizing the future administrative and technical management of .vu ccTLD.

Below is another way of representing the TRR approved model:



TRR wishes to ensure through the new ccTLD management arrangements that an appropriate model for ccTLD management is established. TRR desires working with TVL and the local internet community, towards achievement of this objective.

3.3 Growing the .vu Domain Market

Many ccTLDs have been behind some interesting innovative changes and services provided by registries. As a group, ccTLDs represent a highly diverse set of communities and offer a wide range of different services and models. Domain names are a global business and if community and consumer demands, even via their complaints, are not received and addressed and continually improved by TVL, customers will go elsewhere to get a domain and it may not necessarily be a .vu domain.

The introduction of new generic top level domain names that represent world famous products and service brands and some generic names too, such as **.nike**, **.museum** or **.africa**, shows rapidly changing domain markets. For many years, Vanuatu continues to operate besides the

.vu, second level domains **.com.vu**, **.edu.vu**, **.org.vu**, **.net.vu**, and **.gov.vu**. TRR understands that the Government via OGCI must first approve the registration of second level domain names under the .gov.vu. (i.e. .gov.vu is a moderated second level domain name whose moderator is OGCI).

If Vanuatu does not respond to changing market conditions, it risks falling behind significantly in its domain market developments which can ultimately create economic and social benefits.

Issue: Sales model and scope of .vu domain registration is unknown. TVL is unaware of its current resellers due to its own lack of domain policies governing resellers of .vu domain names since the time it assumed the role of managing the .vu ccTLD. More competition, newer opportunities and choices, and technological developments in the .vu domain market are not easily achievable or not possible because TVL holds both Registry and sole Registrar roles. This again creates a conflict of interest whereby TVL can dictate which services it wants to, or not to, introduce in the .vu domain namespace and market.

TRR wishes to ensure through the new ccTLD management arrangements that appropriate mechanisms for growing the .vu domain market are promoted, supported, established and implemented. A significant one will be the opening of the 'Registrar' service to competition which means there will be more than one registrar in Vanuatu.

3.4 Technical Infrastructure and Administration

Registry technical functions are of paramount interest for ccTLD managers. Network, Domain Name System (DNS) servers and Registry database must have redundancies. DNS servers must also be secured, resilient and have back up and fault tolerance mechanisms.

Since without domain name services, the Internet is effectively broken for users, the following service requirements apply to the ccTLD technical administration level (and to other aspects of the Internet as well):

- Important computer servers to translate between numeric addresses and domain names are maintained;
- There is appropriate oversight of traffic routing rules for all Internet Service Providers within a given area of operation.

These services must be guaranteed in order for the Internet to function. Typically, top-level domain name servers must have 100% availability for years on end.

TRR is certain that this is not something new to TVL because it (TVL) is currently managing the ccTLD's technical registry service including the DNS services. TRR is aware of times the TVL DNS service has failed causing downtime of operations for many users including loss of business. TVL was also, until 2013, able to provide a web interface www.vunic.vu for the registration of

domain names, including a WHOIS service for users to be able to check the availability of a domain name at any time.

Issue: There are no clearly documented and communicated Registry and associated DNS server continuity plans. Given the fact that the Internet is effectively useless without DNS services, and that there are instances where this has occurred in Vanuatu over recent years, the Government must be made aware via TRR on operational and business continuity plans of the technical infrastructure of .vu ccTLD.

TRR wishes to ensure through the new ccTLD management arrangements that appropriate operational and technical measures are implemented to ensure continuity of Internet and .vu services for Vanuatu. These include making sure suitable technical requirements for the Registry service exists, primary and secondary DNS server considerations are in place, and resilience and security of the technical resources are considered and planned for in the event of a downtime.

TRR is aware of the downtime challenges TVL faced at certain times during 2014, particularly, and wishes to address this for all Vanuatu citizens and those trying to reach Vanuatu citizens.

3.5 Domain Name Server Security or DNSSec

One of the defining characteristics of the Internet is the ability to share data between any two points on the network without third party mediation. While possessing significant undeniable benefits, this openness has obvious implications where safety and security are concerned.

As TVL appreciates, DNS infrastructure and services are critical for the internet. ICANN provides useful information for DNS managers like TVL., TRR has communicated the importance of DNS security including some of ICANN's DNS security resources, particularly Domain Name System Security Extensions (DNSSec), to TVL. In December 2014 TVL confirmed the implementation of DNSSec for the DNS zone .vu. This is to achieve improved the resiliency and redundancy of ccTLD DNS infrastructure in Vanuatu and overseas.

Issue: There is unclear information if TVL has any plans and timeframe for offering DNSSec for registrants requiring or requesting DNSSec deployment.

Implementation of DNSSEC is an important security action in the .vu domain namespace and should be seriously considered by TVL and all parties operating in the .vu domain name space. DNS servers at the .vu registry location must be secured from any form of DNS server attacks. DNSSec is one such mechanism being implemented by many ccTLD registry service operators around the world and one that is promoted by ICANN and its supporting organisations like APNIC – from where Vanuatu registers the use of its Internet resources (e.g. IP address).

TRR wishes to ensure through the new ccTLD management arrangements that security of the .vu domain namespace is considered paramount and appropriate security mechanisms are implemented in the .vu domain name space.

4 TRR Proposed Actions & Recommendations

4.1 Through the Consultation Paper

TRR has taken the following decisions and steps:

- Under its powers specified in section 7(4,e) of the TRR Act, approved an appropriate .vu ccTLD model whereby a .vu ccTLD regulatory framework has been developed to give effect to the model;
- Under section 7(4,e) of the TRR Act, has developed a .vu ccTLD regulation providing for the .vu ccTLD management and administration principles and rules.
- Put the approved .vu ccTLD model and draft .vu domain names management and administration regulation to public consultation since 19 December 2014 to public consultation immediately after conveying this information to TVL.
- Decided on the domain name space policies covering important domain administration aspects as those set out in section 3.2.
- Continued to provide advice and support to TVL on domain issues and complaints until the appropriate domain policies as those set out in section 3.2 are created by TRR, and are publically consulted on and approved.

4.2 Potential Changes to the Consultation Paper Model and Arrangements

Potential changes in response to comments received from the current public consultation document include but are not limited to following proposed actions:

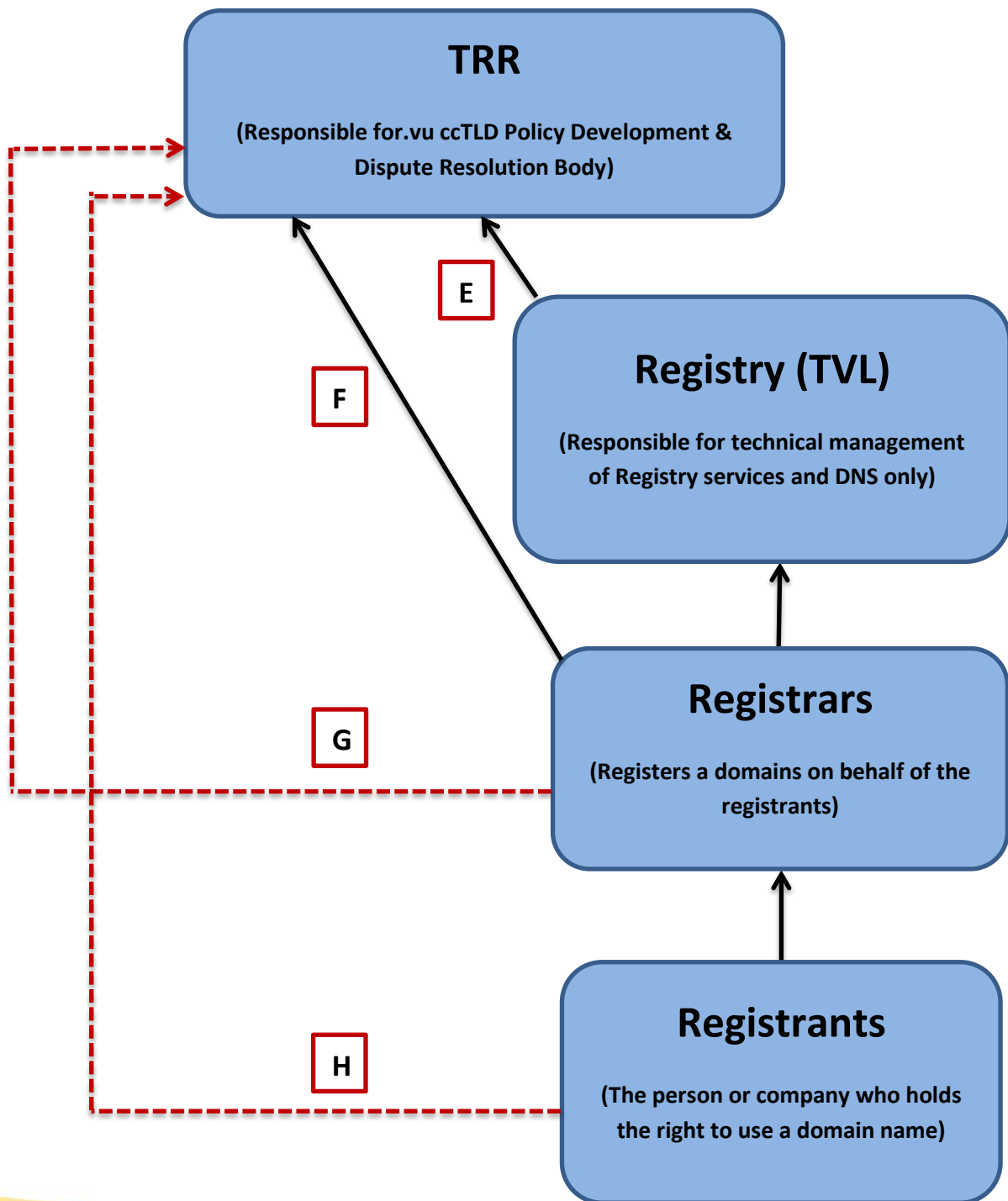
- TRR will be negotiating with the current registry operator and appropriate stakeholders to discuss plans about a stabilizing registrar for the transition period when the proposed structure becomes effective.
- Some sections of the regulation are too detailed so possible changes are for the regulation to be kept at a high level, and to create detailed policies to reinforce specific compliance rules and procedures.
- Ensure Terms are used consistently throughout the document.
- Slightly modify the regulation so that the policy and regulation responsibilities are given to the regulator instead of the registry. e.g. Part IV section 20 (1), section 19 etc.
- A dispute resolution or mediation section must be included.

Through this briefing meeting TRR wishes to discuss any queries you may have to confirm each other's understanding and to recommend and agree some concrete steps for a way forward for the administrative and technical management of .vu ccTLD.

TRR looks forward to fruitful discussions with all appropriate stakeholders, at the pre-consultation period close meeting.

5 ANNEX A: Model of .vu ccTLD Management

Refer to **Annex B** for a full explanation of the different parties operating in the .vu domain name space.



6 ANNEX B: Parties operating in the .vu ccTLD Domain Namespace

Note: The letters in column 1 of this table references the different components in the proposed 18 months handover structure as shown in Annexes B and C. Full descriptions of the different policies and agreements for instance DNSP1, DNSP2 are provided in Annex E.

Structure Component	Description
A	TRR is responsible for all .vu ccTLD policy making and development in order to ensure the structure and governance framework works best to suit Vanuatu's needs. TRR will develop a set of policies that set out the roles, responsibilities and rights of every party involved in the management and operations of .vu domain name space (DNS) including TRR as domain policy administrator, Registry, Registrar, Registrant and any separate Dispute Resolution Body, if different to TRR.
B	Registry (currently TVL) is the entity that operates the Registry or database, providing access to Registrars (currently is solely TVL). This is the ccTLD technical administrator, providing DNS services. Registry operates from out of TRR appointment and policies pertaining to registry services provision. The authoritative record of .vu domains is managed and operated by the Registry.
C	Registrars (currently is solely TVL) - the entities that register domains on behalf of the registrants. Registrars are independent parties who have TRR's approval to perform registrar roles. They have access to the register database provide by the Registry, and subject to agreement to comply by Registrar and Registry service obligations.
D	Registrant is the individual or organisation/company who holds the right to use a domain name.
E	This represents communication and reporting line of the structure by the Registry to TRR. TRR must approve of the Registry operator and sign an Agreement between the Registry operator, before it is able to provide Registry and technical administration services.
F	This represents communication and reporting line of the structure by the Registrar to TRR. TRR must approve of the Registrar operator and sign an Agreement between the Registrar operator, before it is able to provide Registrar

	services.
G and H	These represent communication and reporting lines of the model during a dispute resolution situation. If a party believes its complaints had not been addressed satisfactorily, the case may be escalated to TRR. No direct conflict communication occurs between TRR and the Registrars and Registrants in the first instance.

