



DRAFT

A Consultation Paper on **Nominated Service Provider's Reference Interconnection Offer**

INVITING PUBLIC COMMENT AND INPUT

7/06/2013

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CONSULTATION FEEDBACK INFORMATION

- TRR welcomes and invites comments and feedback to this consultation document from the nominated service provider (TVL and Digicel) and any other interested parties.
- We would appreciate your provision of information to be clear by quoting the corresponding main sections and sub sections when providing your comments.
- More general comments on the consultation document should be indicated accordingly.
- In the interests of transparency, TRR will 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 5 (Your Specific 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:

Public Input – Nominated Service Provider’s Reference Interconnection Offer

Telecommunications and Radiocommunications Regulator
P O Box 3547, Port Vila, Vanuatu

- The deadline for public comments is **4:00 pm, Friday 19 July 2013**.
- For any phone enquiries regarding this Consultation document, please call the following numbers:
 - (678) 27621 or (678) 27487
- TRR will consider every comment submitted when finalizing its report or decision. For transparency, a record of every comment received will be made available for public information, unless comments are labelled 'In Confidence' (see also dot points 4 and 5 above);
- For more information about TRR's Consultation Guidelines, please visit the following website: <http://www.trr.vu>
- 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.

INTRODUCTION

- This Consultation Document (“document”) is in preparation for future arrangements for Interconnection Agreements within Vanuatu, and to also cover existing interconnection arrangements for licensees with Digicel and TVL.
- The Telecommunications and Radiocommunications Regulator (TRR) has designated TVL, and Digicel as “Nominated Service Providers” (NSP) under section 27(1) of the Telecommunications and Radiocommunications Regulation Act No 30 of 2009 (the “Act”) . It is a high possibility that TRR will designate Interchange dominant in the submarine Cable (Cable) once the Cable lands in Vanuatu. As such this document is intended to cover some technical aspect of the Cable as well.
- TRR envisaged that it will designate Interchange as an NSP and will require Interchange to adopt this document once the Cable arrives.
- A proposed draft NSP Reference Interconnection Offer (RIO) is the key element of this Consultative Paper and comments on both the principles and detailed content of the draft NSP RIO are invited.
- In addition, a number of questions on both the services to be covered and some related issues have been included in this document. Responses are invited to these questions also.
- A report on this consultation will be published and will include a list of stakeholders, summary of comments received and explanations on how such comments were taken into account (as well as, if applicable, reasons as to why certain comments/suggestions were rejected).

INTERPRETATIONS

These are contained within the Draft NSP RIO.

TRR Draft NSP RIO

BACKGROUND AND LEGAL BASIS

- a. To further the process of Interconnection in Vanuatu, and fulfil its obligations under the Act, TRR has discussed all aspects of a draft RIO and consulted extensively with affected Licensees; particularly TVL, Digicel and Interchange. That process resulted in TRR's development of this draft NSP RIO and public consultation of it is a step in the process of determining future arrangements for Interconnection that best fits Vanuatu's needs.
- b. It is important now to proceed to the next step and gain views from key stakeholders; all licensees, government, ministries, the ICT industry in Vanuatu, the community and interested persons.
- c. This document is produced and released for public consultation under section 27(4) of the Act which requires the Regulator to consult with the NSP and any other interested parties in assessing or determining the terms and conditions proposed by the NSP. Once the Regulator has determined the terms and conditions, this will become the nominated service provider's reference interconnection offer.

PURPOSE

- a. The NSP RIO will form the basis under the Act for parties (access seeker and access provider) to negotiated an Interconnection Agreement in accordance with the relevant sections of the Act. Section 29 of the Act covers the requirements for all Interconnection Agreements to be filed with the Regulator and shall be made available to public inspection after reasonable notice as provided under section 10(1) of the Act.
- b. An NSP shall, if requested by a service provider who provides or intends to provide telecommunications services to the public in Vanuatu (ONO), enter into an Interconnection Agreement in the form of a RIO.
- c. The main objectives of establishing the NSP RIO are:
 - i. To ensure the public good is managed fairly, equitably and transparently.
 - ii. To ensure appropriate policies are in place to guide and to safeguard the welfare of the different parties operating services in Vanuatu.
 - iii. To ensure the effective and speedy provision of Interconnection to new and existing Licensees.
 - iv. To ensure the effective maintenance of end to end services between Licensees in Vanuatu.
 - v. To ensure no discrimination of interconnection services among licensees.
 - vi. To ensure the smooth introduction of an International Submarine Cable to Vanuatu.

REGULATORY IMPACT ASSESSMENT

- a. TRR sees the importance of having a NSP RIO for the telecom market and to ensure speedy and fair interconnection services (where feasible) is provided to access seeker wishing to interconnect with any access provider within the market.
- b. Since both TVL and Digicel are required under their licence to produce a RIO within 90 days from the date of their licence (but both failed to do so) and given the need for regulating interconnection services and the importance of having this document, TRR then relies in section 27(3) of the Act and requires TVL to propose its terms and conditions of its mobile and fixed network.
- c. TRR then developed a RIO under section 27(3) of the Act which was submitted for public consultation on 17th May 2011 and on a second occasion a revised version on 27th October 2011.
- d. During the consultation period, Digicel argued that it would not accept any RIO produced by TRR which was based on TVL's network. Digicel further argued that its Licence has designated Digicel as a NSP and as such Digicel is required to produce a RIO for itself. To ensure that a NSP RIO is developed and accepted by Digicel and TVL as the dominant service providers in the market, TRR on 6th February 2012 notified both TVL and Digicel under section 27(1) of the Act as the NSP to propose their terms and conditions of a RIO to TRR. Once TRR determined the terms and conditions of their respective RIO it would then become the NSP RIO.
- e. TRR will notify Interchange as an NSP once the Cable arrives in Vanuatu and Interchange will need to adopt the NSP RIO.
- f. Subsequent to October 2011, TRR has met extensively with TVL, Digicel and, of late, with Interchange in the development of this draft NSP RIO.
- g. TRR in drafting this NSP RIO, notes the many sections in the Act referring to Interconnection in Part 6 of the Act and on Competition in Part 5 of the Act. The Act makes a clear distinction between the RIO and any Interconnection Agreement negotiated by licensees. As such TRR believes that the best way forward to ensure compliance under the Act is for TRR to develop a draft NSP RIO, following its consultation with TVL, Digicel and possibly Interchange, covering certain mandatory issues and sections as well as providing guidance to the parties in negotiating Interconnection Agreements under the Act. Use of this NSP RIO in negotiating Interconnection Agreements should enable TRR to ensure that such Agreements do not contravene Section 26 of the Act when submitted to TRR under Section 28 of the Act.

- h. This NSP RIO will support the Government's National ICT Policy (currently in development) and the objectives of the Act.
- i. It is proposed that the NSP RIO will operate as follows:
 - 1. In *Section A* of the NSP RIO, Licensees should follow the detailed wording of the NSP RIO in their negotiations of the Interconnection Agreement. The access seeker may decide which particular services they require and these services as defined should be included in the Interconnection Agreement. Other services may not be required but can be added at a later date if required.
 - 2. In *Section B* of the NSP RIO, there are a number of detailed issues which TRR would expect to be included in an Interconnection Agreement. Whilst leaving the detailed wording to be negotiated between the parties, the NSP RIO gives some guidance as to the issues that TRR expects to be covered by such provisions.
 - 3. *Section C* details a number of optional services which, though generally considered as Interconnection Services, are not specific in terms of section 27 (2) of the Act. The parties are free to negotiate the provision of these services taking due account of the definitions in *Section C*.
 - 4. *Section D* details a number of further contractual issues TRR would expect in an Interconnection Agreement.
- j. In producing this consultation document, TRR has taken into account the submissions made to the 2011 Draft RIO consultations released by TRR and the a draft RIO submitted by Digicel on 9 April 2013. In developing this document, TRR has also consulted with Interchange to ensure that the NSP RIO also covers some aspect of interconnection services provided via the Cable if any access seeker wish to have with Interchange.
- k. In developing the NSP RIO, TRR has tried to ensure that draft is proportional and will not impose unnecessary burdens on its addressees than it is necessary to achieve their objectives and purpose. Comment is invited on this particular view.
- l. TRR believes that the draft to be consulted on will safeguard and promote:
 - 1. Interests of Vanuatu residents and businesses in the area of telecommunications;

2. Sustainable and effective competition;
3. The arrangements for implementation in a timely manner of the regulations concerning Interconnection.

Comment is invited on this particular view.

TRR Draft NSP RIO

THE DRAFT NSP RIO

Please see Addendum A to this Consultation Paper.

TRR Draft NSP RIO

CONSULTATION QUESTIONS

Specific Questions

Q1. Comment is invited on the structure, content and intent of this draft NSP RIO. Does it cover all the required aspects of a RIO from your point of view? If not, what other aspects should be included? (Please provide title and proposed text; including placement in this draft).

Q2. For licensees other than Digicel, TVL and Interchange, will this draft NSP RIO, in your opinion, enable you to negotiate a suitable Interconnection Agreement?

Q3. Comments are specifically invited from Digicel, TVL and Interchange as to the suitability of this draft NSP RIO, from their perspective, particularly in their negotiation of an Interconnection Agreement with other licensees?

Q4. Do Licensees want each NSP to include their Network information as a public document on its web site?

Q5. Should Leased Lines be provided as part of the Interconnection Agreement or as standard Retail services?

Q6. Should the Directory Assistance Service, provided to End Users, be provided from one Licensee to another under the NSP RIO?

Q7. Do Licensees want a more comprehensive set of standard for delivery and repair, including penalties?

Q8. Would Licensees prefer the NSP RIO to provide a detailed system for fault management?

Q9. Do the Licensees accept the principles for calculating Collocation Charges? –See Schedule B.

Q10. Would Licensees support the creation of a Bitstream Service as described in Schedule C?

1 ADDENDUM A: CONSULTATION DRAFT OF NSP RIO

Introduction

- 1.1** The Telecommunications and Radiocommunications Regulator (TRR) has designated TVL and Digicel as “Nominated Service Providers” under the Telecommunications and Radiocommunications Regulation Act No 30 of 2009 (the “Act”) in accordance with section 27 (1) of the Act. Draft RIOs have been considered and extensive consultation taken place with these Licensees. This resulted in a further Public Consultation of a draft Nominated Service Providers RIO (NSP RIO). TRR will notify Interchange to be a NSP under the Act at the appropriate time when the Cables arrives in Vanuatu.
- 1.2** After consideration of the comments submitted by interested parties to this draft, a final NSP RIO is to be issue on _____ 2013.
- 1.3** This document once finalised and consulted with NSP (TVL and Digicel) shall become the NSP RIO as provided under section 27(4) of the Act. Any service provider who provides or intends to provide telecommunications services to the public (ONO) may notify any of the NSP for them to enter into an Interconnection Agreement in the form of this RIO as provided under section 27(8) of the Act.
- 1.4** Where Interconnection is between NSPs the Interconnection Agreement shall be made on the basis that the party seeking Interconnection shall be considered as though it were the ONO.
- 1.5** Unless otherwise expressly agreed between the parties, the terms of the Interconnection Agreement shall, be consistent with the terms of this NSP RIO. TRR shall ensure that any Interconnection Agreement made under this NSP RIO must be consistent with the Act, meet all reasonable requests for interconnection at any technically feasible point, and in all other respects, incorporate reasonable terms and conditions for interconnection, including technical standards and specification as set out in section 29 of the Act.
- 1.6** This NSP RIO provides certain detailed requirements which shall be included in any Interconnect Agreement entered into under the Act. In this TRR has taken note of the provisions of Sections 21, 22 and 23 of the Act and of Section 27 (2).
- 1.7** In *Section A* of the NSP RIO Licensees should follow the detailed wording of the NSP RIO in their negotiations of the Interconnection Agreement. The ONO may decide which particular services they require and these services as defined should be included in the Interconnect Agreement. Other services may not be required but can be added at a later date if required.
- 1.8** In *Section B* of the NSP RIO there are a number of detailed issues which TRR would expect to be included in an Interconnection Agreement. Whilst leaving the detailed

wording to be negotiated between the parties the NSP RIO gives some guidance as to the issues that TRR would expect to be covered by such provisions.

- 1.9** *Section C* details a number of optional services which though generally considered as Interconnection Services are not specific in terms of Section 27 (2) of the Act. The parties are free to negotiate the provision of these services taking due account of the definitions in *Section A*.
- 1.10** *Section D* details a number of further contractual issues TRR would expect to be included in an Interconnection Agreement.
- 1.11** Neither party is responsible for the conveyance of any Call or the provision of any other Interconnection Service where a charge for the conveyance of the Call or the provision of any other Interconnection Service by that party is not specified in, or has not been agreed or determined pursuant to, the Interconnection Agreement.
- 1.12** In relation to the connection of the parties' Networks, and the making available and provision of Interconnection Services by one party to the other, each party is responsible for providing, installing, testing, making operational, maintaining and repairing its own Network.
- 1.13** Neither the NSP nor the ONO shall be required to do anything which is not practical.

Section A: Mandatory Provisions

2 DEFINITIONS AND INTERPRETATION

- 2.1** Any references to Sections in this Interconnection Agreement are to Sections to that Interconnection Agreement.
- 2.2** In this Interconnection Agreement the following terms have the following meanings:

<i>Answer Line Signal:</i>	means the message signal in the Signalling Format which indicates that a Call has been answered;
<i>Authorised Personnel:</i>	means representatives of the Collocation User notified and suitably indentified to the Collocation Provider;
<i>Billing Dispute:</i>	means a dispute arising from the invoices and billing processes for the Interconnection Service provided;
<i>Bill Rate:</i>	means the average three (3) month bank bill mid rate as

	<p>quoted by the Vanuatu branch of the ANZ Bank as at the relevant date, provided that if on or about that date for any reason that rate is not then available, the last such rate quoted by the Vanuatu branch of the ANZ Bank before it became unavailable and if the Bank does not quote such a rate, then:</p> <ul style="list-style-type: none"> • in the case where NSP is entitled to receive the interest, the rate NSP reasonably determines to be the nearest practicable equivalent; or • in the case where ONO is entitled to receive the interest, the rate ONO reasonably determines to be the nearest practicable equivalent;
<i>Call:</i>	means the message which passes across a path established through the NSP and ONO Networks via a Point Of Interconnection by which information can be passed from an originating End User and delivered through conveyance to a called number so that messages can be exchanged between the originator and the called number;
<i>Chargeable Call:</i>	means each second of a Call measured from the receipt of an Answer Message to the receipt of a Release Message for each and every Call of the same type and by rounding the sum of such seconds to the nearest whole minute for each billing period;
<i>Calling Line Identification Presentation (CLIP):</i>	Calling Line Identification Presentation is as defined by the ITU-T;
<i>Collocation:</i>	means the location of the ONO and NSP equipment in a single set of premises;
<i>Collocation Provider:</i>	means the party providing the Collocation Site in its premises;
<i>Collocation Site:</i>	means the physical location for the accommodation of the Collocation User's equipment;
<i>Collocation User:</i>	means the party locating its equipment in the premises of the other party;
<i>Commencement Date:</i>	means the date of signature of the Interconnection Agreement by both parties;
<i>Data Management Amendments:</i>	means such data reconfiguration of the NSP Network or the ONO's Network as is necessary for the access, routing and charging of calls;
<i>Due Date:</i>	means the 20th day of the month following the month in which an invoice is received, provided that, if the 20th day of the relevant month is not a Working Day, the Due Date shall be the immediately succeeding Working Day;

	or where any provision of the Interconnection Agreement provides that payment of any amount is to be made on or by a particular date, that particular date, provided that, if that particular date is not a Working Day, the Due Date shall be the immediately succeeding Working Day;
<i>Dispute Resolution Process:</i>	means the process agreed as part of the Interconnection Agreement and contained in Section [xxx] ¹ of the Interconnection Agreement.
<i>Emergency Services:</i>	means the Government of Vanuatu nominated authorities provided to handle a crime, fire, medical emergency or natural disaster;
<i>Erlangs:</i>	means a measure of call attempts as defined by ITU – T;
<i>End User:</i>	means the customer of either the ONO or NSP as the context requires;
<i>Fault:</i>	means a condition that causes a Network to operate other than intended or to cease operating altogether;
<i>Free to Caller Service:</i>	means a service provided to End Users in such a way that the originating End User pays nothing for the Call and any Chargeable Call charge is paid by the receiving End User;
<i>Fixed Number:</i>	means any fixed network number allocated by a party to its End Users, which number is allocated to that party by the TRR in accordance with the National Numbering Plan;
<i>Grade of Service (GOS):</i>	is as defined by ITU-T;
<i>Group:</i>	means, jointly and severally, the ONO or NSP as the context requires and each and all of its subsidiaries now or from time to time and includes any member of the ONO or NSP Group, including the ONO or NSP as the context requires;
<i>Interconnection:</i>	has the meaning contained in the Act;
<i>Interconnection Agreement:</i>	means an agreement that is agreed or determined in accordance with the provisions of the NSP RIO and is in accordance with the Act;
<i>Interconnection Change:</i>	means a change required to an existing Interconnection Service or a new Interconnection Service;
<i>Interconnection Link:</i>	means a circuit or group of circuits which connects to a POI, which may include a 2 Mbps 31 channel link and may include a ITU-T No. 7 signalling link;
<i>Interconnection Change Request:</i>	means a request by a party to the Interconnection Agreement for and Interconnection Change;

¹ Note the detail and numbering of this section is part of the detailed negotiations of the Interconnection Agreement.

<i>Interconnection Service:</i>	means the service provided by Interconnection and contained in the Interconnection Agreement;
<i>International Cable Landing Station:</i>	means a building or part of a building housing the necessary terminal equipment for the termination of a submarine cable between different countries;
<i>Invoicing Party:</i>	means, in relation to any invoice in respect of any payment due under the Interconnection Agreement, the party which renders the invoice;
<i>ITU-T:</i>	means the International Telecommunications Union/Telecommunication Section (ITU-T) and its predecessor the CCITT;
<i>Act:</i>	means the Telecommunications and Radiocommunications Regulation Act No 30 of 2009;
<i>Liaison Committee:</i>	means the operational liaison committee established pursuant to Section 4 of the Interconnection Agreement;
<i>Licensee:</i>	means a person holding a licence under the Act;
<i>Manifest Error:</i>	means: any erroneous duplication of the items charged in; any error in a calculation shown on; any error in the total of the amounts shown on; any erroneous calculation of discounts shown on; any erroneous calculation of the VAT shown on; any erroneous inclusion of services not to be provided under the Interconnection Agreement; or any erroneous application of an incorrect price to a Call, where the parties are in agreement on the price which should apply to that Call in; an invoice rendered by the Invoicing Party, which is apparent on the face of the invoice;
<i>Mid-Span Meet:</i>	means an Interconnection Service specified in Section 4;
<i>Mobile Number:</i>	means any mobile network number allocated by a party to its End Users, which number is allocated to that party by the TRR in accordance with the National Numbering Plan;
<i>National Numbering Plan:</i>	means the national numbering plan and its associated rules that are administered by the TRR;
<i>Network:</i>	means the telecommunication system comprising all links, radio, microwave and other transmission media and equipment, switches, software and related items utilised by the ONO or NSP as the context requires and any other members of the ONO or NSP Group as the context requires to make available and provide

	Interconnection Services. For the avoidance of doubt, the NSP Network does not include the POI or any circuits or equipment of the NSP or the NSP Group utilised by ONO on the ONO side of any POI;
<i>Network Alteration:</i>	means a change to one party's Network, which affects the other party's Network or the provision or receipt of an Interconnection Service by the other party;
<i>Network Interconnection Operational Procedures:</i>	means the operational procedures for the operation of the Interconnection Services contained in the Interconnection Agreement;
<i>Network Interconnection Technical Specifications:</i>	means the technical specifications, including relevant ITU-T specifications necessary for the correct operation of the Interconnection Services contained in the Interconnection Agreement;
<i>Nominated Service Provider:</i>	has the meaning assigned to it in Section 27 (1) of the Act;
<i>Numbering Information:</i>	means the A number of the calling party End User that originated the traffic: <ul style="list-style-type: none"> • provided in the form of the national significant number as ITU-T Recommendations; and • including any CLIR flags (an indicator provided together with an A-number for the purposes of calling line presentation information which indicates that the A-number is not to be forwarded to the called party) and any other numbering information relating to that traffic, but not including billing name and address
<i>Number Ranges:</i>	means a group of numbers allocated to the ONO or NSP as the context requires, by TRR for the purpose of providing services to End Users;
<i>Other Network Operator (ONO):</i>	means a service provider who provides or intends to provide telecommunications services to the public in Vanuatu (ONO) and has been licensed by TRR under the Act;
<i>Paying Party:</i>	means, in relation to any invoice in respect of any payment due under the Interconnection Agreement, the party to whom the invoice is addressed;
<i>Private Property:</i>	means a location, including sites and/or buildings in private ownership but excluding such locations owned by either the ONO or NSP;
<i>Point of Interconnection (POI)</i>	means the demarcation point between two interconnected Networks where traffic is transmitted from one Network to another;
<i>Release Message:</i>	means the message in the Signalling Format carried from

	ONO to NSP or from NSP to ONO that indicates that a Call has ended and that a connection is no longer established in respect of that Call;
<i>Retail Leased Lines:</i>	means fixed capacity links provided by Licensees to End Users;
<i>Signalling Format:</i>	means ITU-T No. 7 signalling (or such other signalling as may be agreed by the parties from time to time);
<i>Short Message Service(SMS):</i>	means an SMS message of up to 160 alphanumeric characters and otherwise in accordance with ETSI GSM Recommendations that can be sent or received (as the context requires) from suitably equipped and configured phones;
<i>Switch:</i>	means a telecommunications platform within a Network which performs the function of switching and routing Calls;
<i>TRR:</i>	means the Telecommunications and Radiocommunications Regulator appointed pursuant to section 4 of the Act;
<i>Working Day:</i>	means a day other than a Saturday, a Sunday or a statutory holiday in Vanuatu.

3 SCOPE OF AN INTERCONNECTION AGREEMENT

- 3.1 The Interconnection Agreement shall set out the framework for the conduct of the relationship between the parties as network operators who's Networks are connected. Accordingly, an Interconnection Agreement is intended to apply only to:
- 3.1.1 the interconnection of the Networks of the parties;
 - 3.1.2 meet all reasonable requests for interconnection at any technical feasible point;
 - 3.1.3 the making available and provision of Interconnection Services by each party to the other party;
 - 3.1.4 incorporate reasonable terms and conditions for interconnection, including technical standards and specifications;
 - 3.1.5 payment of the charges in relation to the provision of those Interconnection Services; and
 - 3.1.6 the resolution of certain disagreements or disputes in relation to any matter arising under or in relation to the Interconnection Agreement.

4 MANAGEMENT OF INTERCONNECTION

4.1 Role of Liaison Committee

- 4.1.1 During the term of the Interconnection Agreement the parties shall be required to liaise on and resolve technical network operational issues which arise from time to time regarding:
 - 4.1.1.1 the provision of services, including service levels, under the Interconnection Agreement;
 - 4.1.1.2 the operation and connection of their respective Networks; and
 - 4.1.1.3 any Faults that may occur;
 - 4.1.1.4 In recognition of this, the parties shall establish a Liaison Committee:
 - 4.1.1.4.1 to liaise on, and to provide a forum for discussion of, Operational Issues; and
 - 4.1.1.4.2 to discuss and make recommendations on changes to the Network Interconnection Operational Procedures and to the Network Interconnection Technical Specifications.

4.2 Constitution of Liaison Committee

- 4.2.1 The Liaison Committee shall consist of one (1) or more (but not more than three (3) unless otherwise agreed by the parties) suitably qualified personnel appointed by each party from time to time (on a permanent or temporary basis), and advised to the other party by name or position as being that party's representatives on the Liaison Committee.
- 4.2.2 The Liaison Committee may regulate its own meetings and procedures, provided that:
 - 4.2.2.1 meetings of the Liaison Committee (either in person, or by audio or audio and visual communication) shall be held:
 - 4.2.2.2 at least every three (3) months or more frequently as the Liaison Committee shall determine; and
 - 4.2.2.3 at the written request of a member of the Liaison Committee, such request to set out the issues which the member wishes to be discussed by the Liaison Committee;
 - 4.2.2.4 meetings of the Liaison Committee shall be hosted alternately by each party;
 - 4.2.2.5 at least five (5) Working Days' notice of a meeting is given by the party hosting the meeting to each member of the Liaison Committee, together with written advice of the matters to be discussed at the meeting. However, this notice requirement may be waived with the unanimous consent of the members of the Liaison Committee;

4.2.2.6 each meeting of the Liaison Committee shall be chaired by a representative nominated by ONO or NSP (on an alternating basis); and

4.2.2.7 the Liaison Committee shall record, circulate and keep the agreed outcomes of each meeting that it holds.

4.3 Provision of information between Licensees

4.3.1 General Network Information

4.3.1.1 On application by an ONO the NSP shall supply within five (5) Working Days the following Network information²:

- 4.3.1.1.1 Service configuration
- 4.3.1.1.2 Technical characteristics
- 4.3.1.1.3 Network Interconnection paths and routing
- 4.3.1.1.4 Switching Network Interconnection
- 4.3.1.1.5 Signalling Network Interconnection
- 4.3.1.1.6 Interface standards
- 4.3.1.1.7 Synchronisation
- 4.3.1.1.8 Safety standards

4.4 Planned Changes to Networks

4.4.1 Network Alterations

4.4.1.1 Because Network Alterations may cover a wide variety of circumstances it is not possible to specify a form to be used. The party requesting the change should attempt to include all the necessary information to enable the receiving party to assess the impact, including any cost implications, for its Network.

4.4.1.2 At least forty (40) Working Days notice shall be provided by the requesting party for each Network Alteration request. The requested party shall, if in a position to accept the Network Alteration proposed, provide an estimate of the costs involved within twenty (20) Working Days of receipt of a Network Alteration request.

4.4.1.3 Where the Network Alteration is part of a planned upgrade programme or, for example, a change to the National Numbering Plan required by TRR, the parties shall draw up a detailed plan. The plan and its implementation shall be overseen by the Liaison Committee.

4.4.1.4 Network Alterations shall be carried out within the timescales specified by the requesting party seeking the Network Alteration except that if the requested party believes that it is not in a position to proceed with the requested Network Alteration, either within the timescales requested or in any circumstances, the requesting party shall be advised within ten

² See separate questions. Do Licensees want each NSP to include this information as a public document on its web site?

(10) Working Days of receipt of the request. In these circumstances NSP and the ONO shall make all reasonable efforts to resolve the situation, including recourse to the dispute resolution procedures in the Interconnection Agreement.

4.5 Data Management Amendments

- 4.5.1 The NSP and the ONO shall endeavour to minimise the number of Data Management Amendments in each other's Network by minimising the level of digit analysis carried out in their respective Networks to that required to ensure efficient call routing and provide agreed billing information.
- 4.5.2 Where a Data Management Amendment is required the requesting party shall complete a Data Management Amendment request in the form of a business letter providing details of the Number Range and proof of its allocation by TRR.
- 4.5.3 The requested party shall acknowledge receipt of the Data Management Amendment request within two (2) Working Days of receipt. Provided the application is completed correctly and there is evidence of allocation of the Number Range by TRR, the requested party shall:
 - 4.5.3.1 forward the Data Management Amendment request to the technical department for preparation for implementation forty (40) Working Days from the date of receipt of the request;
 - 4.5.3.2 prepare an amendment adding the new Number Range to the Interconnection Agreement and forward to the requesting party an acknowledgement within five (5) Working Days.
- 4.5.4 The Data Management Amendment shall be completed within the forty (40) Working Days from the initial receipt of the request.
- 4.5.5 Joint testing should be arranged between the parties towards the end of the implementation period.
- 4.5.6 If a requested party believes that it is not in a position to proceed with the requested Data Management Amendment, either within the timescales requested or in any circumstances, the requesting party shall be advised within ten (10) Working Days of receipt of the request. In these circumstances the NSP and the ONO shall make all reasonable efforts to resolve the situation, including recourse to the dispute resolution process in the Interconnection Agreement.

4.6 Records of Interconnect Links

- 4.6.1 Details of each Interconnection Link including numbers of 2 Mbps circuits and signalling configuration are attached to the Interconnection Agreement.

4.7 New Services

- 4.7.1 Section 4.7 deals with New Interconnection Services or, a change in an existing Interconnection Service.
- 4.7.2 Arrangements for the provision of standard Interconnection Services are detailed in the Service Schedules to the Interconnection Agreement. New or changed

Interconnection Services shall be incorporated as additional or modified Interconnection Services to the Interconnection Agreement once specific arrangements dealing with specifications, prices and other terms have been agreed.

- 4.7.3 Following the successful completion of an Interconnect Change the parties shall notify TRR and once agreed, modify the Interconnection Agreement to include that new or changed service.
- 4.7.4 Interconnect Change request may be in the format of a business letter.
- 4.7.5 The party seeking the change (the Requesting Party) shall include in its Interconnection Change Request the following information:
 - 4.7.5.1 the specific services required;
 - 4.7.5.2 the location at which the services are required;
 - 4.7.5.3 the date(s) on which the services are required;
 - 4.7.5.4 other relevant detail sufficient to enable the party receiving the request (the Receiving Party) to assess whether a plan can be constructed to meet the request for an Interconnection Change in the timescale sought;
 - 4.7.5.5 the names of the personnel (including the name and contact details of the senior contact person) who shall represent the Requesting Party in the negotiations or other dealings with the Receiving Party.
- 4.7.6 The parties shall negotiate in good faith to agree a plan to deliver the Interconnection Change and amend the Interconnection Agreement.
- 4.7.7 If the parties fail to agree a suitable plan for the implementation of the Interconnection Change within a reasonable timescale or to the Interconnection Change itself then the ONO or NSP as appropriate shall refer the issue to TRR. For the avoidance of doubt the Dispute Resolution Process detailed in the Interconnection Agreement shall not apply to Change Requests.

4.8 Interconnection Services

4.8.1 Traffic Conveyance Services

4.8.1.1 Fixed Call Termination means:

4.8.1.1.1 acceptance of Calls handed over from the first party's Network to the second party's Network where the Call has been originated by an End User on the first Party's Network and for which a second party's Fixed Number is provided, and delivery or offer of delivery of each such Call to the second party's designated destination in respect of that Call; and

4.8.1.1.2 transmission of an Answer Line Signal to the first party's Network in respect of Calls handed over from the first party's Network to the second party's Network in terms of the Interconnection Agreement and answered by the called End User or by some other means: and

4.8.1.1.3 where the first party has, for each Call handed over from the first party's Network to the second party's Network, transmitted the line, information or control signals in the Signalling Format that relate to the establishment of that Call, including details in the Signalling Format of the valid second party's Fixed Number called.

4.8.1.1.4 For the avoidance of doubt this service includes calls to 30CDE numbers.

4.8.1.2 Mobile Call Termination means:

4.8.1.2.1 acceptance of Calls handed over from the first party's Network to the second party's Network where the Call has been originated by an End User on the first party's Network and for which a second party's Mobile Number is provided, and delivery or offer of delivery of each such Call to the second party's designated destination in respect of that Call; and

4.8.1.2.2 transmission of an Answer Line Signal to the first party's Network in respect of Calls handed over from the first party's Network to the second party's Network in terms of the Interconnection Agreement and answered by the called End User or by some other means: and

4.8.1.2.3 where the first party has, for each Call handed over from the first party's Network to the second party's Network, transmitted the line, information or control signals in the Signalling Format that relate to the establishment of that Call, including details in the Signalling Format of the valid second party's Mobile Number called.

4.8.1.3 Short Message Service (SMS) means:

4.8.1.3.1 acceptance of Short Message handed over from the first party's Network to the second party's Network where the Short Message has been originated by an End User on the first Party's Network and for which a second party's Number is provided, and delivery or offer of delivery of each such Short Message to the second party's designated destination in respect of that Short Message.

4.8.1.4 SMS are handled as follows:

4.8.1.4.1 SMS originating from a terminal device of the originating party is received by that party's SMSC;

4.8.1.4.2 the originating party's SMSC queries that party's home location register, via GSM MAP;

4.8.1.4.3 the originating party's SMSC forwards the SMS over the SMS Interconnection Link, via GSM MAP, to the terminating party's MSC visitor location register; and

4.8.1.4.4 the terminating party's MSC visitor location register delivers the SMS to a suitable device used by the terminating party's End User.

4.8.1.5 Toll Free Service means:

4.8.1.5.1 acceptance of Calls handed over from the first party's Network to the second party's Network where the Call has been originated by an End User on the first Party's Network and for which a second party's Toll Free Number in the form 08CDEF is provided, and delivery or offer of delivery of each such Call to the second party's designated destination in respect of that Call; and

4.8.1.5.2 transmission of an Answer Line Signal to the first party's Network in respect of Calls handed over from the first party's Network to the second party's Network in terms of the Interconnection Agreement and answered by the called End User or by some other means: and

4.8.1.5.3 where the first party has, for each Call handed over from the first party's Network to the second party's Network, transmitted the line, information or control signals in the Signalling Format that relate to the establishment of that Call, including details in the Signalling Format of the valid second party's Toll Free Number called.

4.8.1.5.4 For the avoidance of doubt the End User on the first party's Network pays no charge for the Call. Any fees for the Toll Free Service shall be paid by the End User of the second party to whom the Call is terminated.

4.8.2 Transport Services

4.8.2.1 Interconnect Links

4.8.2.1.1 Interconnection Links are provided in accordance with the terms and conditions of the Interconnection Agreement.

4.8.2.1.2 The parties shall connect and keep connected the ONO Network and the NSP Network by establishing Points of Interconnection using where appropriate Interconnect Links by one or more of the following

Interconnection Services in accordance with the Interconnection Agreement:

4.8.2.1.3 Customer Sited Interconnection³

4.8.2.1.4 Mid-Span Meet

4.8.2.1.4.1 Using fibre cables means a service where Interconnection is provided by each party installing part of the Mid-Span Interconnection Link. It is achieved through the provision jointly by each party of a Point of Interconnection (PoI) on the public highway or, subject to the parties' agreement, on Private Property, with each portion of the 2Mbit/s Interconnection Link being provided by each party on its side of the Point of Interconnection. The Service shall only use SDH technology.

4.8.2.1.4.2 Using radio means a service where Interconnection is provided using Mid-Span Interconnection methodology but where the transmission path is provided by a suitable radio link and the Point of Interconnection is a theoretical point on the radio path between the ONO and the NSP. The service shall only use SDH technology.

4.8.2.2 Network Infrastructure means:

4.8.2.2.1 The provision to the ONO of links between different parts of the ONO Network provided by the NSP to the ONO. These links shall be provided in accordance with the prices in the Interconnection Agreement and except for the prices under the terms and conditions for Retail Leased Lines.

4.8.2.3 Leased Lines⁴

4.8.2.4 International Submarine Cable Access means:

4.8.2.4.1 the provision by Collocation at the International Cable Landing Station of access from the ONO Network to an international submarine cable. This Service includes the provision of cross connection to the international submarine cable. The terms and conditions for Collocation and crossconnection shall be covered by the Interconnection Agreement.

4.8.2.4.2 a service which uses SDH technology and is limited to either STM-1 links of 155 Mbps or STM-1 presented 45 Mbps capacity.

³ Given that this service is the equivalent of collocation on the ONO's premises, it is not proposed to define this as a service. It is proposed that Interconnect Links provided by the NSP to the ONO shall be considered as Collocation by the NSP on the ONO premises.

⁴ These are retail services. Should they be provided as part of the Interconnection Agreement or as standard Retail services?

4.8.2.4.3 For avoidance of doubt the terms and conditions for the provision of the capacity within the international submarine cable shall be covered by a separate agreement between the parties which although covered by the Act is not defined as an interconnection service under the Act.

4.8.2.4.4 For the avoidance of doubt international submarine cables are not to be fault free and given the practical time needed to locate and repair faults Licensees are required to make their own separate arrangements for providing standby access to international partners and operators.

4.8.3 Collocation

4.8.3.1 Each party (in this Section 4.8.3, the Collocation Provider) shall make available to the other (in this Section 4.8.3, the Collocation User) all such:

4.8.3.1.1 premises, access, facilities and services in relation to each of the Collocation Users on the Collocation Provider's premises;

4.8.3.1.2 access from the street front to the premises in which each of Interconnection of the Collocation User is located to enable the Collocation User to construct and place wires, cables, casings or other equipment;

4.8.3.1.3 facilities and services, including power as stipulated by the Collocation User on the Collocation Provider's premises; and

4.8.3.1.4 such other reasonable assistance, as the Collocation User reasonably requires to accommodate the Point of Interconnection and enable all equipment required to be both located in close proximity and connected to the Collocation User's Point of Interconnection for the Collocation User to provide or receive Interconnection Services under the Interconnection Agreement, to be safely and securely accommodated and installed to reasonable standards, connected to the rest of the Collocation User's Network, inspected, tested, repaired, modified, maintained, worked on and removed as and when reasonably required by the Collocation User. The Collocation Provider shall comply with all applicable statutory requirements in meeting its obligations under this Section 4.8.3.

4.8.3.2 The Collocation Provider grants the Collocation User all licenses necessary for the Collocation User to carry out the activities contemplated by Section 4.8.2, and it is mutually agreed between the Collocation Provider and the Collocation User that the Collocation User shall pay the Collocation Provider its reasonable costs incurred for the provision of any access or space for the purposes of Section 4.8.3.

4.8.4 Each party may at any time give notice of its reasonable requirements under this Section 4.8.3.

4.8.5 In meeting its obligations as a Collocation Provider, or carrying out the activities contemplated by Section 4.8.3 as a Collocation User, neither party may maintain, repair or interfere with the other party's equipment or interfere with the provision of Interconnection Services except with the consent of the other party or any authorised contractor or agent of the other party and only to the extent necessary to meet its own obligations under the Interconnection Agreement.

4.8.6 The Collocation Provider shall not cause or allow any nuisance or unreasonable impediment to the Collocation User to exist or occur in any premises to which the Collocation User reasonably requires access under this Section 4.8.3.

4.8.7 The Collocation User shall comply with the reasonable health and safety and security procedures issued by the Collocation Provider.

4.8.8 Details processes for ordering Collocation facilities and arrangements by the Collocation User for access, including outside normal hours, are located in Annex A at Section ⁵ to the NSP RIO.

4.8.9 Directory Assistance Services⁶

4.9 Technical Aspects

4.9.1 Interconnection of Public Switches

4.9.1.1 General Rules for Interconnect Links between Public Switches

4.9.1.1.1 Interconnection covered under the terms of the Interconnection Agreement is only available using signalling known as ITU-T Signalling System No 7 and using 2.048 Mbps capacity for each Interconnection Link subject to the terms and conditions in the Interconnection Agreement.

4.9.1.2 Number of Interconnect Links

4.9.1.2.1 Details of the number of Interconnection Links shall be attached to the Interconnection Agreement and modified from time to time to reflect changes.

4.9.1.3 Transmission Technologies

4.9.1.3.1 Only SDH technologies shall be used for Interconnection.

4.9.2 Interconnection of Signalling Networks for Switch connection

4.9.2.1 The NSP shall provide signalling circuits of 64 Kbps as part of the Interconnect Link of 2 Mbps between its Switch and each of the Points of Interconnection and each Switch in the ONO's Network. The associated

⁵ Details of the access processes will be negotiated by the parties as part of the Interconnection Agreement

⁶ Should this Directory Assistance Service, provided to End Users, be provided from one Licensee to another under the NSP RIO?

mode, with a SS7 link set that has at least two signalling links for each Point of Interconnection shall be used where possible.

4.9.2.2 ITU-T Q701 recommends that two signalling links should be provided between any platform in the ONO's network and each NSP Switch. Currently Where the initial Capacity is for only 1 x 2 Mbps here shall be only one (1) 64Kbps signalling links.

4.9.2.3 ITU –T recommends that the signalling link should carry 0.2 Erlangs of SS7 signalling traffic in the normal mode and 0.4 Erlangs in the case of one signalling link.

4.9.3 Interface Standards and Technical Requirements

4.9.3.1 The Interface Standards and Technical requirements of the NSP Network shall be included as an annex to the Interconnect Agreement.

4.9.4 Numbering

4.9.4.1 Each party shall use Number Ranges allocated to them in accordance with the National Numbering Plan as administered by TRR.

4.9.4.2 Each party shall, for all Calls and SMS messages that are handed over by one party to the other party under the Interconnect Agreement, provide to the other party the Numbering Information with respect to that traffic. There shall be no charge for the making available and provision of Numbering Information.

4.9.4.3 Neither party (the first party) shall attempt to manipulate the Numbering Information provided to the other party with the objective that a Call definition or charge that:

4.9.4.3.1 would not otherwise apply but for the manipulation, does apply (based on the Call presentation information provided to the other party); and/or

4.9.4.3.2 would otherwise apply but for the manipulation, does not apply (based on the Call presentation information provided to the other party).

4.9.4.4 For the avoidance of doubt, the provisions of this Section 4.9.4 shall not apply to anything that occurs as a part of the normal service function of the first party's Network in accordance with normal practice for that network.

4.9.5 The ONO and the NSP's Number Ranges shall be detailed in the Interconnection Agreement which should be amended when changes are made to these Number Ranges.

4.9.6 Each party shall notify the other party in advance of any routine changes to its numbering plan. Each party shall implement and test any necessary changes to its routing plan caused by the other party's routine changes within forty (40) Working Days. Neither party shall charge the other for this service.

4.9.7 In the event that the TRR adopts a decision imposing a modification to the National Numbering Plan which affect a party's numbering plan or directly to a party's numbering plan, each party shall co-operate in the early implementation of the

changes and bear the costs associated with any changes to its own network required as a result of such a decision. The party subject to such modifications needs to inform the other party in writing as soon as it becomes aware of such a decision of the TRR so that the other party effects the necessary changes to its network.

4.9.8 CLIP/CLIR

4.9.8.1 The parties undertake to provide the Calling Line Identification Presentation (CLIP) in respect of all of its End Users where this is technically feasible. The provision by either party of the CLIP service is subject to the data transferred through the signalling circuits and the technical capability of either party's interconnected Switches to support the provision of the CLIP.

4.9.9 The parties undertake to ensure that except for calls to the Emergency Services, the Calling Line Identification Restriction (CLIR) marking of Calls is respected at all times and that the numbers marked with CLIR shall not be presented to the called end-user or a third party where this is required by an End User or by Act.

4.9.10 Quality of Service⁷

4.9.10.1 Each party shall:

4.9.10.1.1 use its reasonable endeavours to manage, and shall co-operate with the other in managing, its own Network in a manner or use of End User Services that minimises disruptions to the other party's Network; and

4.9.10.1.2 use its reasonable endeavours to ensure that the quality of Calls delivered to or accepted from the other party's Network is maintained.

4.9.10.2 Except where otherwise specified in the Interconnection Agreement, each party (*the first party*) shall provide Interconnection Service to the other party of a quality comparable to the same or similar network service provided by the first party to its End Users and to any other member of the Group to which it belongs.

4.9.10.3 Where a party (*the first party*) conveys any Call handed over from the network of the other party (*the second party*) where that Call is not originated by an End User of the other party either locally or internationally, the first party shall ensure that such Call is of a quality comparable to the same or similar quality provided by the first party to its End Users on its own network and to any other member of the Group to which it belongs.

4.9.10.4 Where a Call may eventually be transmitted to an international network, the parties shall use reasonable endeavours to ensure that they comply with the principles and requirements of any applicable agreements

⁷ See later section and question on Quality of Service Issues.

between the relevant party and overseas networks, as notified by each party to the other from time to time.

4.10 Interconnection Processes

4.10.1 Initial Interconnection Planning Processes

4.10.1.1 The ONO shall provide a detailed statement ("Statement") of its technical requirements for Interconnection Services in respect of the Interconnection Agreement. The NSP shall specify the technical requirements that shall be included in the Statement which shall be no more than those which are reasonably required to enable the NSP to design a technical and operational solution to provide and receive (where relevant) Interconnection Services to and from the ONO.

4.10.1.2 If the information provided by the ONO is reasonably considered by the NSP to be insufficient to design the technical and operational solution, the NSP shall notify the ONO within ten (10) Working Days of receipt of the statement of requirements. This notification shall include a list of detailed questions and requests for any additional data or information that may reasonably be required by NSP.

4.10.1.3 Once the NSP has been provided sufficient data or information to enable the NSP to design and document a technical and operational solution and testing plan for providing and receiving Interconnection Services to and/or from the ONO, NSP shall, within twenty (20) Working Days of receipt of that data or information, provide a documented technical and operational solution and testing plan to the ONO.

4.10.1.4 If the NSP and the ONO cannot reach agreement on the technical and operational solution and testing plan within twenty (20) Working Days of the NSP's provision of that technical and operational solution and testing plan to the ONO, either party may refer the disagreement to the TRR for determination.

4.10.1.5 The parties shall establish and maintain a document entitled Network Interconnection Technical Specifications, recording details of the technical requirements which the parties have agreed. The Network Interconnection Technical Specifications contain specifications agreed by the parties that are appropriate to the operation of their respective Networks and the provision of Interconnection Services by each party to the other.

4.10.1.6 The Network Interconnection Technical Specifications as at the date of the Interconnection Agreement shall be attached to the Interconnection Agreement.

4.10.2 Interconnect Provisioning Processes

4.10.2.1 Lead-times

4.10.2.1.1 As a rough guide the initial interconnection can take more than six (6) months to implement, especially where physical Mid-Span Meet is required. However, it is often possible to achieve the end to end process in less than these time scales though rarely in less than three (3) months.

4.10.2.2 Planning Processes

4.10.2.2.1 Introduction of a new Switch and related testing

4.10.2.2.1.1 This Section 4.10.2.2.1 covers necessary but not exclusive details described in the processes contained in Section 4.10.1

4.10.2.2.1.2 For the avoidance of doubt this process shall apply to both the initial Interconnection, the introduction of an additional ONO Switch or the replacement of an existing ONO Switch.

4.10.2.2.2 The ONO shall provide to the NSP with details about the proposed Switch type, software build level and of its inter-operability with other Switch types supported by manufacturer's certificate or such other information, including but not limited to evidence of successful inter-operability with similar configurations in other countries to demonstrate inter-operability;

4.10.2.2.3 The proposed location of the Switch indicating the proposed method of Interconnection.

4.10.2.3 It is essential that the ONO provides a C7 Signalling conformance statement at the earliest opportunity. This shall enable the level of interoperability testing to be agreed.

4.10.2.4 Additionally the parties shall agree an overall test plan and a ready for test date at least ten (10) Working Days before testing commences.

4.10.2.5 Planning of Mid-Span Meet

4.10.2.5.1 If the ONO requests and the NSP agrees the Interconnect Links should be provided using Mid-Span Meet the parties shall meet at the earliest possible time to agree the location of the POI and a work programme to achieve this.

4.10.2.5.2 Failure to agree a suitable POI within 20 Working Days of the initial meeting shall be referred to TRR for mediation.

4.10.2.6 Planning of Infrastructure Links

4.10.2.6.1 These shall be planned on the same basis as Retail Leased Lines.

4.10.2.7 Removal of Transport Link

4.10.2.7.1 All Transport Link Services shall be removed by the party who originally ordered the Link giving twenty (20) working Days notice that it requires the removal of the specified Link.

4.10.2.7.2 Where the Link is an Interconnection Link and the party receiving the request for the removal of the Link does not accept that the Interconnection Link should be removed the matter shall be referred to the Liaison Committee for resolution.

4.10.2.8 Capacity Planning on Transport Links

4.10.2.8.1 Capacity planning for Interconnection Links shall be based on the traffic Forecasts as detailed in Section 4.10.2.9.2.

4.10.2.8.2 For other Links the party requesting the Link should provide as much notice as is reasonably possible so the party providing the Link can provide this in a timely manner.

4.10.2.9 Interconnect Traffic Forecasts

4.10.2.9.1 Provision of traffic forecasts

4.10.2.9.1.1 The ONO shall provide the NSP with Forecasts in respect of ONO Calls and any other matter agreed between the parties which shall facilitate the alignment of traffic with capacity.

4.10.2.9.1.2 The NSP shall provide the ONO with Forecasts in respect of NSP Calls and any other matter agreed between the parties which shall facilitate the alignment of traffic with capacity.

4.10.2.9.2 Content of traffic Forecasts

4.10.2.9.3 The exact content of traffic Forecasts shall depend on the requirements of the relevant Interconnection Service and any specific requirements set out in relation to that Interconnection Service, but in general shall cover:

4.10.2.9.3.1 forecasts for each Point of Interconnection, covering the forecasting party's existing Call routes, and any changes to Call routing envisaged by that party during the forecast period, including peak calling times, busy-hour traffic volume and number of call attempts on routes; and

4.10.2.9.3.2 traffic in Erlangs and number of traffic circuits required for the total traffic volume forecast in each direction, based on the switching architecture and design Grade of Service (GOS) agreed by both parties using a GOS of 0.1% for trunk routes; and

4.10.2.9.3.3 forecasts for each Point of Interconnection, covering CCITT No. 7 signalling, including:

- 4.10.2.9.3.4 call related signalling, measured in message signalling units (MSUs) and octets per second, for each set of signalling links; and
 - 4.10.2.9.3.5 non-call related signalling, measured in message signalling units (MSUs) and octets per second, for each set of signalling links; and
 - 4.10.2.9.3.6 the number of sets of signalling links required, including the number of signalling circuits in each set of signalling links requested by the forecasting party.
- 4.10.2.10 The Forecasts may include, without limitation, forecasts of:
- 4.10.2.10.1 increases in the number of Interconnect Links;
 - 4.10.2.10.2 the decommissioning of Interconnect Links;
 - 4.10.2.10.3 the redistribution of call traffic over different routes.
- 4.10.2.11 Forecast period
- 4.10.2.11.1 Forecasts shall be supplied six (6) monthly during the term of the Interconnection Agreement, or as reasonably requested by either party, and shall cover:
 - 4.10.2.11.1.1 the six (6) month period commencing on, in the case of the first six (6) monthly forecasts, the Commencement Date or, for any subsequent six (6) monthly forecasts, the date six (6) months after the date of the last forecast or, for any other forecasts reasonably requested by either party, the date of the forecasts; and
 - 4.10.2.11.1.2 each of the succeeding twelve months.
 - 4.10.2.11.2 Each six (6) monthly Forecast shall specifically give the forecast for the December covered by the forecast, or the forecast for the month in the forecast period with the highest volume, if that month is not December (or if the forecast period does not include a December).
- 4.10.2.12 Response to Forecasts
- 4.10.2.12.1 A party that receives a Forecast is, within ten (10) Working Days of receipt of the Forecast, to indicate to the other party any variations to the Forecast which it reasonably considers to be appropriate, based on its own traffic studies and experience. Any differences in forecasts shall be discussed and the parties shall use all reasonable efforts to resolve any differences through the Liaison Committee.
- 4.10.2.13 Forecast updates
- 4.10.2.13.1 Each party shall promptly notify the other party of any material changes to Forecasts supplied that occur at any time during a forecast period.

4.10.2.13.2 In particular should either party become aware of any event or circumstance which is likely to cause interconnect traffic on any designated route to rise:

4.10.2.13.2.1 on a short-term or long-term basis; or

4.10.2.13.2.2 during periods outside the designated busy hour;

4.10.2.13.2.3 beyond the level previously forecast for busy-hour traffic in the most recent forecast to the other party, then that party is promptly to notify the other party of the circumstances and likely extent of the increase.

4.10.2.14 Reactive Capacity Planning

4.10.2.14.1 Where a route is used for the conveyance of traffic between the parties and either party detects the agreed grade of service is not being met because of non-transient causes or identifies a trend that shall lead to such grade of service not being met in the current or next forecasting period, the ONO shall order Interconnection Link augmentation such that the problem or potential problem is alleviated.

4.10.2.15 Link Direction

4.10.2.15.1 Except where the parties otherwise agree, all Interconnect Links shall be bi-directional links.

4.10.3 Transport Links

4.10.3.1 Point of Interconnection (POI)

4.10.3.1.1 Interconnection between switches

4.10.3.1.1.1 For Mid-Span Meet using fibre cable the POI shall be a notional point in the optical cable located at point on the public highway or on private premises agreed by the parties.

4.10.3.1.1.2 Where Mid-Span Meet using radio is used the POI is a theoretic point on the radio path midway between the two dishes at each end of the radio link.

4.10.3.1.1.3 Where Collocation is used it shall be at a digital distribution frame provided by the ONO as part of their collocated installation. If agreed by the parties it may be at an optical distribution frame provided by the ONO as part of their collocated equipment. The final connection to the NSP switch shall be done by the NSP.

4.10.3.1.2 Crossconnection to International Submarine Cables

4.10.3.1.2.1 Where Collocation is to be used for the POI and it shall be at an an optical distribution frame provided by the ONO as part of their collocated installation. The final connection from the POI to the International Submarine Cable shall be undertaken by the NSP or its authorised agents.

4.10.3.2 Collocation Processes

4.10.3.2.1 For the purposes of the Interconnection Agreement the party providing the Collocation Service (the Collocation Provider) may have regard to the following when assessing the availability of Collocation space at a Collocation Site:

4.10.3.2.1.1 the reasonably anticipated requirements in the next five (5) years for space at the Collocation Site for the provision to itself and other users, including any turn round space required as part of its network modernisation plans;

4.10.3.2.1.2 the reasonably anticipated requirements in the next two (2) years for space at the Collocation Site for operational and maintenance purposes;

4.10.3.2.1.3 Other Collocation Users requirements (including those for operation and maintenance purposes) which have been ordered but not yet delivered or which have been provided;

4.10.3.2.1.4 security and confidentiality requirements imposed by Governmental Agencies;

4.10.3.2.1.5 where the Collocation Provider has plans to, or otherwise proposes to, decommission the Collocation Site.

4.10.3.2.2 The Collocation User shall request the space required at each Collocation Site. The maximum available floor space will be determined on a site-by-site basis dependent upon the type of equipment to be installed and the results of a physical survey at that site.

4.10.3.2.3 The Collocation Site will provide space for the installation of standard equipment racks. All installed equipment shall comply with current standards and regulations.

4.10.3.2.4 The Collocation User has no rights to assign in whole or in part the license in respect of the Collocation space or to sub-let the Collocation space at the Collocation Site.

4.10.3.2.5 It should be noted that the availability of the Collocation Service at any site is not guaranteed and will be subject to a physical survey.

4.10.3.3 Request for Service Processes

- 4.10.3.4 This Section 4.10.3.3 applies to all requests for the Collocation Service. For the avoidance of doubt this also includes requests for additional Collocation Services as well as replacement, modification and rearrangement of existing collocated equipment.
- 4.10.3.5 The party requesting collocation (the Collocation User) shall notify the other party of its request for the use of the Collocation Service by means of the request form set out in Annex A at Section 5 to the the Interconnection Agreement if it wishes to use the Collocation Service.
- 4.10.3.6 The Collocation Provider shall acknowledge, in writing to the Collocation User's nominated representative.
- 4.10.3.7 Following receipt of a request under Section 4.10.3.3 the Collocation Provider shall assess that request and notify the Collocation User within ten (10) Working Days of acknowledgement that either:
- 4.10.3.7.1 the request has been provisionally accepted, on a non-binding basis subject to the satisfactory completion of a Collocation Site survey which shall be completed within a further thirty (30) Working Days;
 - 4.10.3.7.2 where building work is required, carry out a detailed survey and produce a work schedule and bill of quantities with costs;
 - 4.10.3.7.3 agree planned work schedule and costs with the Collocation User;
 - 4.10.3.7.4 accept the order for Collocation Service;
 - 4.10.3.7.5 confirm acceptance of any out-turn costs by the Collocation User;
 - 4.10.3.7.6 confirm acceptance of the collocation facility by the Collocation User.
- 4.10.3.8 If the request has been rejected the Collocation Provider shall provide the reasons for such rejection to the party requesting the Collocation Service. The Collocation Provider may reject a Collocation request if any of the following applies:
- 4.10.3.8.1 the data contained in the request form for the Collocation Service is incomplete; or
 - 4.10.3.8.2 there is no available space at the Collocation Site as determined in accordance with Section 4.10.3.1.2 of the Interconnection Agreement and the work required to create such space can be demonstrated to be practically and/or economically unviable or;
 - 4.10.3.8.3 acceptance of the Collocation for Interconnection Equipment Service request will give rise to significant health, safety, technical or engineering issues.
- 4.10.3.9 The Collocation Provider shall recover its reasonable cost of processing the request for the Collocation Service irrespective of the outcome of the Collocation request.

4.10.3.10 Collocation space once available for occupation shall be utilised within six (6) months of handover. In cases where Collocation space which has been provided but is unused the Collocation User the Collocation Provider reserves the right to reclaim the unused collocation space and allocate this space for other uses.

4.10.3.11 Implementation

4.10.3.11.1 Once the order for the Collocation Services has been accepted by both parties, they shall agree a plan for the implementation of the accommodation. This plan shall be completed in a timely manner having due regard to any building work that needs to be completed before the Collocation Site can be occupied.

4.11 Operations Processes

4.11.1 Network Traffic Management

4.11.1.1 In the event of unexpected traffic affecting the Interconnection of the parties Network, the parties shall cooperate in the management of demand in their respective Networks to limit this impact on the Interconnection Links and each others networks. This activity may be pre-planned by the parties if there is an expectation that temporary traffic events are planned or likely to occur.

4.11.2 Traffic and Quality of Service Measurement⁸

4.11.3 Interconnection Maintenance Processes

4.11.3.1 General Principles⁹

4.11.3.1.1 The parties as part of the negotiation of the Interconnection Agreement shall agree and document as part of the Interconnection Agreement a simple manual for the handling of faults. The Interconnection Agreement shall include but may not be limited to the following:

4.11.3.1.1.1 the 24hr/365 days per year contact numbers for reporting and managing faults;

4.11.3.1.1.2 a system for jointly recording faults, including a common numbering system and time recording methodology;

4.11.3.1.1.3 a system for joint testing to verify the faults and decide which Network the fault lies in;

⁸ Do Licensees want a more comprehensive set of standard for delivery and repair, including penalties?

⁹ Would Licensees prefer the NSP RIO to provide a detailed system for fault management?

- 4.11.3.1.1.4 a classification system for urgent and non-urgent fault;
- 4.11.3.1.1.5 target repair times for urgent and non-urgent faults;
- 4.11.3.1.1.6 a system for agreeing and recording fault clearances;
- 4.11.3.1.1.7 a system for escalation within each party's management structure for faults that are not cleared within the target time scales.

4.11.4 Planned Engineering Works

- 4.11.4.1 It is necessary for all parties to conduct engineering work to their networks to implement necessary changes, upgrades or conduct off line tests. Although many of these changes shall have little or no bearing on Interconnection Services there are occasions where such engineering work shall have an impact including periods when Calls could be lost. It is essential that a party informs all parties who may be affected by the extent of the planned engineering work.
- 4.11.4.2 If a party intends to undertake planned maintenance that may affect the other party's Network or any Interconnection Service, that party shall:
 - 4.11.4.2.1 provide at least ten (10) Working Days notice of the planned maintenance;
 - 4.11.4.2.2 use its reasonable endeavours to minimise any disruption to the conveyance of Calls which cross or are to cross both parties' Networks, and which are caused by the maintenance or re-routing;
 - 4.11.4.2.3 where practicable and agreed by the parties, provide alternative routing or carriage at no additional cost to the other party.
- 4.11.4.3 A party intending to conduct any planned engineering work on its Network shall inform the other party of the extent and nature of the work as soon as possible. The following information is required:
 - 4.11.4.3.1 the originator's name, address, telephone and facsimile numbers;
 - 4.11.4.3.2 date of notification;
 - 4.11.4.3.3 Interconnect or other equipment affected;
 - 4.11.4.3.4 Interconnect route affected;
 - 4.11.4.3.5 nature of the outage expected;
 - 4.11.4.3.6 date, time and duration of the planned work (assuring that a low traffic time is proposed);
 - 4.11.4.3.7 any other information which could add value to the advice of interruption.
- 4.11.4.4 On receipt of this notice the receiving party shall within two (2) Working Days of receipt advise if the proposal is unacceptable and propose an alternative time.
- 4.11.4.5 In proposing a time for conducting the work and a service outage full regard shall be given to the minimum disruption to traffic. This could mean that the work causing the outage shall need to be conducted out

of normal working hours and potentially in the middle of the night. Each party shall undertake planned maintenance within windows of time agreed with the other party, and where the windows of time for such planned maintenance have the least effect on End Users.

4.11.5 Emergency Planned Engineering Work

4.11.5.1 If a party needs to undertake emergency maintenance that may significantly affect the other party's Network or the provision of an Interconnection Service, that party shall, if it is reasonably able to do so:

4.11.5.1.1 provide at least one (1) day's notice of the maintenance;

4.11.5.1.2 use its reasonable endeavours to minimise any disruption to the conveyance of Calls which cross or are to cross both parties' Networks, and which are caused by the maintenance or re-routing;

4.11.5.1.3 where practicable and agreed by the parties, provide alternative routing or conveyance at no additional cost to the other party.

4.12 Site Access Procedures

4.12.1 Access to the Collocation Site areas shall be restricted to authorized personnel of the party using the Collocation Service (the Collocation User) and/or their authorized nominated contractors for whom they shall assume full responsibility. Details of the processes for the identification of Authorised Personnel shall be agreed as part of the Interconnection Agreement.

4.12.2 The Collocation Provider shall reserve the right of access to the Collocation Site at any time in order to carry out planned and reactive maintenance of the building fabric, power and ancillary service systems. Where this is a planned activity the Collocation Provider shall give the Collocation User at least five (5) Working Days notice of such activity. Where access is reactive the Collocation Provider shall advise the Collocation User by telephone as soon as possible after the need for access becomes apparent.

4.12.3 System Protection and Safety

4.12.3.1 Prevention of Harm and Injury

4.12.3.1.1 Each party shall take reasonable measures to ensure its staff, employees, contractors and agents do not cause physical harm or injury to the other party's Network or personnel.

4.12.3.2 Interference and Obstruction

4.12.3.2.1 Neither party shall do anything, or knowingly permit any third person to do anything, in relation to a Network facilities, Network services or equipment which:

4.12.3.2.1.1 causes interference; or

4.12.3.2.1.2 materially obstructs, interrupts or impedes the continuous use or operation of the Network facilities, Network services or equipment of the other party.

4.12.3.3 Notice of Interference and Rectification

4.12.3.3.1 If one party notifies the other party that the other party's Network facilities, Network services or equipment is causing interference to the notifying party's facilities, Network services or equipment:

4.12.3.3.1.1 the other party shall rectify the situation so that no interference is caused within twenty four (24) hours of receiving notice from the notifying party; or

4.12.3.3.1.2 if the other party is not able to locate the source of the interference within twenty four (24) hours the other party shall promptly notify the notifying party, and both parties shall meet within twenty four (24) hours of such notice being received and jointly examine each other's Network facilities, Network services or equipment to locate the source of the interference.

4.12.4 The parties acknowledge that in the event of a natural disaster which results in large scale destruction of one or both parties' Networks it is in both parties' interest to co operate to restore a level of service to emergency service providers and other rescue services in the destruction area.

4.12.4.1 At the request of a party (the first party), the other party shall meet with the first party and discuss and use reasonable endeavours to develop and agree on a disaster continuance plan, covering joint co operation for the restoration of a level of service to emergency service providers and other rescue services in the destruction area.

4.12.5 Services in the Event of an Emergency

4.12.5.1 In the event that:

4.12.5.1.1 One of the parties is unable to provide a substantial part of the Interconnection Service; and

4.12.5.1.2 the party with such inability in this Section 4.12.5 called the Affected Party) and such inability has been caused by an act of God or other natural disaster which has given rise to the declaration of a state of national or regional civil defence emergency, then the ONO (in the case where the Affected Party is the NSP) and the NSP (in the case where the Affected Party is the ONO), shall use reasonable endeavours to assist the Affected Party in providing temporary services to enable the Affected Party to provide services to its End Users, any such assistance to be on terms and conditions and charges to be agreed between the parties. Nothing in this Section 4.12.5 shall

oblige the ONO or the NSP (as the case may be) (the Assisting Party) to assist the Affected Party where the assistance would diminish the Assisting Party's normal level of service to its End Users or where terms and conditions and charges have not been agreed.

4.13 Commercial Aspects

4.13.1 Charging and Payments

4.13.1.1 The Interconnection Agreement shall contain a detailed procedure in relation to charging and payment for Interconnection Services provided under the Interconnection Agreement.

4.13.2 Charging Principles

4.13.2.1 The charges payable by the NSP to the ONO and by the ONO to the NSP for their respective services provided under the Interconnection Agreement shall be as set out in the Interconnection Agreement.

4.13.2.2 Except as otherwise specifically provided in the Interconnection Agreement, the NSP and the ONO shall arrange for all charging of and setting charges for its own End Users.

4.13.2.3 Where the Interconnection Agreement specifies a charge to apply to an Interconnection Service, no reduction, rebate, saving, bonus or discount of any kind, including, without limitation, any call promotion offers or plans shall apply, unless expressly provided otherwise in the Interconnection Agreement.

4.13.3 Value Added Tax (VAT)

4.13.3.1 All charges set out in the Interconnection Agreement shall be exclusive of VAT and, to the extent that charges are payable under the Interconnection Agreement by the parties, the VAT on such charges will be invoiced to and payable by the parties in accordance with the applicable VAT legislation in Vanuatu.

4.13.3.2 Each party shall provide the other party in accordance with the applicable VAT legislation in Vanuatu by no later than the last day of a calendar month, a tax invoice for:

4.13.3.2.1 regularly billed charges; and

4.13.3.2.2 any one-off charges.

4.13.3.3 Each of these tax invoices is to cover charges for the period to at least the twentieth day of the month in which the tax invoice is rendered in order that the Due Date of that tax invoice falls in the following month.

4.13.4 Payment of Charges

4.13.4.1 The quality of billing of services under the Agreement by the Invoicing Party shall be to a standard which is comparable to the quality of the billing provided by the Invoicing Party to its major customers and other Licencees in respect of comparable services. Without limiting the foregoing, all charges and costs payable by the Paying Party, when invoiced to the Paying Party, shall include reasonable information that is sufficient to enable the Paying Party to check the accuracy of the amount charged.

4.13.4.2 Each party is to co-operate with the other on billing and invoicing matters, including:

4.13.4.2.1 the information to be provided to each other with respect to an invoice;

4.13.4.2.2 the methods by which that information is provided; and

4.13.4.2.3 the need to meet from time to time to resolve billing disputes.

4.13.5 Due Date

4.13.5.1 Subject to any bona fide claims of Manifest Error, all amounts invoiced by the Invoicing Party to the Paying Party under this Agreement shall be due and payable on or before the Due Date of the relevant invoice.

4.13.6 Payment

4.13.6.1 All charges and other amounts payable by the Paying Party under the Interconnection Agreement (including any amount which the Paying Party disputes or intends to dispute pursuant to a Billing Dispute) shall be paid by the Paying Party to the Invoicing Party, at the place or to a bank account nominated from time to time by the Invoicing Party, all payments to be in Vatu and (except to the extent required by Act) free of any deductions, set off or withholding on account of any amount.

4.13.6.2 No payments may be made under the Interconnection Agreement by credit card or debit card.

4.13.6.3 Acknowledging that the interests of the parties and their respective End Users require that:

4.13.6.3.1 as far as reasonably practicable, Interconnection Services under the Interconnection Agreement be continuously available, and when in use, continuous and fault-free; and

4.13.6.3.2 subject to any bona fide claims of Manifest Error, payments for such services be made without deduction, set off or withholding on account of any amount;

4.13.6.3.3 the parties shall agree that, in the event of any dispute about the validity or enforceability of the Interconnection Agreement or of its implementation (in whole or in part), each party shall

continue to perform its obligations in accordance with the terms of the Interconnection Agreement until a court of competent jurisdiction (or the arbitrator of an arbitration or the TRR) lawfully determines that the Interconnection Agreement or its implementation (in whole or in part), is invalid or unenforceable.

4.13.7 Manifest Error in Invoice

4.13.7.1 If the Paying Party:

4.13.7.2 believes on reasonable grounds that there is a Manifest Error in an invoice provided by the Invoicing Party which has resulted in the Invoicing Party overcharging the Paying Party in that invoice; and

4.13.7.3 has on or before the Due Date, served on the Invoicing Party a notice of Manifest Error, (setting out in the notice details of the relevant invoice and the reasonable grounds in support of the Paying Party's view that the Manifest Error exists),

4.13.7.4 then the Paying Party shall be entitled to withhold payment to the Invoicing Party of the amount by which, in the reasonable opinion of the Paying Party, the Invoicing Party may have overcharged the Paying Party in the invoice as a result of the Manifest Error. The remainder of the amounts charged in the invoice will be paid by the Paying Party on or before the Due Date in the normal manner. The amount withheld may be withheld until such time as the Invoicing Party and the Paying Party have settled between them in accordance with the disputes procedure set out in Section 4.13.7, whether or not there is a Manifest Error in the invoice and, if there is, the amount of it and the amount properly payable on that invoice after correcting it.

4.13.7.5 Following the giving of any notice under Section 4.13.7, the parties shall use reasonable endeavours to settle any claim of Manifest Error. If they do not settle any claim of Manifest Error within twenty (20) Working Days after the due date for payment of the invoice, either party may give notice referring the matter directly to an independent telecommunications accounting expert (the Expert) to be finally resolved and, unless otherwise agreed in writing:

4.13.7.5.1 the parties shall endeavour to appoint a single Expert. If, within five (5) Working Days of the notice under this Section 4.13.7.5 being given, the parties are unable to agree on a single Expert, the Expert will be appointed by the TRR;

4.13.7.5.2 the Expert shall adopt a procedure which, in the Expert's opinion, is the most simple and expeditious procedure possible in the circumstances;

4.13.7.5.3 the parties will provide the Expert with any information that the Expert reasonably requires;

4.13.7.5.4 the Expert shall use reasonable endeavours to make a decision on the claim of an Manifest Error within thirty (30) Working Days of appointment; and

4.13.7.5.5 the costs of the Expert will be paid as follows:

4.13.7.5.5.1 if the Expert decides that there is no Manifest Error or, as a result of a Manifest Error the amount of the invoice is increased after correction, then the Paying Party will pay the costs of the Expert;

4.13.7.5.5.2 if the Expert decides that there is a Manifest Error and the amount of the invoice is reduced by five percent (5%) or less after correction, then the Paying Party and the Invoicing Party will equally share and pay the costs of the Expert; and

4.13.7.5.5.3 if the Expert decides that there is a Manifest Error and the amount of the invoice is reduced by more than five percent (5%) after correction, then the Invoicing Party will pay the costs of the Expert.

4.13.7.6 If it is agreed by the parties or found by the Expert that there was a Manifest Error in the invoice, then if:

4.13.7.6.1 the amount by which the Paying Party was overcharged in the invoice as a result of the Manifest Error is less than the amount withheld by the Paying Party, the Paying Party shall forthwith pay to the Invoicing Party the amount of the difference, and shall pay to the Invoicing Party interest on a daily basis at the Bill Rate (as at the Due Date of the invoice) plus one percent (1%) per annum on the amount of the difference for the period from and including the Due Date to but excluding the date of payment of the amount of the difference, such interest to be paid contemporaneously with the amount of the difference;

4.13.7.6.2 the amount by which the Paying Party was overcharged in the invoice as a result of the Manifest Error is equal to the amount withheld by the Paying Party, the Paying Party shall retain the amount withheld;

4.13.7.6.3 the amount by which the Paying Party was overcharged in the invoice as a result of the Manifest Error is greater than the amount withheld by the Paying Party, then the Invoicing Party shall forthwith refund to the Paying Party the amount of the difference and shall pay to the Paying Party interest on a daily basis at the Bill Rate (as at the date on which the overpayment was made by the Paying Party) plus one percent (1%) per annum on that refunded amount for the period from and including the date on which the overpayment was made by the Paying Party to but excluding the date of payment of the refunded amount, such interest to be paid contemporaneously with the payment of the refunded amount.

4.13.7.7 If it is agreed by the parties or found by the Expert that there was not a Manifest Error in the relevant invoice, then the Paying Party shall forthwith pay in full the amount withheld and shall pay to the Invoicing Party interest at the Bill Rate (as at the Due Date) plus one percent (1%) per annum for the period from and including the date of the invoice to

but excluding the date of payment of the amount withheld, such interest to be paid contemporaneously with the amount withheld. Nothing in this Section 18.10 shall prevent the Paying Party from claiming an amount in accordance with Section 18.11, if the Paying Party has reasonable cause to believe that the invoice contains a billing error which is not a Manifest Error.

4.13.8 Settling Other Invoicing Disputes

4.13.8.1 If the Paying Party has a claim in respect of the accuracy or correctness of an invoice issued by the Invoicing Party (other than any claim in respect of a Manifest Error which has been made under Section 4.13.7), the Paying Party shall, no later than six (6) months after the Due Date of the invoice which it disputes, serve notice on the Invoicing Party setting out details of the relevant invoice, the disputed amount and the grounds for the dispute together with supporting evidence. All disputes under this Section 4.13.8 shall be bona fide disputes for which the Paying Party has reasonable cause to believe that there has been a billing error. For the avoidance of doubt, Section 4.13.7 do not apply to any notice given under this Section 4.13.8, and Section 4.13.8 do not apply to any notice given under Section 4.13.7.

4.13.8.2 The Invoicing Party and the Paying Party will use their reasonable endeavours to settle promptly any claim of which the Invoicing Party is notified under Section 4.13.8. Failing resolution within forty (40) Working Days of the date of the service of the notice under Section 4.13.8, either party may serve notice on the other that it wishes the dispute to be arbitrated and the dispute shall be referred directly to arbitration in accordance with the Dispute Resolution Procedures, on the expiry of ten (10) Working Days from the date of service of such notice (without the need for prior negotiation). The terms of reference of such an arbitration shall be agreed between the parties but shall relate only to that claim or dispute.

4.13.8.3 If a claim under Section 4.13.8 is resolved in favour of the Paying Party, then the Invoicing Party will forthwith refund to the Paying Party:

4.13.8.4 the disputed amount, or so much of it as the resolution of the dispute dictates should be refunded; and

4.13.8.5 interest on a daily basis at the Bill Rate (as at the date on which the overpayment was made by the Paying Party) plus one percent (1%) per annum on the refunded amount referred to in Section 4.13.8.1 for the period from and including the date on which the overpayment was made by the Paying Party to but excluding the date of payment of the refunded amount, such interest to be paid contemporaneously with the payment of the refunded amount.

4.13.9 Charges Omitted from Invoices

4.13.10 Nothing in the Interconnection Agreement or in the terms of any invoice or statement shall prejudice the Invoicing Party's right to charge the Paying Party for any services or other amount due under the Interconnection Agreement, the charges or costs for which should have been included within earlier invoices or statements but which were omitted inadvertently or otherwise. This right shall be limited to a period of six (6) months from the date of the provision of the relevant service or the date any other amount was due to be paid, after which no charge or cost may be made for that service or other amount. This Section 4.13.9 shall survive termination of the Agreement.

4.13.11 Late Payment

4.13.11.1 Where:

4.13.11.1.1 an amount due from the Paying Party to the Invoicing Party under the Agreement remains unpaid after the Due Date of the relevant invoice and that amount is not one to which Sections 4.13.7, 4.13.8 or 4.13.9 applies; or

4.13.11.1.2 an amount due from the Paying Party to the Invoicing Party under Sections 4.13.7, 4.13.8 or 4.13.9 remains unpaid on the sixth (6th) Working Day after the date of resolution of the dispute;

4.13.11.1.3 then the Paying Party shall be liable to pay to the Invoicing Party interest on a daily basis on that amount at the Bill Rate (as at the Due Date or the date six (6) Working Days after the date of resolution of the dispute, as the case may be) plus five percent (5%) per annum, such interest to be charged:

4.13.11.1.4 in the case of interest payable in respect of amounts unpaid to which Section 4.13.11.1.1 applies, from and including the Due Date of the relevant invoice to but excluding the date of payment of the amount due, such interest to be paid contemporaneously with the payment of the amount due;

4.13.11.1.5 in the case of interest payable in respect of amounts unpaid to which Section 4.13.8.1 applies, from and including the sixth Working Day after the date of resolution of a dispute, from and including the sixth (6th) Working Day after the date of resolution of the dispute to but excluding the date of payment of the amount due, such interest to be paid contemporaneously with the payment of the amount due.

4.13.12 Where an amount due from the Invoicing Party to the Paying Party under Sections 4.13.7 or 4.13.8 remains unpaid on the sixth (6th) Working Day after the date of resolution of the dispute, then the Invoicing Party shall be liable to pay to the Paying Party interest on that amount at the Bill Rate (as at the date six (6) Working Days after the date of resolution of the dispute) plus five percent

(5%) per annum, such interest to be charged on a daily basis from and including the date 6 Working Days after the date of the resolution of the dispute until, but excluding the date the amount due is paid, such interest to be paid contemporaneously with the payment of the amount due.

4.13.12.1 The Paying Party shall continue to be liable to pay for any charges incurred between the time of termination of any service of the Invoicing Party and the actual discontinuance of the service of the Invoicing Party.

4.13.12.2 The interest payable under this Section 4.13.4 constitutes liquidated damages and the interest rate formulae set out in this Section 4.13.4 represent a genuine estimate of the approximate loss a party may suffer as the result of non-payment after taking into account the complexity of each party's business.

4.13.13 Charges and Payments

4.13.13.1 Traffic Conveyance

4.13.13.2 The charges for the Interconnection Service to be provided under this Interconnection Agreement, and which each party agrees to pay, are as follows:

Type of Interconnection Service		Chargeable rate
(a)	Fixed Call Termination	3.3 VT per minute
(b)	Mobile Call Termination	From 26 October 2013 to the 25 February 2014 6.5 VT per minute
(c)	All Chargeable SMS Messages	3 Vatu per SMS Message
(d)	Free to Caller From Fixed End Users From Mobile End Users	Payment to originating party 3.3 VT per minute From 26 October 2013 to the 25 February 2014 6.5 VT per minute

Notes:

1. All charges are in Vanuatu currency.
2. The Chargeable Fixed Call and Chargeable Mobile Call rates are amounts in Vatu per minute. The seconds for each Chargeable Call are added together for the billing period and rounded up to the

4.13.13.3 Transport Link Costs and Charges

4.13.13.3.1 Interconnect Links

4.13.13.3.1.1 Each party will bear its own costs for their part of the provision and maintenance.

4.13.13.3.2 Infrastructure Links

4.13.13.3.2.1 These shall be changed at the current NSP Retail Price less a discount of 15%

4.13.13.3.3 Leased Lines

4.13.13.3.3.1 These shall be changed at the current NSP Retail Price

4.13.13.4 Collocation¹⁰

¹⁰ Proposals for how these should be calculated is shown elsewhere in this Consultation but should be included in the final agreement.

Annexes

5 ANNEX A: PROCESSES AND FACILITIES FOR COLOCATION

5.1 Order Form

Request for the Collocation Service			
Requesting Collocation User Details			
Collocation User Ref:		Request Date:	
Location details of proposed Collocation Site:			
Collocation User Proposed Ready for Service Date:			
Forecast duration of Collocation Service (if known):			
Estimated footprint of all equipment to be installed (m ²):			
Contact Details of Collocation User Representative Making the Collocation Request:			
Name:			
Job Title:			
Telephone Number:			
Facsimile Number:			
E Mail:			

Request for Collocation Service	
Collocation User's Physical and Technical Requirements	
Type, quantity, dimensions and power requirements of equipment racks / cabinets to be installed in the Collocation Site are detailed in the table below.	
Maximum total AC power load which would be required by the Collocation User's installed equipment to the Collocation Provider's AC power supply (kW).	
Maximum permissible room temperature in ° C .	
Minimum permissible room temperature in ° C .	
Relative humidity maximum (%RH).	
Relative humidity minimum (%RH).	
Maximum permissible rate of temperature change as 'degrees C per minute'	

[illegible]

Collocation Service – Collocation User’s Equipment Forecast Power Gradient						
Percentage of Stated Maximum Power Graduated from Brought Into Service (BIS) Date of:						
BIS + 6 Months	BIS + 12 Months	BIS +18 Months	BIS + 24 Months	BIS + 30 Months	BIS + 36 Months	BIS + 60 Months
%	%	%	%	%	%	%

Collocation Service – Summary of any Additional Requirements
<div></div>

Collocation Provider’s Authorisation and Response to Building Survey	
Name of Collocation User Requesting Survey:	
Location Details of Collocation Provider’s Building:	

TRR Public Consultation Draft on Nominated Service Provider RIO, 7 June 2013

Date and time Initial Survey Request was received:	Date:	Time:
Date response to Initial Survey required:	Date:	
Contact Details of Collocation Provider's work co-ordinator:	Name: Tel: Fax: E-mail:	
For Collocation Provider's Internal Use Only:		
Response Compiled By:	Name: Tel: E-mail: Date Compiled:	
Summary of Planning Hours Required to Complete the Initial Survey:	Normal Hours: Overtime Hours:	
Summary of Initial Survey Results		
Building Identity:		

Can a Collocation Service be provided that meets the requirements of the requesting Collocation User?	YES / NO
If so, what is the degree of difficulty rating at this site:	High Medium Low
Estimated floor area available (m ²):	
Estimated work requirement:	
Any anticipated problems:	
If not, what is the main reason that a Collocation Service cannot be provided at this site:	

Collocation Facility Offer
Name of Requesting Collocation User:

To: (PO Box and location of requesting Collocation User)			
Location of Building where Collocation Service has been requested: (Floor Plan to be Attached)			
Details of Collocation Service to which this offer refers:			
Available floor space offered (m ²):		Location of Floor space:	Room ID: Floor
Method of providing Collocation Service:			
Method of access for Collocation User Personnel agreed:			
Additional Relevant Information:			

Method of Equipment Entry:			
Restrictions:		Facilities for Vehicle Unloading:	
Details of Access Requirements:			

Collocation Service Offer	
Details of work required to comply with floor loading and load spreading:	
Estimated time duration from acceptance of order for Collocation Service requiring building works to commencement of installation (Working Days):	
Details of requirement for optional ancillary services:	
Potential risks and constraints that could inhibit the provision of Collocation Service:	

Activity Time Summary:			
Activity	Duration (Business Days)	Start Date	Completion Date
Works Planning and Programming			
Pre-building works			
Construction of Collocation Site			
Electric power and fittings			
Ventilation, cooling and heating			
Ancillary services Provision – Standard:			
Optional:			
Building access and security			

Collocation Service Offer

Acceptance of this offer will only be recognised by the submission of a completed Acceptance Form which must be returned to the Collocation Provider at the Post Office Box and location shown.

To:

.....Company

PO Box.....

From:

Requesting Collocation User's details

On behalf of the requesting Company listed above I
formally accept the offer for Collocation Service.

Name:

Position in Company:

Acceptance Dated:

Signed:.....

On Behalf of (requesting party company
name)

This acceptance form should be returned by post to
the location shown above.

6 ANNEX B: NETWORK DOCUMENTATION

Note this depend on answers to supplementary questions

7 ANNEX C: SERVICE LEVEL OFFER

Note this depend on answers to supplementary questions

Section B: Detailed Issues to be Negotiated in Detail

8 GENERAL CONTRACT PROVISIONS

8.1 General

8.1.1 There are a number of legal contractual issues that should be considered by each Licensee and shall be included within the Interconnection Agreement. These should be adapted from international 'best practice' in line with Vanuatu Act.

8.1.2 In general such sections covered by these provisions should be reciprocal and agreed by the parties as part of the negotiations of the Interconnection Agreement.

8.2 Specific Sections

8.2.1 Dispute Resolution Process

8.2.2 The Interconnection Agreement shall include a simple procedure to determine any Disputes. This shall include:

8.2.2.1 an escalation mechanisms so that any Disputes shall in the first instance be referred to the parties' respective Chief Executive Officers for them to attempt a commercial resolution;

8.2.2.2 a voluntary mediation mechanism whereby an independent third party mediator may be appointed by the parties to facilitate a resolution of the Dispute; and

8.2.2.3 a binding arbitration mechanism, whereby an independent arbitrator shall be appointed and determine the Dispute.

8.2.3 For the avoidance of doubt, nothing in the Agreement may limit either party to exercise its lawful right to seek the intervention of the TRR in relation to disputes arising from the negotiation of new interconnection terms.

8.2.4 For the avoidance of doubt this shall exclude billing disputes which are covered in the Commercial Section above.

8.2.5 Provision of Information

8.2.5.1 Provision of Information as defined in the mandatory provisions above should include a section in the Interconnection Agreement, stating that certain network information shall be supplied to interconnected Licensees in order to enable them to plan their Networks

and Interconnection Services. However, the section should also state that this information is not to be divulged to third parties.

8.2.6 Statement of Service Level¹¹

8.2.6.1 Statement of Service Level shall be include within the Interconnection Agreement. This shall include, at least, measures for times to provide new services, availability and repair times. The Interconnect Agreement shall contain the details of financial penalties that shall be paid to to the other party if one party fails to meet the commitments defined in the Service Level Offer.

8.2.7 Duration

8.2.7.1 The Interconnect Agreement shall not have a defined fixed duration. The agreement should be an ongoing one with periodic mutually agreed upon reviews and opportunities for renegotiation.

8.2.8 Review

8.2.8.1 There shall be a process for re-negotiation of defined issues e.g., changes in the Act or regulation. This process shall have defined timescales, e.g., minimum times for negotiation, review notices, etc. There shall also be an option to use arbitration to resolve dispute.

8.2.9 Confidentiality & Disclosure

8.2.9.1 Licensees should require other Licensees to sign a confidentiality agreement to protect its information from being divulged to any other party (except for the TRR), subsidiary or partner. In particular there shall be a need for data protection in respect of User details. However, this shall have to enable provision of information to the TRR if required.

8.2.9.2 Information provided in the course of operation of the Interconnection Agreement should only be used by the receiving party on a need to know basis and only used for the purposes that it was intended to be used for. E.g. the provision of additional capacity or new Handover Points.

8.2.10 Prevention of Fraud

8.2.10.1 The Interconnect Agreement shall contain sections requiring the parties to co-operate in the detection and control of fraud.

¹¹ This will depend on the repose to the question above about Service Level Agreements.

8.2.11 Intellectual Property Rights

8.2.11.1 Licensees should ensure through the Interconnection Agreement that they safeguard their Intellectual Property Rights (IPR). This shall include controlled use of its trademarks. However, there is still a need to ensure 'open' interfaces between interconnected Licensees.

8.2.12 Liability

8.2.12.1 Licensees need to define in the Interconnection Agreement events of liability and limits of liability (direct loss), together with any threshold below which claims shall not be made.

Section C: Optional Provisions

9 OPTIONAL PROVISIONS

9.1 Interconnection Services

9.1.1 Traffic Conveyance Services

9.1.1.1 Traffic Transit

9.1.1.1.1 This would include the transit of Calls from Licensee A to Licensee B by Licensee C. This could be considered an Interconnection Service but in many countries this is considered a competitive service. However, for Inbound International Calls some distant operators do not segregate traffic to small countries such as Vanuatu. There may also be commercial advantage for larger Licensees to offer an outgoing International Call Service so that with an aggregated volume they may be able to negotiate better rates for the conveyance of the delivery of the Call.

9.1.2 Bitstream Services

9.2 Interconnection Processes

9.2.1 Bitstream Processes

9.3 Commercial Aspects

9.3.1 Charges and Payments

9.3.1.1 Transit Services

9.3.1.1.1 Charges will be negotiated by the parties

9.3.1.1.2 Bitstream Service Charge

Section D: Additional Contractual Provisions Provisions

8.2.13.1 There are a number of other contractual issues (additional provisions) that shall be considered when negotiating an Interconnection Agreement:

8.2.13.1.1 Force Majeure

8.2.13.1.2 Indemnities

8.2.13.1.3 Assignment of Rights and Obligations

8.2.13.1.4 Contract variation

8.2.13.1.5 Breach of contract

8.2.13.1.6 Suspension and Termination

8.2.13.1.6.1 Suspension of the contract in whole or in part shall include a section requiring immediate notification to TRR

8.2.13.1.7 Governing Act.

10 SCHEDULE B: CALCULATION OF COLLOCATION CHARGES

10.1 General

The methodology used is typical of those established in other countries and as such can be said to be based on a benchmark of other systems.

10.2 Make ready costs

This would cover the cost of making the part of the Collocation Site ready for occupation. It would include the cost of any building work, including an extension to the existing building if the parties agreed that this was a viable option. It would also include any changes to trunking to provide power and cable access.

As each occasion would be bespoke the change on each occasion would need to be determined on the basis of actual cost of the work. It is suggested that a full quote should be produced before the Collocation user orders the implementation with as much detail as possible to justify the change.

10.3 Annual running costs

This would cover power consumption for the equipment located on site and a share based on occupation of air conditioning costs, building maintenance and any detailed annual running expenses for cleaning. Again such charges would need to be on a transparent basis for the Collocation User. It would be changed annually in arrears using end of year costs.

10.4 Space Rental Costs

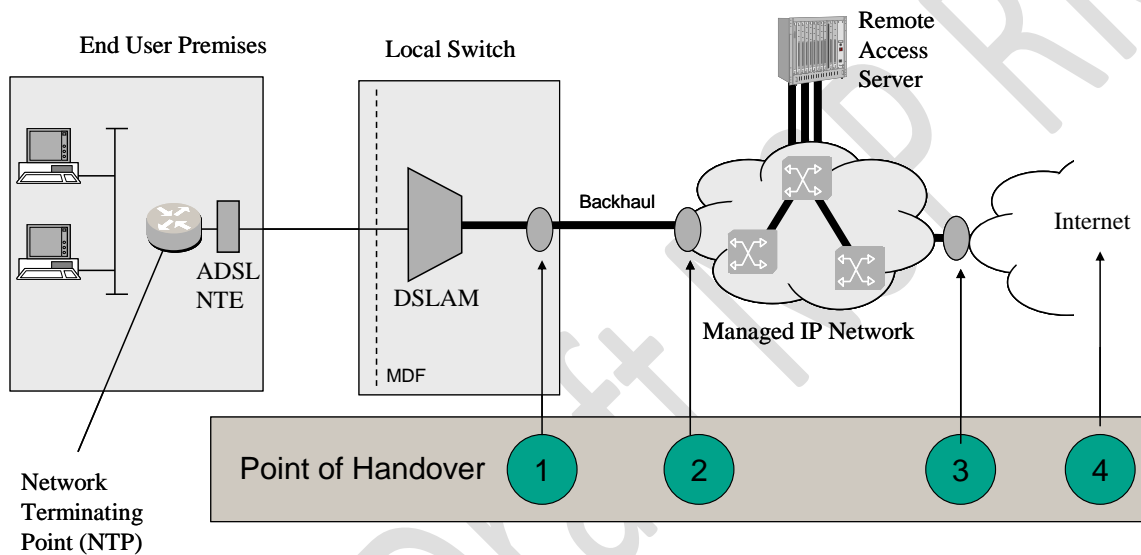
This would cover the cost of occupation of the space, including any circulation space for the equipment. It would be a standard charge per square metre or square foot if this is preferred for all occupiers. It would be based on the current average commercial rental cost for commercial premises in Port Vila. This might be charged on a quarterly basis.

11 SCHEDULE C: CONSIDERATION OF BITSTREAM SERVICE

To provide a Bitstream service, TVL would need to install a high-speed access link to the customer premises (by installing ADSL DSLAMMSAN equipment), and make this link available to Licensees to enable them to provide broadband services to customers. Associated with this, TVL would also supply wholesale transmission services to carry the traffic to Licensees points of presence.

The End User Link could also include WiMax links as well as ADSL copper services.

The service is illustrated below:



There are four broad options for the implementation of such a service:

Option 1: In this scenario, Licensee provides transmission infrastructure as far as the local switch, connecting directly to the TVL DSLAM/MSAN. The other Licensee therefore has control over all technical parameters of the core transmission.

Option 2: The Licensee purchases a backhaul link from TVL along with the access link. This typically takes the form of a point-to-point ATM connection with data rates of 2Mbit/s upwards. The Licensee is then responsible for aggregating the traffic and managing contention.

Option 3: The Licensee purchases a managed IP service, where TVL aggregates the traffic and manages contention. In this option, there is little opportunity to adapt technical characteristics of the service – which will be determined by the nature of the wholesale service offered by TVL.

Option 4: The Licensee purchases the entire service from TVL, and is responsible only for platforms interfacing at the world-wide-web level. This scenario is little different from a simple resale offering.

If some form of Bitstream access was provided it should obviate the need for full metallic-path LLU.

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