



Government of
The Republic
of Vanuatu



Telecommunication &
Radiocommunication
Regulator

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A Consultation Paper on **TRR's DRAFT INTERPRETATION OF UAP BROADBAND INTERNET SPEEDS**

Issue Date: 6 May 2014

Consultation feedback information

- TRR welcomes and invites comments and feedback on this public consultation document; particularly from service providers who provide telecommunications service and any interested person(s);
- TRR would appreciate your provision of information to be clear by quoting the corresponding main sections and sub sections when providing your comments;
- Please note that this consultation document will not follow all of TRR's 'normal' consultation processes outlined on our website. In particular, given we must report to the Minister by 9th June 2014, the consultation has, and must, been shortened considerably;
- More general comments on the consultation document should be indicated accordingly;
- In the interests of transparency, TRR will, if it decides to do so, make public all or parts of any submissions made in response to this Consultation Document unless there is a specific request to treat all or part of a response in confidence. If no such request is made, TRR will assume that the response is not intended to be confidential. TRR will evaluate requests for confidentiality according to relevant legal principles;
- Respondents are required to clearly mark any information included in their submission that they consider confidential. They shall provide reasons why that information should be treated as such. Where information claimed to be confidential is included in a submission, respondents are required to provide both a confidential and a non-confidential version of their submission. TRR will determine, whether the information claimed to be confidential is to be treated as such, and, if so, will not publish that information. In respect of the information that is determined to be non-confidential, TRR may publish or refrain from publishing such information at its sole discretion.
- If you have specific questions, please use Section 6 (Consultation Questions) to provide us with your queries;
- TRR will accept comments in English, French or Bislama;
- If comments are submitted in printed format, they must be submitted on A4 paper accompanied, wherever possible, by a disk containing the comments, in electronic format;
- Comments on this consultation document should be provided to TRR via the following means:
 - Email address consultation@trr.vu
 - Faxed to (678) 24470
 - Posted or hand delivered to:

Input – TRR's DRAFT INTERPRETATION OF UAP BROADBAND INTERNET SPEEDS
Telecommunications and Radiocommunications Regulator
P O Box 3547, Port Vila, Vanuatu
- The deadline for public Comments is **4pm, 19 May 2014.**
- For any phone enquiries regarding this Consultation document, please call the following numbers:
 - (678) 27621 or (678) 27487
- You are welcome to visit our website <http://www.trr.vu> for more details on the latest developments in the telecommunication services industry and other related matters.

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1. INTRODUCTION

The Universal Access Policy (UAP) was developed and approved by the Council of Ministers on the 4th November 2013. The objective of the Policy is to improve access to telecommunications services for locations, which are not adequately served or served at all by existing services. TRR is the responsible agency for implementation of this Policy, including enforcement of related instruments and commitments.

2. LANGUAGE OF THE UAP

The UAP states:

1.1. By 1 January 2018 98 percent of the Vanuatu population shall have (and continue having after this date) access to the following telecommunications services:

...

1.1.3. Broadband Internet services that shall enable download speed of at least 21 Mbps and upload speed of at least 12 Mbps.

Section 1.1.3 of the UAP raises three issues; speed, dedicated and contented services that TRR seeks industry's views on in this draft.

3. CONSULTATION WITH INDUSTRY

TRR has consulted several times with industry on the implementation of the UAP and has sought its views on the Broadband Internet speed specified under the UAP. TRR now seeks to consult with industry to determine how Broadband Internet speed might be appropriately interpreted by TRR and industry.

4. TRR'S INTERPRETATION ON SPEEDS

TRR is of the view and is proposing interpretation of the Policy requirements for a broadband internet speed specified in section 1.1.3 of the UAP to represent a 'design capacity' speed that a 3G and upwards (3G+) cellular network can support. TRR notes that, primarily, 'UMTS' or 3G is generally defined as 3GPP release 7 or less.¹ Release 7 has a 'design capacity' speed of 21.1Mbps download speed at 64QAM(Quadrature Amplitude Modulation) and 11.5 upload speed at 16QAM capability. TRR understands that the specified speeds of the UAP are based on Release 7. Much of the current cellular network of TVL and Digicel throughout Vanuatu is 3G capable and supports 3GPP Release 7, and it is evolving to 3G+ technology. TRR appreciates and notes that there is a significant difference between what 'in theory' a technology can provide and what it can 'practically' provide.

TRR fully supports the UAP implementation speeds of the UAP and now proposes that they be considered as design capacity speeds of 21/12Mbps. TRR will set a practical and minimal baseline that must be met. At this time we seek views on whether the baseline speeds should be set. TRR's current view is that this minimum level is *at least* 2Mbps/1Mbps, which must be able to be provided with 99% success rate.

¹ Holma, Toskala, Ranta-aho, Pirskanen. "High-Speed Packet Access Evolution in 3GPP Release 7." IEEE Communications Magazine. 2007.

TRR invites views on any other proposed baseline speed that industry feels might be appropriate and relevant for Vanuatu bearing in mind our views in the above two paragraphs. Whatever speeds are set by TRR as practical and minimal, these will be speeds that are the minimum level which must be provided if the service is to be considered to have met the UAP requirement.

5. TRR'S INTERPRETATION ON SERVICE QUALITY AND SPEED

The UAP is not explicit in terms of whether the Broadband Internet service speed requirement relates to dedicated services, services which are subject to quality reduction if customers contend for them at the same time, or all services.

The UAP does not mention dedicated or service contention at all. This may suggest that the speeds mentioned are the minimum acceptable irrespective of the manner in which the service is delivered and that service providers must substantially over-provision their mobile networks to take account of the impact of customers seeking the same service at the same time. However, this approach would add cost to network expansions with negative effects on affordability and customer needs given that this may not be their wish and, particularly not wish to pay for such a service. TRR is of the view that such an approach does not provide an outcome that the UAP is seeking to support.

TRR considers that a more practical approach that better reflects the circumstances in which the UAP is to be implemented, is to require service providers to establish their networks on the design capacity standard that enables the provision of Broadband Internet services at speeds of 21/12 Mbps under appropriate demand conditions (such as during off-peak periods and some peak periods). This means that if a service is incapable of speeds of 21/12 Mbps at any time, then the service will have failed to meet the UAP requirement.

TRR proposes that a more realistic approach may be that to meet the UAP requirement, a Broadband Internet Service will need to be provisioned and provided at speeds of 21/12 Mbps for *most of the* time; and certainly outside the busy hour period of the network in any 24 hour cycle.

If a customer seeks a dedicated service connection on a 24-hourly basis – that is at all times – then TRR recognizes that the service providers are able to develop and charge for a suitably enhanced service. TRR intends to treat dedicated broadband services (that satisfy the minimum speed requirement discussed above) as broadband services for the purpose of the UAP. However, it is not prepared, as a practical measure, to use such dedicated services as the only services that meet the UAP requirement.

TRR is aware of the dynamic changes and improvement in technology developments, and will be flexible to adapt to any appropriate and proven technology that may meet or exceed the UAP speed requirements. In this respect TRR notes that the likelihood at 4G (or other advanced mobile) technology being implemented in Vanuatu before 1st of January 2018 is not only expected, but is fully encouraged.

6. TRR'S PROPOSAL ON SERVICE QUALITY AND SPEED IMPLEMENTATION

TRR proposes that to be UAP compliant, a Broadband Internet Service must have a design capability of 21/12 Mbps. If the service cannot achieve this speed under any circumstances because of design limitations then, although it is broadband internet service, it is not one that TRR will consider as UAP compliant.

TRR also proposes that, in addition to the above, the following milestone targets shall be applied between the date of effect of its UAP Broadband Internet Speed interpretation and 1 January 2018: **(TRR may review these milestones, when appropriate, to adapt any capable technology proven to exceed these current targets.)**

- From the date of effect until 31st December 2014 a Broadband Internet Service will be considered to be UAP compliant if it achieves 21/12 Mbps speeds for at least 4 hours (not necessarily continuous) in any 24-hour cycle and achieves no less than 2/1 Mbps for at least 99% of the balance of that cycle;
- From 1st of January 2015 to 31st of December 2015 a Broadband Internet Service will be considered to be UAP compliant if it achieves 21/12 Mbps speeds for at least 8 hours (not necessarily continuous) in any 24-hour cycle and achieves no less than 2/1 Mbps for at least 99% of the balance of that cycle;
- From 1st of January 2016 to 31st of December 2016 a Broadband Internet Service will be considered to be UAP compliant if it achieves 21/12 Mbps speeds for at least 12 hours (not necessarily continuous) in any 24-hour cycle and achieves no less than 2/1 Mbps for at least 99% of the balance of that cycle;
- From 1st of January 2017 to 31st of December 2017 a Broadband Internet Service will be considered to be UAP compliant if it achieves 21/12 Mbps speeds for at least 18 hours (not necessarily continuous) in any 24-hour cycle and achieves no less than 2/1 Mbps for at least 99% of the balance of that cycle; and
- From 1st of January 2018 a Broadband Internet Service will be considered to be UAP compliant if it achieves 21/12 Mbps speeds for at least 21 hours (not necessarily continuous) in any 24-hour cycle and achieves no less than 2/1 Mbps for at least 99% of the balance of that cycle. TRR is of the preliminary view that the required broadband speed, with availability of 21/12Mbps should be contended for a minimum availability capacity; of at least as 2Mbps/1Mbps speed. The minimum speed capacity must be available to all users with 99 percent success rate, through a variety of technologies.

TRR is of the preliminary view that the required broadband speed, with availability of 21/12 Mbps should be contended for a minimum availability capacity; of at least 2/1 Mbps speed. The minimum speed capacity must be available to all users with 99 percent success rate, through a variety of technologies.

7. CONSULTATION QUESTIONS

Q1: Comments are invited on any aspect of TRR's draft interpretation of speeds and proposal regarding design capacity, practical and minimal speeds. (Section 4)

Q2: What are your views on TRR's draft interpretation of Service Quality and speeds for the purposes of the UAP? (Section 5)

Q3: What are your views as to what may constitute a reasonable definition of service that meet the broadband speed of 21/12 Mbps required under the UAP, and whether a practical baseline speed should be determined that is 'SMART' (Simple, Measurable, Achievable, Realistic and Timely)? (Section 5)

Q4: What are your views on TRR's proposal in respect of Service Quality and Speed Implementation? (Section 6)

Q5: What are your views on TRR's preliminary view that the required broadband speed with availability of 21/12 Mbps should be contended for a minimum availability capacity of at least 2/1 Mbps with 99% success rate? (Section 6)
