

ORDER OF THE COMMUNICATIONS REGULATORY AUTHORITY: APPROVAL OF VODAFONE QATAR REFERENCE INTERCONNECTION OFFER

21 May 2015

CRA 2015/05/21D
21 May 2015

This Order is issued to Vodafone Qatar (Vodafone) holder of public fixed and mobile telecommunications networks and services Individual License pursuant to Section 25 of the Telecommunications Law Decree No.34 of 2006 (Telecommunications Law).

Background

In accordance with Section 25 of the of the Telecommunications Law Decree No.34 of 2006 (Telecommunications Law), Vodafone is required by the Communications Regulatory Authority (CRA) to develop a Reference Interconnection Offer (RIO) as part of its obligation as a Dominant Service Provider (DSP) in the markets for termination on public telecommunications networks at a fixed location - Markets 9 and termination on public mobile networks – Market 14.

The key procedures adopted by the CRA in regard to the development of the (RIO) are detailed below:

1. In June 2014, the CRA requested Vodafone to submit a draft RIO for CRA's review and approval pursuant to its Decision and Instructions dated 13 December 2012 (ICTRA 2012/12/13).
2. Vodafone submitted a draft RIO to CRA review in October 2014;
3. The CRA reviewed the draft RIO submitted by Vodafone and provided comments via an amended RIO which was issued for industry consultation on 27 November 2014. The CRA further clarified that Vodafone provided its draft RIO based on Ooredoo's draft of the same given that the obligation to provide terminations services is common to both operators. Ooredoo, however declined to comment on Vodafone's draft RIO.
4. In January 2015, the CRA made further amendments to Vodafone's draft RIO taking into consideration the feedback form the industry consultation of 27 November 2014;
5. On 25 February 2015, Vodafone provided written comments on the amended draft RIO;
6. On 11 March 2015, the CRA issued an Order (CRA 2015/03/11A) to Vodafone:
 - a. to amend the RIO as directed by CRA;
 - b. to incorporate in the RIO, relevant technical information related to its network description;
 - c. to deliver a detailed implementation plan including the key steps and timelines towards establishing a direct network connection to the NEC;

7. On 19 May 2015, Vodafone delivered its amended RIO, including relevant information related to its network description. However, Vodafone did not submit the required detailed implementation plan to establish a direct network connection to the NEC;
8. CRA has now carefully evaluated the amended RIO submitted by Vodafone.

LEGAL BASIS FOR THIS ORDER

The following legal provisions, which are not exhaustive, provide a basis for these Orders:

Article 6 of the Executive By-Law for Telecommunications Law 2009 (Executive By-Law) empowers the CRA to issue legal instruments including Orders for the implementation of the provisions of the Decree Law and Telecommunications Law 34 of 2006. Article 5 of the Telecommunications Law confers the same power, specifically in relation to regulating the telecommunications sector.

Article 25 of the Telecommunications Law provides that the CRA shall determine the rights and obligations of a Dominant Service Provider which include any requirements relating to the contents and publication of an interconnection reference offer and access agreements.

Article 46 of the Executive By Law empowers CRA to issue regulation, orders or notices to specify interconnection and access terms, conditions and processes, including the types of interconnection and facilities access that shall be provided by one or more Service Providers.

Article 49(2) of the Executive By Law provides that interconnection and access arrangements by Dominant Service Providers shall be in accordance with any applicable reference offer approved by the CRA for the Service Provider

Article 51(2) of the Executive By Law states that every Dominant Service Provider must prepare a reference interconnection offer for approval within the time prescribed by the CRA and must comply with any applicable instructions regarding the form and content of a reference interconnection offer as prescribed by the CRA

ORDER

The CRA has completed the review of the amended RIO submitted by Vodafone. The majority of the proposed modifications are in conformity with the requirements outlined by the CRA in the Order dated 11 March 2015,

CRA has further amended the RIO of Vodafone to make it consistent with Ooredoo RIO.

Attached to this Order, CRA provides Vodafone with a markup version of the RIO, tracking all the amendments done (CRA 2015/05/21E).

The amendments are not relevant, except from the following changes:

1. Clause 5, part 2, of the Main Body on Number Translation Service.

On Number Translation Service the clause has been modified consistently with the correspondent clause included in Ooredoo RIO.

The change has been made since the National Numbering Plan states that "All Service Providers must route calls made using these numbers to the network that is providing the end-user service for that particular number".

According to that provision, a Toll Free Number used by an end user is supposed to be registered on the network of the Service Provider offering the Toll Free Number Service. Actually, this is not the solution implemented by Vodafone to offer the Toll Free Number to its customers.

The end user served by Vodafone with the Toll Free Number is registered on Ooredoo network, with a geographic number. Vodafone network receives the call to the Toll Free Number sold to the end user and reroute the calls to Ooredoo geographic number attributed to the end user using the Number Translation Service.

This solution is not consistent with the provisions on Toll Free Number included in the National Numbering Plan.

Accordingly, CRA is of the view that a Service Provider shall register the Toll Free Numbers of its customer on its own Network. The revised clause on NTS included in the RIO of both Ooredoo and Vodafone reaches that scope.

To protect the end users which have bought Toll Free Numbers from Vodafone, CRA is giving 6 months period to Vodafone to implement a technical solution compliant with the above. After the expiration of that period, Ooredoo would be allowed to stop the termination of the calls to Vodafone Toll Free Numbers' end users.

2. Emergency Service

As stated in the Order dated 11 March 2015, Vodafone is mandated under its Public Fixed and Mobile Telecommunications Networks and Services Licenses to provide access to emergency calls to its customers. In this regard, emergency calls are classified as a mandatory telecommunications service pursuant to its licenses. At present, Vodafone provides Emergency Calls to its customers through the Ooredoo network, by purchasing termination services for Emergency Calls from Ooredoo. Vodafone does not have in place a direct network connection to the National Emergency Center (NEC).

From a social point of view, access to emergency calls is regarded as a critical service. Accordingly, with the aforementioned Order, Vodafone was required to deliver a detailed implementation plan including the key steps and timelines towards establishing a direct network connection to the NEC.

The changes made by CRA to the clauses on Emergency Service now reflects the above.

CRA notes that Vodafone has failed to provide the required detailed implementation plan including the key steps and timelines towards establishing a direct network connection to the NEC by the deadline defined by CRA.

In the view of the above, CRA directs Vodafone to

- i. Within seven (14) calendar days from the date of this Order, to make available the attached approved RIO via a dedicated section on Vodafone's official website. Information highlighted in red have been deemed confidential and shall be published on the website.
- ii. By 30 September 2015, to deliver a detailed implementation plan including the key steps and timelines towards establishing a direct network connection to the NEC.

Any clarification required on this Order must be made in writing. Please note any query or clarification from Vodafone shall not affect Vodafone's obligation to comply with this Order.

Signed by:



Graeme Gordon
Principal CRA Administrator
Communications Regulatory Authority

Reference Offer for Interconnection (RIO)

of

Vodafone Qatar

Approved by CRA on 21 May 2015 (CRA 2015/05/21E)

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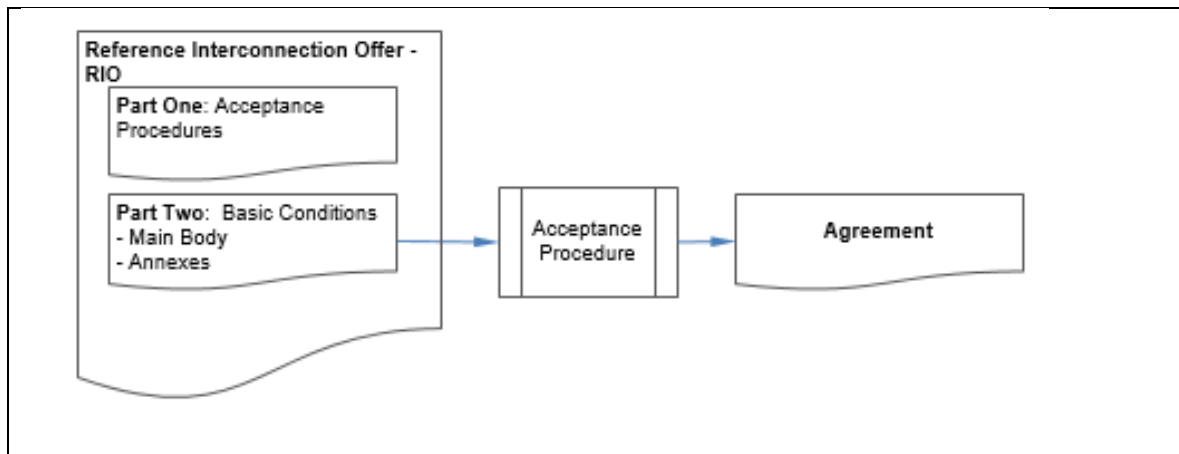
Reference Interconnection Offer

Pursuant to Article (18) and (25)2 of the Telecommunications Law, Article (51) of the Executive By-Law and the License for the Provision of Public Fixed Telecommunications Networks and Services issued to Vodafone Q.S.C. (**Vodafone**) (dated 7 October 2007), Annexure F, Article (4), Vodafone is publishing the present Reference Offer (**RIO**).

This RIO consists of two parts.

- Part One sets out the procedures to accept the basic conditions contained in Part Two, which are necessary for an Agreement.
- Part Two, including the basic conditions and the Annexes, establishes the minimum terms and conditions on which Vodafone will enter into an Agreement with a Licensed Service Provider.

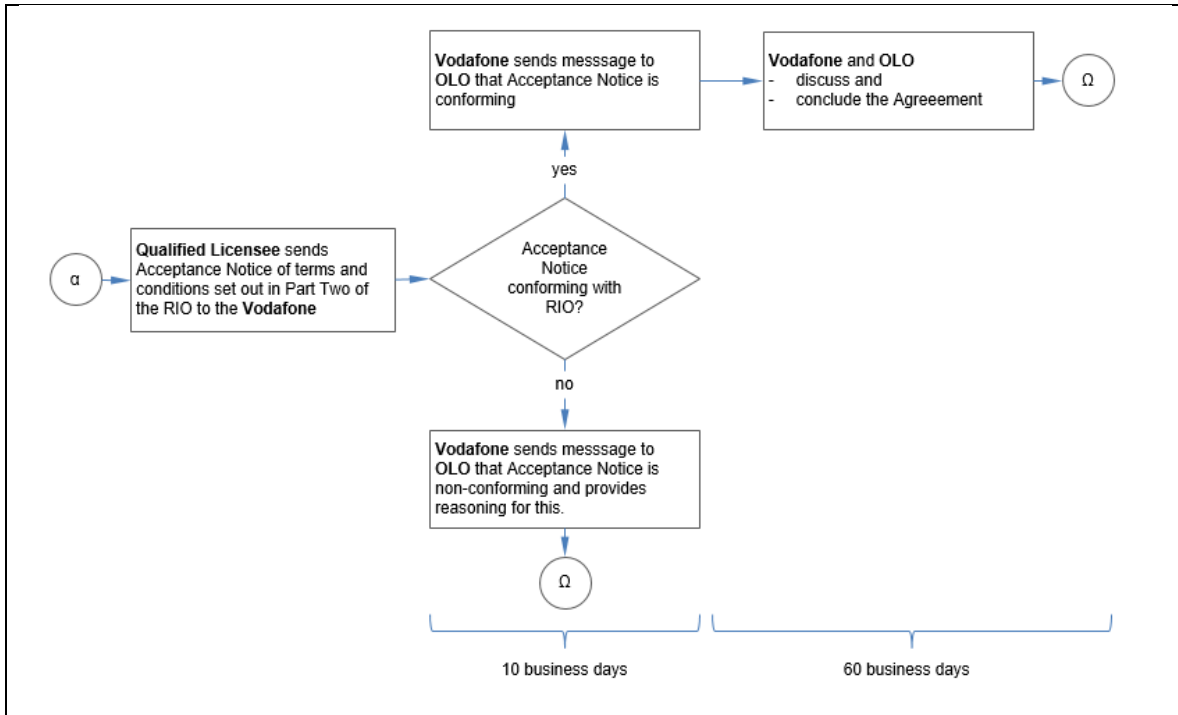
The structure of the RIO and how, after the Acceptance Procedure, the Agreement is reached is shown in the indicative chart below:



Part One: Acceptance Procedures

1. Process

1.1 An indicative process chart of the Acceptance Procedure is provided below:



2. Acceptance Notice

2.1 If a Licensed Service Provider is entitled by the terms of its License and the Applicable Regulatory Framework to acquire Services contained in Part Two (**Qualified Licensee**), the Qualified Licensee must submit to Vodafone a written acceptance of the terms and conditions set out in Part Two (**Acceptance Notice**).

2.2 A Qualified Licensee that submits such an Acceptance Notice shall be known as the Other Licensed Operator (**OLO**). The OLO, by submitting the Acceptance Notice, will become bound by the provisions of this RIO, including the representations and warranties contained in clause 4.

2.3 The OLO shall submit the Acceptance Notice in writing to:

Director Legal and Regulatory
Vodafone Q.S.C.
Doha, Qatar, PO Box 27717

2.4 The OLO's Acceptance Notice must contain the following information:

- (a) The Services the OLO wishes to receive;
- (b) The locations at which the OLO wishes to establish Interconnection with Vodafone Network;
- (c) The type of telecommunications service license held by and the specific telecommunications services provided by the OLO;

- (d) A designated contact person;
- 2.5 Notwithstanding the provisions in clause 3, Vodafone will notify the OLO within 10 business days of whether it finds the Acceptance Notice conforming or non-conforming under clause 3.1.

Except to the extent Vodafone finds the Acceptance Notice to be non-conforming under clause 3.1, and subject to clause 3, Vodafone and the OLO will, following submission by the OLO of the Acceptance Notice, use its reasonable endeavors to complete discussions to conclude an Agreement within 60 Days of the receipt of the Acceptance Notice.
- 2.6 Conditions amending the terms and conditions of the RIO can be negotiated, but are subject to approval by CRA. In case there is no agreement between Vodafone and the OLO, the case shall be referred to CRA who will rule on behalf of the parties in accordance with Article 61 of the Telecommunications Law and with Article 47 of the Executive By-Law.
- 2.7 For the purposes of this RIO, an Agreement entered into on terms and conditions consistent with those set out in Part Two of this RIO shall be referred to as an Agreement.
- 2.8 If the OLO requests products outside the Relevant Markets, the terms and conditions for the provision of such services can be separately negotiated by the Parties and can remain outside the scope of the Agreement.

3. Assessment of Acceptance Notice

- 3.1 Vodafone may find an Acceptance Notice to be non-conforming if:
 - (a) The OLO is not a Qualified Licensee; or
 - (b) The OLO has not provided a notification in accordance with the requirements of clause 2.4, or the information contained in the Acceptance Notice is missing, inconsistent or incomplete; or
 - (c) Vodafone is already supplying the Services that are the subject of the Acceptance Notice to the OLO pursuant to an existing agreement and the OLO has not notified Vodafone of its intention to terminate the provision of the Services under that existing agreement.
- 3.2 If Vodafone finds an Acceptance Notice to be non-conforming under this clause 3 it will:
 - (a) Notify the OLO in writing within ten (10) Business Days of receipt of the Acceptance Notice; and
 - (b) Provide reasons for rejection to the OLO with the notice in paragraph 3.2(a); and
 - (c) Not be required to enter into an Agreement pursuant to the Acceptance Notice. The OLO may submit a revised Acceptance Notice.
- 3.3 If Vodafone notifies the OLO that the Acceptance Notice is conforming, the parties will commence discussions aimed at concluding the Agreement in accordance with clause 2.5.

4. Representations and Warranties

4.1 By submitting an Acceptance Notice, the OLO represents and warrants that:

- (a) It has power to enter into and observe its obligations under an Agreement; and
- (b) It has in full force and effect the authorizations necessary to enter into an Agreement, observe obligations under it and allow it to be enforced; and
- (c) Its obligations under an Agreement are valid and binding and are enforceable against it in accordance with its terms; and
- (d) The information provided by it to Vodafone in its Acceptance Notice is complete, true and correct, and not misleading.

4.2 Vodafone represents and warrants that:

- (a) It has power to enter into and observe its obligations under an Agreement;
- (b) It has in full force and effect the authorizations necessary to enter into an Agreement, observe the obligations under it and allow it to be enforced;
- (c) Its obligations under an Agreement are valid and binding and are enforceable against it in accordance with its terms.

4.3 Each Party agrees to indemnify the other Party on demand for any liability, loss, damage, cost or expense (including legal fees on a full indemnity basis) incurred or suffered by the other Party which arises out of or in connection with any breach of any of the representations given in this clause 4.

5. Effect of Variation

5.1 Vodafone

- (a) may amend this RIO from time to time with the approval of CRA or
- (b) must amend the RIO if directed by the CRA to do so pursuant to the Applicable Regulatory Framework.

5.2 CRA may give the OLO and other industry stakeholders the opportunity to make representations before giving its approval or instruction to Vodafone. For the avoidance of doubt, Vodafone will continue to provide services to the OLO during such period.

5.3 Without prejudice to an OLO's right to dispute a change to the RIO, where an Agreement is based on a RIO, an amendment to an RIO will be deemed to alter the relevant terms and conditions of that Agreement. However, if the OLO or Vodafone disputes the change to the RIO that are directed by the CRA pursuant to clause 5.1 above, no amendments to the Agreement will be deemed to occur unless and until such dispute is resolved.

Part Two: Basic Conditions

Main Body

1. Definitions and Interpretations

In this RIO, except in cases in which the context would require otherwise, words and terms shall be defined based on the definitions contained in

Annexes

1.1 Annex A – Definitions.

1.2 If there is any inconsistency between the documents comprising this RIO Agreement, the documents will be given priority in the following to the extent necessary to resolve that inconsistency:

- (a) This Main Body;
- (b) Annex H – Price List;
- (c) the other Annexes;
- (d) the attachments; and
- (e) any other document referred to in this RIO Agreement.

1.3 In the event of conflict or ambiguity between the terms defined in the Agreement and terminology used elsewhere, the following sources should guide the interpretation of the term, which is presented in a hierarchical order:

- (a) The Agreement itself
- (b) The regulatory framework including the Telecommunications Law and the Telecommunications Executive Bylaw
- (c) The Individual Licenses

2. Commencement and Duration

2.1 This RIO takes effect on the Commencement Date and shall continue until the expiry or revocation of Vodafone's License or the termination of an Agreement in accordance with its terms, whichever comes first.

2.2 In the event that all or a material part of either Party's License is suspended or terminated, the other Party may suspend or terminate an Agreement (or such part thereof as may be reasonable in the circumstances) by notice in writing, copied to CRA, to the Party whose License has been suspended or terminated.

3. Scope

3.1 Vodafone will provide Services to the OLO pursuant to the terms of this Part Two of this RIO.

3.2 Neither Party shall do anything or cause or permit anything to be done (including without limitation, number translation, routing and/or the allocation of numbers to terminal equipment) to cause any call of a type not covered by this RIO to be presented to the other Party as a call type which is applicable to or covered by this

RIO. This provision does not provide Vodafone with any rights, except as it may be provided herein, to the OLO's Telecommunications Network.

4. Non-Discrimination

- 4.1 Notwithstanding other provisions in the Applicable Regulatory Framework, Vodafone shall treat the OLO and all requests that the OLO makes for Interconnection Services (whether for existing Services as set out in Annex C – Service Schedule or new Services as requested in accordance to Annex F – Planning, Forecasting and Provisioning including price and non-price related terms), in a fair, reasonable and non-discriminatory manner.
- 4.2 Subject to any reasonable technical limitations, Vodafone will provide the OLO with the same terms and conditions required for the infrastructure of the OLO's networks, as Vodafone provides for itself, or its affiliates and subsidiaries. Vodafone shall not extend to itself any undue preference.

5. Number translation services

- 5.1 The general principle is that the Number Translation Service (NTS) for non-geographic numbers (including toll free numbers) is carried out by the Service Provider that has been assigned the relevant non-geographic number. A Service Provider therefore shall not translate numbers that are assigned to another Service Provider. For the avoidance of doubt, NTS must not cause the provision of a service which is not included in Annex C – Service Schedule.
- 5.2 For a period of six (6) months from publication of the approved RIO or on 31 December 2015 whichever is the earlier, OLO shall be allowed to terminate a translated non-geographic number assigned to it on a network other than its own. The parties agree that such arrangement shall be limited to this RIO and shall cease upon expiry of the six (6) months period from the publication of the approved RIO or on 31 December 2015 whichever is the earlier.

6. Network Interconnection

- 6.1 The Parties must interconnect their respective Networks through a minimum of two (2) Points of Interconnect (POI). The OLO may interconnect with Vodafone at any of the Service Nodes listed in Annex D – Technical Information, subject to that POI being bi-laterally agreed in the Network Plan.
- 6.2 The OLO may establish Interconnection with Vodafone in accordance with the following procedure:
 - (a) By providing a statement of its technical requirements for Interconnection and Interconnection Services. This statement of requirements must be sufficiently detailed to enable Vodafone to design a solution for the OLO's Interconnection requirements.
 - (b) If the statement of technical requirements referred to in clause 6.2(a) of this RIO is considered by Vodafone (acting reasonably) to be insufficient to set out a comprehensive technical solution, Vodafone shall notify the

OLO within fifteen (15) Business Days of receipt of the statement of technical requirements. This notification shall include a list of questions and requests for data that are not supplied within the OLO's statement of technical requirements that are necessary for Vodafone to develop a comprehensive technical solution. Without such notification, the statement of technical requirements referred to in clause 6.2(a) shall be deemed sufficient and the process in clause 6.2(c) of this RIO shall apply.

- (c) Subject to clause 6.2(b), if the statement of technical requirements referred to in clause 6.2(a) is sufficient to enable Vodafone to design and document a comprehensive technical solution for OLO's Interconnection requirements, Vodafone shall provide a documented proposed technical solution to the OLO within thirty (30) Business Days of receipt of the statement of technical requirements referred to in clause 6.2(a).
- (d) Vodafone and the OLO shall negotiate in good faith to reach an agreement on a comprehensive Network Plan within twenty (20) Business Days (or as otherwise agreed between the Parties, each acting reasonably) of the provision by Vodafone to the OLO of the proposed technical solution referred to in clause 6.2(c).
- (e) Once the proposed technical solution referred to in clause 6.2(c) is agreed between Vodafone and the OLO, the agreed technical solution shall become known as the Network Plan, which shall form part of the Agreement and shall conform with clause 14 of this RIO and clause 1.2 of Annex F – Planning, Forecasting and Provisioning.

- 6.3 The Parties agree to establish Services pursuant to the provisions of Annex D – Technical Information.
- 6.4 Vodafone and the OLO shall be responsible for providing sufficient capacity at the Point of Interconnect (POI) to meet the agreed forecast traffic contained in the Network Plan, as described in Annex F – Planning, Forecasting and Provisioning.
- 6.5 Vodafone and the OLO will own and shall be responsible for the operation and maintenance of the transmission equipment on their respective sites of the POI up to the Optical or Digital Distribution Frame.
- 6.6 The Parties shall comply fully with the technical standards, which are outlined in Annex D – Technical Information.

7. Network Alterations and Data Management

- 7.1 Either Party in this clause 7, (the **Requesting Party**) may request the other Party (the **Requested Party**) to make Network Alterations in accordance with Annex G - Operational Procedures.

8. Service Schedules

- 8.1 The Service Schedules in Annex C – Service Schedule provide details of the Services offered. Services are Usage Based Interconnection Services.

9. Charging for Services

- 9.1 The structure and the amount of the charges for the provision of Services are specified in Annex H - Price List. Charges will be calculated on the basis set out in Annex H - Price List, and billed and collected in accordance with the processes and procedures specified in Annex B – Billing Processes and Procedures.

10. Network Protection and Interference with Other Services

- 10.1 Each Party is responsible for the safe operation of its Network and shall take all reasonable and necessary steps in its operation and implementation of this RIO to ensure that its Network does not endanger the safety or health of employees, contractors, agents, customers of the other Party or the general public.
- 10.2 All appropriate safety precautions required pursuant to applicable law of the State of Qatar shall be strictly followed at all times. Subject to clause 52, neither Party shall be held responsible for any consequences resulting from the other Party's negligence in this regard.
- 10.3 Each Party shall ensure that connection of its Network and equipment to the Network and equipment of the other Party does not:
- (a) Interrupt, interfere with, degrade, or impair service over any of the facilities comprising the other Party's Network or any circuits or facilities of any other entity connected to the other Party's Network;
 - (b) Breach or impair the security or privacy of any communications over such circuits or facilities;
 - (c) Cause damage of any nature to the other Party's Network; or
 - (d) Create hazards to employees of the other Party or users of the other Party's Network or any Third Party.
- 10.4 When either Party has reasonable grounds to believe that the other Party is using equipment which is not Compliant Equipment or is otherwise causing interference to the Services (or any other service, including Third Party operator services), the Party shall:
- (a) Notify the other Party of its reasonable grounds for believing that there is use of equipment which is not Compliant Equipment or interference taking place; and
 - (b) Give the other Party a reasonable opportunity to demonstrate that this is not the case or to remedy the situation.
- 10.5 Where a Party's equipment is not Compliant Equipment or is otherwise causing interference to other service, (including Third Party operator services) the Party shall remedy such interference as soon as practicably possible.
- 10.6 If a Party's equipment adversely affects the normal operation of the other Party's or any Third Party operator services, or is a threat to any person's safety, in an emergency the Party may suspend, to the extent necessary, such of its obligations hereunder, and for such period as may be reasonable, to ensure the normal operation of the Party's system or any Third Party operator system or reduce the threat to safety.

10.7 If a Party reasonably considers that the equipment used by the other Party is not Compliant Equipment, the other Party shall, on request from the first Party, take such steps as are required, including if necessary disconnection of any necessary equipment, in order to permit the Party to test the characteristics of the equipment.

10.8 The relevant equipment shall be reconnected as soon as practicable when the situation has been remedied.

11. Numbering

11.1 Vodafone and the OLO shall use Number Ranges allocated to them in accordance with the National Numbering Plan as administered by CRA.

11.2 For all calls Vodafone and the OLO shall present CLI in accordance with the provisions of Annex C – Service Schedule as appropriate.

12. Management of Interconnection

12.1 Technical and Commercial Representatives:

- (a) Within five (5) Business Days of the Effective Date, the Parties shall each appoint suitably qualified and experienced Technical Representatives and Commercial Representatives with sufficient authority within each organization as the principal points of contact between the two Parties to coordinate and facilitate communication on Interconnection matters.
- (b) Either Party may request a meeting to address any matter related to Interconnection. The Parties agree to meet within five (5) Business Days of receipt of a request for a meeting and a detailed agenda.
- (c) On the Effective Date, each Party will agree on and appoint twenty-four (24) hour contact points for Fault Reporting (**Fault Reporting Contacts**) and appropriate senior contacts for Fault Escalation (**Fault Escalation Contacts**), with appropriate telephone numbers and email addresses provided. Second and third level Fault Escalation Contacts should be at progressively higher levels of management and decision-making authority. Either Party may appoint new Fault Reporting Contacts and/or Fault Escalation Contacts by providing notice in writing to the other Party. Such appointment shall take effect ten (10) Business Days following receipt by the Party receiving such notice. The names and contact information for such Fault Reporting Contacts and Fault Escalation Contacts shall be included in the Network Plan.
- (d) The Technical Representatives and Commercial Representatives of the Parties shall consult together from time to time in connection with the operation and implementation of an Agreement and endeavour to resolve any problems (including issues relating to Quality of Service), encountered by them in relation to the operation and implementation of an Agreement.

12.2 Billing Representatives:

- (a) Each Party shall appoint by notification to the other Party a Billing Representative, who shall be sufficiently competent, experienced and

- authorized to handle billing matters.
- (b) Processes and procedures relating to billing are set out in Annex B – Billing Processes and Procedures.
- (c) Inquiries related to billing, collection, settlement arrangements, and/or network and operation issues related to billing may be directed to the Billing Representatives. All notices of a Billing Dispute must be sent to the Billing Representative.
- (d) Either Party may, at any time, appoint a new Billing Representative, provided that they give prior notification to the other Party ten (10) Business Days in advance.

12.3 Joint Interconnection Committee:

- (a) Within fourteen (14) days of the Effective Date, the Parties shall establish a Joint Interconnection Committee in order to maintain currency of the Network Plan, unless otherwise agreed in writing, which will meet at a frequency to be agreed and recorded in the Network Plan.
- (b) The Joint Interconnection Committee will be the principal forum for the initial and on-going technical and planning discussions. It shall also discuss matters related to technical, planning, operational, billing and service aspects of Interconnection. There shall be an agreed agenda, which may include the following:
 - Order status;
 - Routing plans;
 - Analysis of traffic volumes;
 - Analysis of Service quality;
 - Capacity profiles and requirements;
 - Analysis of Faults during the period since the previous meeting;
 - Billing processes and billing issues;
 - Provision of relevant information and discussion of changes to either network or to the Service; and
 - Forecasts and future rollout plans from Vodafone.

13. Operational Aspects

- 13.1 The Parties shall comply with their respective obligations relating to the operational aspects of Interconnection as outlined in Annex G - Operational Procedures in a timely and professional manner.
- 13.2 Each Party will be entitled to undertake any operational testing or maintenance in accordance with the Annex G - Operational Procedures.
- 13.3 Each Party will obtain and maintain all necessary licenses and consents required by the Governmental Authorities to meet their obligations under the terms of this RIO.

14. Planning and Forecasting

- 14.1 Vodafone and the OLO will cooperate in planning and implementing the provision of Services by Vodafone to the OLO to ensure as far as possible that their respective

Networks work together efficiently and effectively. Both Parties shall follow the provisions set out in Annex F – Planning, Forecasting and Provisioning.

- 14.2 In the event that Vodafone implements any changes in the technical specifications in its Network, it hereby agrees to send to the OLO written information of the proposed changes at least six (6) Calendar Months prior to the implementation of the changes. The same applies to the OLO.
- 14.3 In all cases, the Parties agree to provide technical information to the other to allow each party individually to conduct the performance of an Agreement, including for the purpose of requesting, developing, and implementing new services as per clause 20.
- 14.4 The Network Plan shall be reviewed and updated by the Joint Interconnection Committee on a frequency to be agreed by the Parties. In any case, the maximum period between reviews shall not exceed twelve (12) Calendar Months and any revised Network Plan must be agreed no later than the end of June of each year.
- 14.5 In addition to the production of the Network Plan, the Parties shall revise the relevant forecasts as per the procedures outlined in Annex F – Planning, Forecasting and Provisioning.
- 14.6 The forecasts provided by the Parties shall represent the good faith expectations of each Party of their future capacity requirements.
- 14.7 Vodafone shall use all reasonable endeavours to provide Services in accordance with forecasts developed pursuant to the procedures in Annex F – Planning, Forecasting and Provisioning, but shall be under no obligation to provide Services that are not included in such forecasts unless the Parties come to an agreement that the requested Services shall be included.

15. Ordering and Cancellation

- 15.1 Ordering and cancellation procedures of Services shall be as set out in Annex F – Planning, Forecasting and Provisioning.

16. Not used

17. Provision of Information

- 17.1 Upon request, Vodafone will provide to any Qualified Licensee within ten (10) Business Days all necessary support, access for site inspection and data regarding Vodafone's network. The data is provided for the sole purpose of enabling the Qualified Licensee to consider whether to request Services from Vodafone pursuant to this RIO.
- 17.2 Subject to a Party's obligations of confidentiality to Third Parties, a Party may request and the other Party shall provide information on protocols in use by that other Party which are required for interconnection, conveyance of Calls, transmission or the provision of Services specified in this RIO, if such other Party has relevant information and the provision of such information is necessary as a consequence of the absence or incompleteness of international standards.
- 17.3 Notwithstanding any provision of this RIO, a Party shall not be obliged to provide

information which is subject to a confidentiality obligation to a Third Party unless such Third Party consents to such disclosure.

17.4 The Disclosing Party will use reasonable endeavours to ensure that information disclosed is correct to the best of its knowledge at the time of provision of such information.

17.5 If a Disclosing Party provides information to a Receiving Party, the Disclosing Party shall have obtained all appropriate Third Party consents.

17.6 The Receiving Party shall indemnify the Disclosing Party and keep it indemnified against all liabilities, claims, demands, damages, costs and expenses arising as a consequence of any failure by the Receiving Party to comply with any conditions imposed and identified, including those relating to confidentiality as per clause 23, by the Disclosing Party or any third party at the time when the information was provided.

17.7 The agreement shall not require a Party to do anything in breach of any statutory or regulatory obligation of confidentiality.

18. Quality of Service

18.1 Vodafone shall provide Services to the OLO under the same conditions and quality as it provides for its own telecommunications service operations or those of its affiliates.

19. Measurement of traffic volume

19.1 The responsibility for traffic volume measurements shall reside with the Party responsible for billing that particular Service.

19.2 Both Vodafone and the OLO shall ensure that each Party records traffic volumes in sufficient detail to meet their obligations as outlined in Annex C – Service Schedule and Annex B – Billing Processes and Procedures.

20. New Services

20.1 The provisions and processes for new regulated services are set out in clause 6 of Annex F – Planning, Forecasting and Provisioning. For the avoidance of doubt, new services which are not part of the present RIO can be requested by the OLO and negotiated provided these services are part of the Relevant Markets as determined by the CRA and for which Vodafone has been determined to be dominant.

21. Billing and Payment

21.1 The Parties shall bill and pay each other in accordance with the procedures outlined in Annex B – Billing Processes and Procedures and Annex H - Price List.

21.2 The Charges include all taxes and surcharges.

21.3 Invoices are due and payable in Qatari Riyals. Invoices will be dated as of the date of issue of the invoice (the **Issue Date**) and are payable on or before the “**Due Date**” which is thirty (30) Calendar Days from the Issue Date.

21.4 Each Party shall provide to the other, invoices of all amounts due to it, calculated in accordance with the provisions of Annex B – Billing Processes and Procedures and

- 21.5 Neither Vodafone nor the OLO will be entitled to set off Charges owed to it under this Agreement or in dispute between the Parties against any charges that Vodafone or the OLO owes to the other Party under a separate agreement between the Parties.

22. Credit Assessment and Credit Risk Management

- 22.1 Vodafone may carry out credit vetting of a prospective OLO. The method to be used by Vodafone will be communicated to the OLO and will be applied consistently to all OLOs.
- 22.2 If the result of the credit vetting of a prospective or existing OLO confirm that the provision of Services poses a financial risk which is greater than can be controlled by a credit limit (which Vodafone shall justify), Vodafone has the right to request a form of financial security. The level of security requested shall be proportional to the risk involved. The level of security shall take account of factors such as the estimated value of Services to be provided and the projected liability. The financial security may be provided by a means such as bank deposit or guarantee, and Vodafone shall not unreasonably refuse to accept any other typical form of financial guarantee proposed by the OLO. The financial security will be subject to quarterly review during the first year of operation and will be removed or reduced where the security or its level is no longer justifiable. Thereafter, the review procedures relating to OLO set out in clause 22.4 shall apply.
- 22.3 Vodafone may carry out credit vetting of an existing OLO where Vodafone has reasonable concern about the ability of the OLO to cover debts including without limitation where Vodafone has evidence of a poor payment history or the OLO's credit rating has been downgraded or threatened to be downgraded. The method to be used will be communicated to the OLO and will be standard to all OLOs. However, if the OLO does not agree with the results of the credit vetting process then the OLO shall be entitled to invoke the Dispute Resolution Procedure.
- 22.4 Should the result of credit vetting of an existing OLO confirm the existence of a financial risk, Vodafone has the right to request a form of financial security. The level of security requested shall be proportional to the risk involved and shall take due account of historic levels of Service payments, liability, payment frequency and credit terms. The financial security may be provided by a means such as bank deposit or guarantee, and Vodafone shall not unreasonably refuse to accept any other form of financial guarantee proposed by the OLO. The financial security will be subject to quarterly review and will be removed or reduced where the security or its level is no longer justified.
- 22.5 A financial security may only be required by Vodafone where Vodafone has assessed credit risk in accordance with clause 22.2, 22.3 or 22.4.
- 22.6 For avoidance of doubt, any Disputes relating to credit vetting and credit management shall be subject to the conditions set out in clause 25 of this RIO.

23. Confidentiality and Disclosure

- 23.1 The Receiving Party must:

- (a) Keep confidential all Confidential Information and not disclose it to anyone except as permitted under this RIO;
 - (b) Use all Confidential Information solely for the purpose for which it was supplied;
 - (c) Not disclose the information or use the information for any anti-competitive purpose; and
 - (d) Not copy or record in any other form any part of the Confidential Information except as is strictly necessary for the Approved Purpose.
- 23.2 The Disclosing Party shall use reasonable endeavours to ensure that information disclosed is correct to the best of its knowledge at the time of provision of such information.
- 23.3 Information provided by the Disclosing Party for the purposes of Interconnection shall only be used by relevant staff within the Receiving Party for Services and shall not be made generally available within the Receiving Party's company, and shall not be provided to retail or sales divisions.
- 23.4 Subject to the confidentiality obligations of a Party to a Third Party, each Party may request, and the other Party shall provide, information on protocols in use by that Third Party which are required for interconnection, conveyance of calls or the provision of Services specified in this RIO if such other Third Party has relevant information and the provision of such information is necessary as a consequence of the absence or incompleteness of international standards.
- 23.5 The Receiving Party shall indemnify the Disclosing Party and keep it indemnified against all liabilities, claims, demands, damages, costs and expenses arising as a consequence of any failure by the Receiving Party to comply with the provisions of this clause 23 and with any reasonable conditions imposed and expressly identified and notified to the Receiving Party, by the Disclosing Party at the time when the information was provided.
- 23.6 Nothing in this RIO shall require a Party to do anything in breach of any statutory or regulatory obligation of confidentiality, including without prejudice to the generality of the foregoing, any obligation pursuant to Qatari law.
- 23.7 The provisions of this clause 23 shall not apply to any information which:
- (a) Is already in the possession of or is known by the Receiving Party prior to its receipt provided that the Receiving Party is not bound by any existing obligation of confidentiality in respect of such information;
 - (b) Is in or comes into the public domain other than by default of the Receiving Party;
 - (c) Is obtained by the Receiving Party from a bona fide Third Party having free right of disposal of such information and without breach by the Receiving Party of this clause 23.7(c);
 - (d) Is required to be disclosed by any competent court, the CRA or any Government Authority entitled to receive such information;
 - (e) Is properly disclosed pursuant to and in accordance with a relevant statutory or regulatory obligation or to obtain or maintain any listing on a stock exchange;
 - (f) Is disclosed by the Receiving Party where such disclosure is authorised

by the original Disclosing Party in writing to the extent of the authority given;

(g) Is or has already been independently generated by the Receiving Party.

23.8 The Receiving Party must notify the Disclosing Party of the particulars of the intended disclosure and the reason for the disclosure before disclosing Confidential Information under clause 23.7 and shall in such circumstances limit such disclosure as far as possible in accordance with any applicable law.

23.9 The Disclosing Party may give a notice to the Receiving Party that its right to use Confidential Information ceases if:

- (a) The Disclosing Party considers, in its reasonable opinion, that any of the Confidential Information is no longer required by the Receiving Party for the Approved Purpose;
- (b) The Approved Purpose is completed or terminated; or
- (c) The Receiving Party breaches conditions set out in this RIO.

23.10 If the Disclosing Party gives a notice under clause 23.9, the Receiving Party must immediately do the following things:

- (a) Stop using the Confidential Information, or the notified part of it;
- (b) Return to the Disclosing Party all the Disclosing Party's Confidential Information in its possession or control or in the possession or control of persons who have received information from it under this clause 23; or
- (c) Destroy or delete (as the case may be) the Confidential Information.

23.11 Subject to clause 23.9, information regarding a Party's Customers generated within the other Party's Network as a result of, or in connection with, the provision of Services by the other Party (Network Information) is the Confidential Information of the first Party and is deemed not to have been disclosed to the other Party for the purposes of this clause 23.

23.12 The obligations of confidentiality under an Agreement continue to apply to a Party even if:

- (a) The Approved Purpose is completed or terminated; and
- (b) The Receiving Party has returned, destroyed or deleted the Confidential Information in accordance with clause 23.10.

23.13 The Parties acknowledge that:

- (a) A breach of this clause 23 may cause damage to the other Party; and
- (b) Monetary damages alone would not be adequate compensation to a Party for the other Party's breach of this clause 23, and that a Party is entitled to seek specific performance or injunctive relief for a breach or apprehended breach of an Agreement under this RIO.

24. Retail Customer Management

24.1 Information about a Customer is the Confidential Information of the Party that has entered into an agreement with the Customer for the supply of telecommunications services. For the avoidance of doubt, the Party that has not entered into an agreement with the relevant Customer for the supply of telecommunications services

and which acquires information about that Customer through the supply of Services under this RIO must only use that information for the purpose of fulfilling its obligations under this RIO and not disclose the information or use the information for any other purpose (e.g. for the benefit of the retail activities).

24.2 The Party that has entered into an agreement with a Customer for the supply of telecommunications services:

- (a) Is responsible for handling and addressing all complaints and enquiries from that Customer regarding those telecommunications services, including any billing complaints and enquiries that may arise as a consequence from this RIO; and
- (b) Must not refer those Customers to the other Party for satisfaction of the matters they are raising.

24.3 Each Party must instruct its staff, contractors, agents and employees to refrain from any public statement of the other Party that may arise (or may have arisen) as a result of the operation of this RIO. For the avoidance of doubt, nothing in this clause 24 requires the staff, contractor, agent or employee of a Party to refuse to answer or respond to a Customer inquiry, or to provide false or misleading information to a Customer.

Neither Party may represent expressly, by omission or implication that:

- (a) It is approved by or an agent of or affiliated with the other Party;
- (b) It has a special relationship with the other Party; or
- (c) The services provided by it to Customers are the other Party's services.

24.4 Neither Party has any right to withhold any payment due to the other Party under this RIO on account of any non-payment of debts owed to that Party by its Customers.

25. Resolution of Disputes

25.1 In the event of any Dispute arising between the Parties relating to or arising out of an Agreement, including but not limited to the implementation, execution, interpretation, rectification, termination or cancellation of an Agreement, the Parties shall use their reasonable endeavors to resolve such Disputes by meeting within fifteen (15) Business Days of receipt of written notice of the Dispute by one Party to the other (or such longer time as mutually agreed by the Parties) to negotiate in good faith in an effort to settle such Dispute. Timelines may be extended by a written mutual agreement between the Parties specifying the extended timeline.

25.2 Should the Parties fail to resolve the Dispute after having negotiated in good faith pursuant to clause 25.1 for not less than fifteen (15) Business Days or an extended timeframe mutually agreed upon in writing, either Party may upon service of notice to the other Party refer the Dispute to:

- (a) CRA, in accordance with the CRA Dispute Resolution Rules issued under Article 61 of the Telecommunications Law. The Parties agree to accept the decision as final and binding or appeal it or
- (b) Conciliation and arbitration according to clause 25.4 and clause 25.225.5. The Party referring the Dispute to conciliation and arbitration shall notify CRA.

25.3 During the period of Dispute, Vodafone shall maintain supply of any existing Service.

25.4 Where a Dispute concerning the conclusion, execution, validity, interpretation, termination or dissolution of this RIO is referred to conciliation and arbitration in accordance with clause 25.2(b), the Parties shall first seek to resolve the Dispute amicably by conciliation according to the rules of Qatar International Center for Conciliation and Arbitration (QICCA) of the Qatar Chamber of Commerce & Industry or such other rules as agreed to by the Parties in writing. The following principles will apply to the conciliation process:

- (a) The conciliator shall have the appropriate qualifications and experience to solve the Dispute, including knowledge of the telecommunications industry and legal qualifications;
- (b) The conciliator shall not be or related to an officer, director, or employee of a telecommunications company in Qatar or of an affiliate of a telecommunications company in Qatar or otherwise have a potential for conflict of interest;
- (c) The place at which the conciliation takes place shall be Doha, Qatar, and the language of the conciliation shall be English; and
- (d) All costs of the conciliation procedure shall be shared in the event conciliation is successful in resolving the Dispute, or by the losing party in the event that the Dispute proceeds to arbitration in accordance with clause 25.5.

25.5 If a Dispute referred to conciliation in accordance with clause 25.2(b) is not resolved within thirty (30) Business Days through conciliation pursuant to clause 23.3, it shall be submitted to arbitration according to the rules of Qatar International Center for Conciliation and Arbitration of the Qatar Chamber of Commerce & Industry or such other rules as agreed to by the Parties in writing. The following principles will apply to the arbitration process:

- (a) The arbitrators shall have the appropriate qualifications and experience to solve the Dispute, including knowledge of the telecommunications industry and legal qualifications;
- (b) The arbitrators shall not be officers, directors, or employees of a telecommunications company in Qatar or of an affiliate of a telecommunications company in Qatar or otherwise have a potential for conflict of interest;
- (c) The arbitration shall be binding upon the Parties;
- (d) The place at which the arbitration takes place shall be Doha, Qatar, and the language of the conciliation shall be English; and
- (e) All costs of the arbitration procedure shall be paid by the losing party.

25.6 Parties acknowledge and agree that any Dispute and/or arbitral proceedings may take longer than six (6) months and that such circumstances shall not form the basis of a procedural challenge to any arbitral award subsequently delivered.

25.7 The time limits specified in clause 25.1 and clause 25.2 above may be extended by mutual agreement between the Parties.

25.8 The procedures set out in this clause 25 are without prejudice to any rights and remedies that may be available to the Parties in respect of any breach of any

provision of this RIO.

25.9 The procedures set out in this clause 25 shall not prevent any Party from:

- (a) Seeking (including obtaining or implementing) interlocutory, injunctive or any other immediate pre-emptory or equivalent relief from CRA or the competent courts in Qatar in order to protect their interest in cases of urgency; or

25.10 Each Party will continue to fulfil its obligations under the applicable laws of Qatar and this RIO pending any Dispute resolution, and shall keep their networks connected for the provision and conveyance of calls between their respective networks.

26. Breach and Suspension

26.1 Subject to clause 26.3, if one Party's Network seriously and adversely affects the normal operation of the other Party's Network, is reasonably believed to pose a threat to Network security or is a threat to any person's safety, the affected Party shall immediately inform the affecting Party. The affecting Party shall take immediate action to resolve the problem. In the event that normal operation of the Network is not restored or removal of the threat to Network security or of threat to any person's safety is not reached in a reasonable period of time or if the matter is extreme, the affected Party may suspend, but only to the extent necessary, such of its obligations under this RIO, and for such period as it may consider reasonable to ensure the normal operation of its Network or to remove the threat to Network security or safety. Such suspension shall be immediately notified in writing to both the other Party and CRA and may continue unless the normal operation of the Network is restored or removal of the threat to Network security or of threat to any person's safety is reached.

26.2 In addition to clause 26.1 and subject to clause 26.3, a Party (**Suspending Party**) may also suspend this RIO or the supply of a Service (as the case may be) by providing written notice to the other Party, copied to CRA, if:

- (a) The other Party has committed a Service affecting material breach of this RIO, the Suspending Party has given a five (5) Business Days time limit (or shorter in case of emergency) by serving a written notice of such breach to the other Party, copied to CRA, specifying the breach and requiring the other Party to remedy the breach as well as stating the consequences of failure to remedy including potential suspension or termination and the other Party has failed to rectify such breach within that time;
- (b) The other Party has committed a non-Service affecting material breach of this RIO (including but not limited to failure to pay any sum, whether in respect of any one or more Services, for which the other Party has been invoiced), the Suspending Party has given a ten (10) Business Days time limit by serving a written notice of such breach to the other Party, copied to CRA, specifying the breach and requiring the other Party to remedy the breach as well as stating the consequences of failure to remedy including potential suspension or termination and the

- other Party has failed to rectify such breach within that time;
- (c) If, in the Suspending Party's reasonable opinion, the other Party attempted to use, is likely to use, or has used any Service in contravention of law and the Suspending Party has the necessary confirmation from CRA or the relevant governmental agency that the other Party is in contravention of law;
- (d) Compliance with legal or regulatory obligations requires this action immediately;
- (e) Continued operation of an Agreement under this RIO or an Service (as the case may be) would be unlawful or would pose an imminent threat to life or property;
- (f) Any material information provided or representation made by either Party to the other Party is untrue, false, misleading or inaccurate and has an adverse material impact on the other Party in relation to its supply of Services; or
- (g) Where an Interconnection Link has been established, the other Party fails to satisfy, or no longer satisfies, the requirement for Interconnection Link Services set out in the RIO, in which case suspension shall be limited to those Services to which the failure relates.

26.3 A Suspending Party must only suspend an Agreement under this RIO or the supply of a Service (as the case may be):

- (a) After first giving advance notice to the other Party of its intention to seek the written approval of CRA to suspend the Agreement or Services;
- (b) After then obtaining written approval from CRA within 5 Business Days of notifying the CRA. Approval will be deemed to have been granted if no response is obtained from the CRA within 5 Business Days; and
- (c) Only to the extent necessary to address the relevant cause of the suspension.

26.4 The Suspending Party will lift the suspension of the Agreement or Services (as the case may be) as soon as possible after the reason for the suspension has ceased.

26.5 If an Agreement under this RIO is suspended under this clause 26 for more than sixty (40) Business Days, the Suspending Party may terminate the Agreement with immediate effect by giving the other Party written notice, copied to CRA.

26.6 Upon suspension of Services:

- (a) The supply of the suspended Service will cease;
- (b) The provision of other Services not covered by the suspension, will continue and not be affected in accordance with clause 26.3;
- (c) The Agreement will otherwise remain in full force and effect;
- (d) The other Party must continue to pay any Charges in respect of the suspended Service for the duration of the suspension of that Service, together with any other Charges for other Services that are not subject to suspension.

26.7 For the avoidance of doubt, the term of an Agreement under this RIO will not be affected by any suspension of a Service or an Agreement (as the case may be).

26.8 The Suspending Party will not be liable to the other Party for any loss or damage (including any Consequential Loss) that the other Party may have suffered as a result of a valid suspension of a Service or an Agreement (as the case may be).

27. Termination

27.1 If either Party (**Defaulting Party**) is in material breach of an Agreement under this RIO (including failure to pay an undisputed sum due hereunder), the other Party (Affected Party) may serve a written notice to the Defaulting Party (Breach Notice), copied to CRA, specifying the breach and requiring the other Party to remedy the breach as well as stating the consequences of failure to remedy including potential suspension or termination of an Agreement.

27.2 Notwithstanding the provisions of clause 26.2 of this RIO, if the Defaulting Party fails to remedy the breach within thirty (30) Calendar Days of receipt of the Breach Notice, or if there is no reasonable possibility of remedy, the Affected Party may, until such breach is remedied, undertake the actions stated in the Breach Notice, including suspending performance of its obligations under an Agreement under this RIO in accordance with clause 26.3, as may be reasonable under the circumstances.

27.3 The Affected Party may terminate an Agreement under this RIO or the relevant Services under it, as the case may be, if the Defaulting Party fails to remedy the breach within thirty (30) Calendar Days of receipt of the Breach.

27.4 An Agreement under this RIO may be terminated by either Party by written notice forthwith to the other Party if any one of the following occurs:

- (a) A Party formally commences bankruptcy proceedings;
- (b) Bankruptcy proceedings are formally commenced against a Party;
- (c) A Party ceases to carry on business.

27.5 The OLO may terminate any or all Service(s) at any time without reason or without cause on thirty calendar (30) days' notice upon expiry of the minimum period in writing to Vodafone provided that, in the event of any such termination the OLO shall pay the balance of the Charges for that Service which are outstanding at the effective date of termination.

Either Party may terminate an Agreement or any or all Service(s) if so directed by a Governmental Authority and that Party has given the other Party thirty (30) Calendar Days' written notice of such intent to terminate unless such notice is not allowed by the Governmental Authority.

27.6 The Parties may at any time mutually agree in writing to terminate an Agreement under this RIO and the applicable timeframe for doing so, subject to notifying CRA of such agreement.

27.7 Upon termination or expiry of an Agreement or a Service (as the case may be):

- (a) All sums due and owing under an Agreement or in respect of the terminated or expired Service (as the case may be) immediately prior to termination or expiry, will become immediately due and payable, except for any sums that have not been invoiced at the time of termination or expiry, which will become immediately due and payable upon receipt of the relevant invoice by the other Party;

- (b) Where a Service is terminated or expires:
 - i. The supply of the terminated or expired Service will cease;
 - ii. The provision of other Services, not covered by the termination or expiration, will continue and not be affected; and
 - iii. The Term of an Agreement under this RIO in relation to other Services will not be affected by the termination or expiration;
- (c) All rights and benefits conferred on a Party under this RIO or in respect of the terminated or expired Service (as the case may be) will immediately terminate;
- (d) Each Party must for a period of two (2) Calendar Years after termination or expiration, immediately comply with any written notice from the other Party to deliver, destroy, or erase any Confidential Information belonging to that other Party in relation to this RIO or in respect of the terminated or expired Service (as the case may be).

27.8 Upon termination or expiry of an Agreement, each Party shall take such steps and provide such facilities as are necessary to allow the other Party to recover any equipment that it may have installed or supplied in connection with this Agreement. Each Party shall use reasonable endeavors to recover the equipment that it supplied. If the Party owning such equipment fails to recover it within thirty (30) Business Days of termination or expiry of an Agreement, the other Party may remove that equipment and is entitled to compensation to recover the reasonable costs associated with its removal and storage.

27.9 If within thirty (30) Business Days after termination or expiry of an Agreement, either Party is unable to recover any or all of its equipment because of the acts or omissions of the other Party (or a Third Party appearing to have control of a site where such equipment is situated) without reasonable cause, the injured Party may demand reasonable compensation which shall be paid by the other Party within thirty (30) Business Days of the date of receipt of the written demand in respect of such compensation.

27.10 The Party that terminates an Agreement or a Service (as the case may be) is not liable to the other Party for any loss or damage (including any Consequential Loss) incurred by the other Party in connection with the valid termination of an Agreement or a Service (as the case may be).

27.11 Termination of an Agreement or a Service (as the case may be) shall not be deemed a waiver of a breach of any term or condition thereof and shall be without prejudice to a Party's rights, liabilities or obligations that have accrued prior to such termination.

28. Notices

28.1 A notice shall be regarded as duly served if:

- (a) delivered by hand to the address of the respective receiving Party and exchanged for a signed receipt – in this case, the notice shall be regarded as received at the time of actual delivery; or

- (b) sent by recorded delivery service – in this case, the notice shall be regarded as received on the day that it is actually received, but if it is received on a day that is not a Business Day or after 15:00 on a Business Day, it is regarded as being received on the following Business Day.

28.2 Except if otherwise specifically provided or mutually agreed by the Parties all notices and other communications relating to the Agreement shall be in writing and shall be sent to the contact points and addresses as set out in clause 12.

29. Assignment and Novation

29.1 Without prejudice to the Applicable Regulatory Framework, a Party must not assign, transfer or novate an Agreement or any rights, benefits or obligations under it, in whole or in part, without the prior written consent of the other Party, such consent not to be unreasonably withheld or delayed. Notwithstanding the foregoing, either Party may, without the other Party's consent, assign an Agreement to an affiliate or in connection with the sale of all or a substantial part of its business or assets, provided that the assignee undertakes in writing to assume all obligations and duties of the assignor and that such assignment materially alters neither the legal or regulatory requirements nor the rights and duties arising hereunder of the assignor.

30. Relationship of Parties

30.1 The relationship between the Parties is that of independent contractors.

30.2 Nothing in this Agreement is to be construed to create a partnership, joint venture or agency relationship between the Parties.

30.3 Neither Party may attempt to bind or impose any obligation on a Party or incur any joint liability without the written consent of the other party except as expressly set out in this Agreement.

31. Use of Subcontractors

31.1 A Party may only subcontract the exercise of its rights or the performance of any of its obligations under this RIO as provided by this clause 31.

31.2 If a Party engages a subcontractor to exercise its rights or perform its obligations under this RIO, that Party:

- (a) Must ensure that the subcontractor complies with all the terms and conditions of this Agreement to the extent relevant; and
- (b) Will remain primarily responsible and liable to the other Party for:
 - i. All acts and omissions of the subcontractor; and
 - ii. The performance of its obligations, notwithstanding that performance of such obligations may have been subcontracted by that Party to a subcontractor.

31.3 Any consent or approval of a sub-contractor under this clause 31 does not create a contractual relationship between a Party and the other Party's subcontractor

32. Intellectual property rights

32.1 Except as otherwise expressly provided herein, Intellectual Property rights shall remain the property of the Party creating or owning the same and nothing in this RIO shall be deemed to confer any right or title whatsoever or license of the intellectual property rights of one Party to the other, and nothing in the Agreement shall be deemed to restrict the rights of any Party to own, use, enjoy, license, assign or transfer its own Intellectual Property.

32.2 Where the Intellectual Property is developed in connection with performance of this RIO then in the absence of any other agreement between the Parties, the ownership of the Intellectual Property shall remain with the Party that developed the same, provided that in consideration of this RIO the other Party shall have a license at no cost to use the Intellectual Property for the Approved Purpose.

33. Review

33.1 Either Party may request a review to modify or amend an Agreement under this RIO by serving a Review Notice to the other Party if:

- (a) Either Party's License is materially modified with respect to an Agreement (whether by amendment or replacement); or
- (b) A change occurs in a law or regulation governing or relevant to Telecommunications in Qatar that is material to an Agreement; or
- (c) The Agreement makes express provision for a review or the Parties agree in writing that there shall be a review; or
- (d) A material change occurs, including enforcement action by CRA, that affects or reasonably could be expected to affect the commercial or technical basis of an Agreement; or
- (e) The rights and obligations under this RIO are assigned or transferred by the OLO.

33.2 A Review Notice shall set out in reasonable detail the issues to be discussed between the Parties and the basis for such review pursuant to clause 33.1 of this RIO.

33.3 A review shall take place following changes either mandated or approved by CRA to the Agreement to the extent that such review is required to make the Agreement consistent with any regulation, rule, order, notice or License. Any such changes shall be effective based on the timeframes as instructed by the CRA.

33.4 Within fifteen (15) Business Days of receipt of a Review Notice, designated representatives with the requisite authority from each Party shall meet in Qatar, and shall negotiate in good faith the matters to be resolved with a view to agreeing the relevant modifications or amendments to an Agreement.

33.5 For the avoidance of doubt, the Parties agree that notwithstanding a Review Notice, an Agreement shall remain in full force and effect.

33.6 If the Parties fail to reach an agreement on the subject matter of any Review Notice, the provisions of clause 25 of this RIO shall apply.

33.7 The Parties shall as soon as practical enter into an Agreement to modify or replace an Agreement under this RIO in accordance with what is agreed between the Parties pursuant to any Review Notice, or in accordance with the resolution of any Dispute,

or to conform with an CRA determination.

- 33.8 Vodafone shall update the Agreement to take account of any appropriate changes to the RIO, the regulatory framework or the Services offered by Vodafone under the Agreement. Such amendments will be submitted to CRA for approval no less than fifty (50) Business Days prior to the effective date of any such changes.

34. Entire Agreement

- 34.1 This RIO contains the whole Agreement between the Parties in relation to the subject matter of this RIO and supersedes all previous understandings, commitments, agreements or representations whatsoever, whether oral or written, in relation to the subject matter of this RIO.

35. Survival and Merger

- 35.1 Clauses 23 (Confidentiality and Disclosure), 32 (Intellectual Property Rights), 48 (Warranties), 49 (Liability), 51 (Governing Law), 52 (Indemnities), and this clause 35 shall survive termination or expiry of an Agreement together with any other term which by its nature is intended to do so and shall continue in full force and effect for a period of six (6) years from the date of termination or expiry unless otherwise agreed by the Parties.
- 35.2 No term of an Agreement under this RIO merges on completion of any transaction contemplated by this Agreement.

36. Waiver

- 36.1 The waiver of any breach of or failure to enforce, any term or condition resulting from an acceptance of an Agreement shall not be construed as a waiver of any other term or condition of an Agreement. No waiver shall be valid unless it is in writing and signed by a duly authorized representative on behalf of the Party making the waiver and shall only be effective in the specific instance and for the specific purpose for which it is given.
- 36.2 A single or partial exercise of a right or remedy under an Agreement does not prevent a further exercise of that or of any other right or remedy.
- 36.3 Failure to exercise or delay in exercising a right or remedy under an Agreement does not operate as a waiver or prevent further exercise of that or of any other right or remedy.

37. Consents and Approvals

- 37.1 Except as expressly provided in an Agreement, a Party may conditionally or unconditionally give or withhold any consent or approval under an Agreement, but that consent is not to be unreasonably delayed, conditioned or withheld.

38. Amendments

- 38.1 Except where otherwise expressly provided for in an Agreement, no amendment, variation, supplement or waiver of any provision of an Agreement shall be effective except by a written instrument signed by the duly authorized representatives of both Parties.

38.2 Any amendment, variation, supplement and waiver to an Agreement under this RIO, including its Annexes, shall not be effective until it has been notified to, and approved by CRA. CRA shall be entitled to provide its decision to approve or reject the agreed amendment, variation, supplement and waiver to an Agreement is not in conformity with the ARF. In the event the CRA does not respond with the thirty (30) Calendar Days timeframe, the amendment, variation, supplement or waiver shall be deemed approved.

38.3 No amendments, variations or supplements shall affect the validity or enforceability of any of the remaining provisions of an Agreement.

39. Third Party Rights

39.1 Except as expressly provided in this RIO, each Party that executes an Agreement does so solely in its own legal capacity and not as agent or trustee for or a partner of any other person, and only the Parties which execute this Agreement have a right or benefit under it.

40. Counterparts

40.1 An Agreement under this RIO may be executed in any number of counterparts, each of which, when executed, is an original. Those counterparts together make one instrument.

41. Costs, Expenses and Duties

41.1 Each Party must pay its own costs and expenses in respect to an Agreement especially for negotiating, preparing and executing an Agreement and for documents, any other instrument executed under an Agreement and transactions contemplated by an Agreement.

42. Obligations in Good Faith

42.1 Each Party must act in good faith with respect to all matters relating to or contemplated by an Agreement, including but not limited to any negotiations.

43. Insurance

43.1 Each Party must have in force and maintain for the term of this RIO Agreement, with an insurance company licensed in Qatar, a broad form public liability insurance policy to the value of no less than ten (10) million Qatari Riyals.

43.2 Upon receipt of a written request from a Party, the other Party must as soon as reasonably practicable produce evidence that it has complied or continues to comply with its obligations under clause 43.1.

44. Dealing with Government

44.1 Each Party must deal with the Government and CRA promptly and without undue delay in all matters concerning an Agreement under this RIO including on all reporting to Government and CRA and on matters requiring Government or CRA approval or consultation.

44.2 Each Party shall obtain and maintain any authorization, permission, license, waiver,

registration or consent from any person necessary for it to comply with its obligations under an Agreement.

45. No Prior Representations

45.1 No Party has entered into an Agreement relying on any representations made by or on behalf of the other, other than those expressly made in this Agreement.

46. Further Assurances

46.1 Except as expressly provided in an Agreement, each Party must, at its own expense, do all things reasonably necessary to give full effect to an Agreement and the matters contemplated by it.

47. Force Majeure

47.1 Neither Party shall be liable to the other Party for any delay or failure to perform any obligation under an Agreement to the extent that performance of such obligation is prevented by a Force Majeure.

47.2 The Party initially affected by a Force Majeure shall, as soon as is reasonably practicable, notify the other of the Force Majeure event, copying CRA, describing the effect of the Force Majeure event on the performance of obligations under an Agreement and of the estimated extent and duration of its inability to perform or delay in performing its obligations (**Force Majeure Event Notification**).

47.3 Upon cessation of the Service effects of the Force Majeure, the Party initially affected by a Force Majeure shall promptly notify the other of such cessation.

47.4 If as a result of a Force Majeure, the Party is prevented from performing its obligations under an Agreement, such Party shall, subject to the provisions of clause 47.5 of an Agreement perform those of its remaining obligations not affected by such Force Majeure. In performing those of its obligations not affected by a Force Majeure event, the Party initially affected by a Force Majeure event shall deploy its resources such that (when taken together with other obligations to its customers and Third Parties) there is no undue discrimination against the other Party.

47.5 To the extent that a Party is prevented as a result of a Force Majeure from providing all of the Services or facilities to be provided under an Agreement, the other Party shall be released to the equivalent extent from its obligations to make payment for such Services or facilities or complying with its obligations in relation thereto.

47.6 If the effects of such Force Majeure continues for:

- (a) A continuous period of less than sixty (60) Business Days from the date of the Force Majeure Event Notification (whether or not notice of cessation has been given pursuant to clause 47.3 of this RIO) any obligation outstanding shall be fulfilled by the Party initially affected by the Force Majeure as soon as reasonably possible after the effects of the Force Majeure have ended, save to the extent that such fulfillment is no longer possible or is not required by the other Party.
- (b) A continuous period of sixty (60) Business Days or more from the date of the Force Majeure Notification (and notice of cessation has not been

given pursuant to clause 47.3 of this RIO), either Party shall be entitled (but not obliged) to terminate an Agreement by giving not less than thirty (30) Business Days written notice to the other Party. Such notice shall be deemed as if it had not been given in case that notice of cessation pursuant to clause 47.3 of this RIO is received by the Party that was not initially affected by a Force Majeure prior to the expiry of the thirty (30) Business Days termination notice. If an Agreement is not terminated in accordance with the provisions of this clause 47.6 of an Agreement, any obligations outstanding shall be fulfilled by the Party initially affected by the Force Majeure as soon as reasonably possible after the effects of the Force Majeure have ended, save to the extent that such fulfilment is no longer possible or is not required by the other Party.

48. Warranties

48.1 Each Party warrants that, as at the Effective Date and continuing throughout the Term:

- (a) It is a corporation duly incorporated, validly existing and is in good standing under the laws of the state in which it is incorporated;
- (b) It has all necessary corporate power and authority to own and operate its assets and to carry on its business as presently conducted and as it will be conducted under an Agreement;
- (c) It has all necessary corporate power and authority to enter into an Agreement and to perform its obligations under the Agreement, and the execution and delivery of the Agreement and the consummation of the transactions contemplated in the Agreement have been duly authorized by all necessary corporate actions on its part; and
- (d) The Agreement constitutes a legal, valid and binding obligation of each Party, enforceable against it in accordance with its terms
- (e) That any information provided is complete, true and correct, and not materially misleading.

49. Liability

49.1 To the extent permitted by law, neither Party is liable to the other Party except as provided in this clause 49 and clause 52.

49.2 Each Party shall exercise the reasonable skill and care of a competent OLO in the performance of their obligations under an Agreement.

49.3 Notwithstanding anything else in this clause 49 neither Party is liable to the other Party for any Consequential Loss suffered by the other Party arising from, or in connection with, an Agreement.

49.4 To the extent permitted by law, all express or implied representations, conditions, warranties and provisions whether based in statute, legal precedence or otherwise, relating to an Agreement, that are not expressly stated in this RIO, are excluded.

49.5 Notwithstanding anything to the contrary in this RIO, neither Party excludes or limits liability for:

- (a) Death or personal injury attributable to its own negligence or the negligence of its employees, agents or sub-contractors while acting in the course of their employment, agency or contract;
- (b) Any fraudulent mis-statement or fraudulent misrepresentation made by it in connection with this RIO; or
- (c) Any other liability that cannot be excluded by law.

49.6 Subject to clause 49.5, the maximum aggregate liability of each Party to the other Party for all damages, losses and expenses arising under or in connection with an Agreement, whether that liability arises in contract (including under an indemnity), tort (including negligence or breach of statutory duty), under statute or otherwise, for all events in a 12 month period shall be limited to one hundred percent (100%) of the Charges paid under an Agreement or ten (10) million Qatari Riyals (whichever is the less).

49.7 Each Party acknowledges and agrees that its liability to pay any amounts as Service Credits or liquidated damages shall not count towards the cap on liability under clause 49.6.

49.8 A Party's liability to the other Party arising from or in connection with this RIO (including liability for negligence or breach of statutory duty) is reduced proportionally to the extent that:

- (a) The other Party has not taken all reasonable steps to minimize and mitigate its own loss, damage or liability in relation to the act, omission or event giving rise to such loss, damage or liability; or
- (b) A Party's liability is caused, or contributed to, by the other Party.

49.9 Neither Party will be liable to the other Party for any loss or damage arising from, or in connection with, this RIO to the extent that the other Party has or has sought to claim or recover that same loss or damage pursuant to another agreement between the Parties in respect of the supply of telecommunications services.

49.10 Neither Party will be liable to the other Party in connection with an action, claim or demand brought or made against the other Party by a Third Party to whom the other Party provides a telecommunications service under a contract (or otherwise), where that liability could legally have been excluded or reduced in that contract by the other Party.

49.11 To the extent that this RIO Agreement contains a Service Credit (or similar rebate or remedy) in relation to the performance by a Party (**Liable Party**) of an obligation in relation to a Service Level (or similar obligation) and the other Party seeks to obtain the benefit of that Service Credit (or similar rebate or remedy), that Service Credit (or similar rebate or remedy) shall be the sole and exclusively liability of the Liable Party to the other Party in connection with the performance of that obligation and is the sole remedy of the other Party against the Liable Party in connection with the performance of that obligation.

50. Severability

50.1 The invalidity or unenforceability of any provision in an Agreement shall not affect the validity or enforceability of the remaining provisions.

51. Governing Law

- 51.1 The interpretation, validity and performance of this RIO shall be governed in all respects by the laws of Qatar.
- 51.2 Each Party irrevocably and unconditionally submits to the exclusive jurisdiction of the courts of the State of Qatar.

52. Indemnities

- 52.1 Subject to clauses, 49.3, 49.5 and 49.6 each Party (**Indemnifying Party**) indemnifies the other Party (**Indemnified Party**) against all damages, costs, claims, expenses (including legal costs) arising from or relating to:
- (a) Subject to clause 49.5, any losses, costs, claims, damages, expenses, liabilities, proceedings or demands incurred or suffered by the Indemnified Party arising from the death or personal injury of any person to the extent such death or personal injury is caused by the Indemnifying Party under or in connection with this RIO;
 - (b) Any losses, costs, claims, damages, expenses or liabilities incurred by the Indemnified Party for damage (excluding Consequential Loss) to its tangible property, to the extent that such claim relates to any act, omission or breach of this RIO by the Indemnifying Party or any employee, representative, contractor or agent of the Indemnifying Party; and
 - (c) Any losses, costs, claims, damages, expenses, liabilities, proceedings or demands by a Third Party against the Indemnified Party, to the extent that such claim relates to any act, omission or breach of this RIO Agreement by the Indemnifying Party or any employee, representative, contractor or agent of the Indemnifying Party.
- 52.2 The Indemnifying Party is not liable to the Indemnified Party to the extent that the liability which is the subject of the indemnity claim is the result of a grossly negligent, wilful or reckless breach of an Agreement by the Indemnified Party or its employees, representatives, contractors or agents.
- 52.3 The obligation of the Indemnifying Party to indemnify the Indemnified Party under this clause 52 is reduced:
- (a) To the extent that the liability which is the subject of the indemnity claim is the result of an act or omission of the Indemnified Party or the directors, officers, personnel, agents or contractors of the Indemnified Party; and
 - (b) In proportion to the extent to which an act or omission of the Indemnified Party or the directors, officers, personnel, agents or contractors of the Indemnified Party (including negligence) gives rise to the indemnity claim.
- 52.4 Each provision of this RIO limiting or excluding liability or imposing requirements for indemnification operates separately and survives independently of the others even if one or more such provisions is inapplicable or held unreasonable in any circumstances.

Annexes

Annex A – Definitions

1. Interpretation

1.1 In this RIO, the following rules of interpretation apply:

- (a) Capitalized words and terms shall have the meanings ascribed to them in this
- (b) Annexes
- (c) Annex A – Definitions.
- (d) The headings in this RIO shall not be deemed to be part of this RIO and shall not be used in the interpretation or construction of it;
- (e) The singular indicates the plural and vice versa;
- (f) Where a word or phrase is given a particular meaning, other parts of speech and grammatical forms of that word or phrase have corresponding meanings;
- (g) The words 'such as', 'including', 'particularly' and similar expressions are not used as, nor are intended to be interpreted, as words of limitation;
- (h) A reference to:
 - i. A person includes a natural person, partnership, joint venture, government agency, association, corporation or other body corporate;
 - ii. A thing (including any legal right) includes a part of that thing;
 - iii. A Party includes its successors and permitted assigns;
 - iv. A document includes all amendments or supplements to that document;
 - v. A clause, term, Annex, schedule or attachment is a reference to a clause or term of, Annex, attachment to this RIO;
 - vi. This RIO includes all Annexes and attachments to it;
 - vii. A law includes a treaty, decree, convention, statute, regulation, ordinance, by-law or judgment, and is a reference to that law as amended, consolidated or replaced;
 - viii. A monetary amount is in Qatari Riyals;
- (i) When the day on which something must be done is not a Business Day, that thing must be done on the following Business Day;
- (j) No rule of construction applies to the disadvantage of a Party because that Party was responsible for the preparation of this RIO or any part of it.

2. Definitions

2.1 A term or expression used in this RIO that starts with a capital letter and is defined in this

2.2 Annexes

2.3 Annex A – Definitions or elsewhere in this RIO has the meaning given in this Annex or elsewhere in this RIO.

2.4 The following definitions apply to terms and expressions used in this RIO:

Access Provider means the Party that supplies a Service to the OLO.

Access Seeker means the Party that acquires a Service from Vodafone.

Acceptance Notice is the written acceptance of the OLO regarding the terms and conditions set out in this RIO.

Advanced Capacity Order (ACO) refers to a quarterly commitment for one Party to provide and the other Party to accept capacity in accordance with the forecast capacity orders as agreed by the Parties pursuant to Annex F – Planning, Forecasting and Provisioning.

Affected Party has the meaning as given in clause 27.1 of the Main Body.

Agreement

Alteration means either a Network Alteration or Interconnection Alteration (as the case may be).

Annex is an annex to this RIO Agreement, which forms part of this RIO Agreement.

Answer Signal is a supervisory signal returned from the called device to the originating switch when the call receiver answers.

Applicable Regulatory Framework means all applicable law, enactments, regulations, regulatory policies, regulatory guidelines, industry codes, regulatory permits and regulatory licenses governing the telecommunications sector of the State of Qatar, which is legally binding and in force from time to time.

Approved Purpose refers to the purpose of interpreting, implementing, and a Party exercising its rights and performing its obligations under, this RIO Agreement.

Arbitration is part of the Dispute Resolution Procedure set out in clause 25 of this RIO Agreement.

Arbitration Rules means the 'rules of arbitration' contained in the Rules of Conciliation and Arbitration of the Qatar International Center for Conciliation and Arbitration dated 1 May 2012, as amended from time to time.

BER means Bit Error Rate.

Bi-directional Interconnection Link is an Interconnection Link that allows conveyance of Traffic originating on either end of the link.

Billing Discrepancy refers to any discrepancy between the Billed Party's Usage Report and the Billing Party's Usage Report that is above the Tolerable Discrepancy.

Billing Dispute refers to a disagreement between the Parties regarding amounts due under an invoice for Services covered by this RIO Agreement.

Billing Dispute Escalation Procedure refers to the process set out in clause 3.8(g) of Annex B – Billing Processes and Procedures - by which the Parties seek to resolve a Billing Dispute that is not resolved during the Negotiation Period.

Billing Dispute Notice is a written notice from the Billed Party to the Billing Party that continues to dispute an invoice in good faith after following the Billing Reconciliation Procedure.

Billing Dispute Notification refers to the amount of time that the Billed Party has to notify the Billing Party of a continued Billing Dispute if the Parties fail to reach an agreement through the Billing Reconciliation Procedure.

Billing Dispute Resolution Procedure refers to the process by which the Billed Party and the Billing Party seek to resolve a Billing Dispute pursuant to clause 3.8 of Annex B – Billing Processes and Procedures.

Billing Information refers to information provided by the Billing Party, as set out at clause 2.3 of Annex B – Billing Processes and Procedures, in support of invoices issued by the Billing Party to enable the Billed Party to validate and pay the other's invoice.

Billed Party is the Party which receives an invoice from the Billing Party for Charges and other payments due under this RIO Agreement.

Billing Party is the Party which sends an invoice to the Billed Party for Charges and other payments due under this RIO Agreement.

Billing Period is the period referred to in clause 3.1(a) of Annex B – Billing Processes and Procedures.

Billing Reconciliation Procedure is the procedure whereby the Parties seek to resolve Billing Discrepancies pursuant to clause 3.3(d) of Annex B – Billing Processes and Procedures.

Billing Representatives is a billing representative, who shall be sufficiently competent, experienced and authorized to handle billing matters

Billing System is a system to issue invoices relating to Charges payable by each Party under this RIO Agreement.

Billing Units are the units in which Services are billed in accordance with Annex H - Price List.

Breach Notice has the meaning provided to clause 27 of the Main Body.

Business Day is a day other than a Friday or Saturday, on which banks are open for ordinary banking business in the State of Qatar;

Busy Hour refers to the 60 minute period during which the Network or a relevant part of the Network experiences its peak level of Traffic.

Calendar Days are days of the Gregorian calendar.

Calendar Months are months of the Gregorian calendar.

Calendar Year is a Gregorian calendar year.

Call refers to transmission path through Telecommunications Networks for the sending of messages within the voice band.

Call Data Record (CDR) is a call data record (CDR) includes the details of a phone call, SMS or data service established through the telephone exchange, including an automated record of the length or volume of each telephone call or data session.

Called Party means the person receiving a Call.

Calling Line Identification (CLI) refers to Numbering and other address information transmitted from the Calling Party to the Called Party for the purpose of identifying the origin of Traffic and enabling CLIP.

Calling Line Identification Presentation (CLIP) as defined by ITU-T Q.731, provides the Calling Party's number, with additional address information (e.g. Calling Party sub-address) if any, to the Called Party.

Calling Line Identification Restriction (CLIR) as defined by ITU-T Q.731, provides the Calling Party with the ability to restrict presentation of the Calling Party's number and sub-address to the Called Party.

Calling Party means the person who is originating the Call.

CDU is a Clock Distribution Unit.

Charge Rate Period is the delineated window of time during which a given charge rate or price is valid for the purposes of quoting or billing (e.g. peak, off-peak).

Charges refer to the charges payable by one Party to the other for the provision of Services in accordance with this RIO Agreement.

Commercial Representative is a person within each organization that is suitably qualified and experienced with sufficient authority on commercial issues that is the principal point of contact between the two Parties.

Compliant Equipment refers to equipment used for the purpose of providing a public telecommunications service that is compliant with national and international standards and interoperable with the network elements of the Licensee's Network.

Confidential Information refers to information provided by one Party to the other Party that is marked as "Confidential", or that is provided for the purposes of Interconnection and not generally available to the public, or otherwise previously available to the Receiving Party except by virtue of mutual understanding, or in other case is (by its nature) confidential to a Party.

Consequential Loss includes: (a) special, indirect, incidental, consequential, punitive or exemplary loss or damage; or (b) economic loss, loss of profits, loss of revenue, wasted expenditure or loss of anticipated savings or business, pure economic loss, loss of opportunity, expectation loss, loss of goodwill, loss of bargain or loss of management time, irrespective of whether or not a Party was aware or should have been aware of the loss or damage, and whether or not that Party is warned of the possibility of that loss or damage.

Country Code (CC) has the same meaning as in ITU-T Rec. E.164.

CRA means the Communications Regulatory Authority in the State of Qatar.

Critical Problem refers to a problem resulting in the defective conveyance of interconnected Traffic between the Parties' Networks including, but not limited to dropped or misrouted Calls, failure to adhere to applicable Quality of Service standards and that includes any such problems resulting from deviations from the applicable specifications for testing.

Customer is an End User who has subscribed to receive a public telecommunications service from a Party.

Customer-Sited Interconnection refers to a mode of Interconnection where Vodafone DDF or ODF (CSI) and transmission equipment is installed at the boundary of or within an Access Seeker Site **Data Management Amendment** refers to data reconfiguration of Vodafone Network or Access Seeker's Network as is necessary for the access, routing and charging of Traffic.

Defaulting Party has the meaning as given in clause 27 of the Main Body.

Delivery Date is the date on which an invoice is delivered to a Party and confirmation is received pursuant to clause 3.3(c) of Annex B – Billing Processes and Procedures.

Demarcation Point is the point located at the end of the indoor cable provided by Vodafone that connects the OLO's equipment to Vodafone Optical or Digital Distribution Frame at Access Seeker's side.

Detailed Billing Information refers to the detailed information needed for charging a Service as specified in Annex B – Billing Processes and Procedures for each specific Service.

Digital Distribution Frame (DDF) is a passive device that terminates electrical cables, allowing arbitrary connections to be made.

Disclosing Party is a Party disclosing Confidential Information to the other Party under this RIO Agreement.

Dispute refers to a disagreement between the Parties under the Dispute Resolution Procedure.

Dispute Resolution Procedure is the procedure for resolving Disputes set out in clause 25 of the Main Body of the present RIO Agreement.

Dominant Service Provider has the same meaning as in the Telecommunications Law.

Due Date has the meaning given to it in clause 3.1(g) of Annex B – Billing Processes and Procedures.

Dummy CLI is a non-subscriber CLI.

Effective Date is the date the RIO Agreement has been signed by both Parties.

Emergency Conditions are conditions that causes or is likely to cause significant damage to the Network of a Party or that endangers or is likely to endanger the health or safety of any person.

End User is the ultimate recipient of a service.

Fault means a condition that causes a Network or part of a Network to operate other than intended or to cease operating altogether, including a disruption or degradation of service.

Fault Escalation Contacts are the designated contacts or representatives of each Party which are to be contacted in the event of a Fault, including higher level management to be contacted for second and third level Faults and for Faults that require escalation.

Fault Report refers the reporting of a Fault from the Fault detecting Party to the other Party.

Fault Reporting Contacts are the contacts of each Party to whom the Faults are reported to

FCI means Forward Call Indicator.

Fixed Network is a Telecommunications Network used to provide Public Fixed Telecommunications Service, pursuant to a License issued by CRA or the Minister of ICT where relevant.

Force Majeure Event Notification has the meaning of clause 47 of the Main Body.

Force Majeure means any circumstance or event beyond the reasonable control of the Party affected thereby; including but not limited to acts of God, war or military operations, insurrection or civil disorder, national or local emergency, acts of foreign enemies, requisition or embargo, riots or commotion, fire, lightning, explosion, flood, earthquake, weather of exceptional severity, acts or omissions of government or other competent authority, industrial disputes of any kind (save for those involving the affected Party's own employees), acts or omissions of persons for whom neither Party is responsible or any other cause whether similar or dissimilar outside the Party's reasonable control as specified in clause 47.

Forecasting Forms refer to forms set out in Annex F – Planning, Forecasting and Provisioning or as otherwise agreed in writing between the Parties.

Gateway Mobile Switching Centre is the mobile switching center of a Party.

Geographic Number is a Service number as defined by ITU-T E.164, and is a number allocated within the National Numbering Plan initially for use in a nominated geographic area(s) within Qatar.

Geographic Number Range is the Number Range associated with Geographic Numbers.

Government Authority is any government agency, body, department, organization or similar entity of the State of Qatar.

Government refers to the Government of the State of Qatar.

GPS means Global Positioning System.

IAM means Initial Address Message.

Indemnified Party has the meaning as given clause 52 of the Main Body

Individual License

Integrated Services Digital Network User Part (ISUP) is defined in ITU-T Q760 to Q764, a key protocol in the SS7/C7 signaling system which defines the protocol and procedures used to set-up, manage, and release trunk circuits carrying Calls between different Switches.

Intellectual Property relates to patents, trademarks, service marks, rights (registered or unregistered) in any designs, applications for any of the foregoing, trade or business names, copyright (including rights in computer software) and topography rights; know-how, secret formulae and processes, lists of suppliers and customers and other proprietary knowledge and information; internet domain names; rights protecting goodwill and reputation; database rights and all rights and forms of protection of a similar nature to any of the foregoing or having equivalent effect anywhere in the world and all rights under licenses and consents in respect of any of the rights and forms of protection mentioned in this definition.

Interconnection is the physical and logical linking of Telecommunications Networks in order to allow the Customers of one Service Provider to communicate with Customers of the same or another Service Provider or to enable them to access Services provided by another Service Provider. The term “Interconnect” has a corresponding meaning.

Interconnection Agreement has the meaning given to it in clause 2.7 of Part One of the Main Body.

Interconnection Alteration is a change (other than a Network Alteration, Data Management Amendment or Planned Upgrade Program) in the configuration or method of Interconnection between the Parties, including but not limited to the decommissioning of a Point of Interconnection, Interconnection Link or Interconnection Path (as the case may be).

Interconnection Link is a Telecommunications transmission facility connecting a Vodafone Service Node and Access Seeker Service Node passing through a Point of Interconnection as described in detail in Annex C – Service Schedule.

Interconnection Link Forecasting Form is the form set out in Annex F – Planning, Forecasting and Provisioning or as otherwise agreed in writing between the Parties.

Interconnection Link Monitoring is defined as given in clause 8 of Annex E - Service Level Agreements.

Interconnection Node is a switching center from which call termination Interconnection Services are offered.

Interconnection Path is the geographical/physical route and higher capacity systems used to provide the Interconnection Link(s).

Interconnection Route is the physical and logical course of an Interconnection Link or Links.

Interconnection Service Order Form is the form set out in Annex F – Planning, Forecasting and Provisioning or as otherwise agreed in writing between the Parties.

Interconnection Testing refers to a testing procedure to produce assurance that each Party's Network can properly exchange Traffic and all other information necessary to fulfill their respective obligations in accordance with this RIO with the other Party's Network and that interconnection of these two Networks will not adversely affect the existing Services provided by each Party to their respective customers.

Interconnection Testing Request is the form set out in Annex G - Operational Procedures or as otherwise agreed in writing between the Parties.

International Call Conveyance Service is a Service as defined in Annex C – Service Schedule.

International Correspondent is a telecommunications service provider outside of Qatar to which a Party conveys traffic.

International Gateway (IGW) refers to a Point of Interconnection that allows the conveyance of traffic to and from Vodafone's international facilities.

ISDN means Integrated Services Digital Network

Issue Date refers to the date of issuance of a document

ITU means International Telecommunication Union.

ITU-T means the Telecommunication Standardization Sector of the International Telecommunication Union.

Joint Interconnection Committee is a committee consisting of representatives of both Parties and established in accordance with the provisions of clause 12.3 of the Main Body of this RIO.

License is a license of a Party, as that term is defined in the Telecommunications Law.

Local Exchange (LE) is a Switch for customer access to the PSTN that provides customer connectivity via the access network.

Main Body means the main body of this RIO.

Mass Call Event is the planned occurrence of an unusually high volume of Calls to a specific destination (number or group of numbers).

Mobile Message Termination Services are the Services described in Schedule 2 of Annex C – Service Schedule, namely:

- (a) Vodafone Short Messaging Service (SMS) Termination Service; and
- (b) Vodafone Multimedia Messaging Service (MMS) Termination Service.

Mobile Network is a Telecommunications Network used to provide a Mobile Service, pursuant to a License issued by CRA.

Mobile Number is a Service number as defined by ITU-T E.164, and is a number allocated within the National Numbering Plan for use in connection with a Mobile Service in Qatar.

Mobile Number Range is the Number Range associated with Mobile Numbers.

Mobile Station Roaming Numbers are telephone numbers defined according to ITU-T E.164 (MSRNs) used to route telephone calls in a Mobile Network.

Mobile Service is a Telecommunications service provided by means of radio communications access facilities that is capable of continuous and uninterrupted use while moving between the cell area of one antennae and the cell area of a different antennae.

MTIE means Maximum Time Interval Error.

MTP means Message Transfer Part, as defined by ITU-T Rec Q.700 – Q.704, Q.706 and Q.707.

Multimedia Messaging Service (MMS) is a transmission protocol that enables images, video (MMS) clips and sound files, to be transmitted via Mobile Networks according to standards established by 3GPP, 3GPP2 and the Open Mobile Alliance (OMA).

National Destination Code is a national optional code field, within the E.164 number plan, which combined with the subscriber's number (SN) will constitute the national (significant) number of the international public telecommunication Service for geographic areas.

National Numbering Plan has the same meaning as in the Telecommunications Law.

Negotiation Period is the period of time within which the Parties seek to resolve a Billing Dispute as more particularly described in clause 3.8(d) of Annex B – Billing Processes and Procedures.

Network is a public Telecommunications network.

Network Alteration refers to a change to one Party's Network, which requires a change to be made to the other Party's Network to allow the continuance of Services pursuant to this RIO Agreement.

Network Capacity Forecasting Form is the form set out in Annex F – Planning, Forecasting and Provisioning or as otherwise agreed in writing between the Parties.

Network Plan is a technical document containing the necessary specific information required to document Interconnection, as more particularly described in Annex F – Planning, Forecasting and Provisioning.

Network Termination Point is the point on a Party's Network at which Traffic is conveyed to an End User's device or premises cabling.

NOC means Network Operations Centre.

Non-Service Affecting Fault is a Fault that does not affect the ability of the Network to handle calls or messages.

Number Range is a group of Numbers for which the rights of use for which have been allocated to a Party under the National Numbering Plan, for the purposes of providing Telecommunications Services to Customers.

Numbering is a serial numbering pattern to identify designated termination points in the public telecommunications network, including the necessary information for routing of telecommunications signals to a particular termination point. The term "Numbers" has a corresponding meaning.

Optical Distribution Frame (ODF) is the equipment that terminates optical cables, allowing arbitrary connections to be made.

Order Cancellation Form is the form set out in Annex F – Planning, Forecasting and Provisioning or as otherwise agreed in writing between the Parties.

Originating Party is the Party that sends Traffic from an End User connected to its Network for delivery by the other Party.

Other Licensed Operator (OLO) is any operator licensed in Qatar which pursuant to its license is entitled to interconnect with Vodafone and requesting such interconnection.

Outgoing International Call Conveyance Service is a Service as defined in Schedule 3 of Annex C – Service Schedule.

Outgoing International Minutes Forecasting Form is the Forecasting Form set out in Annex F – Planning, Forecasting and Provisioning.

Party refers to a Party entering into a RIO Agreement.

Planned Engineering Work includes software upgrades or other network management measures by one Party as referenced in clause 3. of Annex G - Operational Procedures that may cause temporary disruption to the other Party's Network, but which are not part of a Planned Upgrade Program or constitute a Network Alteration.

Planned Upgrade Program is a program of Network modifications that may cause the other Party to have to modify its own network to continue to convey Traffic and that is notified in advance to the other Party on or before the Effective Date or at least twelve (12) Calendar Months in advance.

Point of Interconnection (POI) is a physical point at which Vodafone Network and Access Seeker Network are interconnected.

PRC Primary Reference Clocks is as described in Annex C – Service Schedule

Price List refers to the price list of Services set out in Annex H - Price List.

PSTN means Public Switched Telephone Network.

Public Mobile Telecommunications Network means any network over which Mobile Services are made available to the general public on a commercial basis and that fall within the scope of a public mobile telecommunications networks and services license.

Qatar National Numbering Plan means version 7 of the Qatar National Numbering Plan issued by the CRA on September 2014, as may be amended from time to time.

Qualified Licensee has the meaning given to it in clause 2.1 of Part One.

Quarter is a period of three Calendar Months commencing on the first Calendar Day of each of January, April, July and October.

Ready for Service Date is the date on which a Service is tested and accepted by the OLO.

Receiving Party is a Party receiving information or a request from of the other Party under this RIO Agreement.

Reference Offer refers to a standard offer of defined services based on minimum conditions, which a Service provider must offer all licensed Service provider in the market entitled to such service.

Remote Switching Units is a unit located away from a Local Exchange used to extend the geographic area over which customers are served.

Requesting Access Seeker has the meaning as given in Annex G - Operational Procedures.

Review Notice has the meaning as given in clause 33.1 of the Main Body.

RIO Agreement means the agreement set out in Part Two of the Reference Interconnection Offer, including the Main Body, the Annexes and Schedules.

RU means Remote Unit or Remote Switching Unit.

SDH means Synchronous Digital Hierarchy.

Service means the Services specified in Annex – C Service Schedule.

Service Affecting Fault is a Fault that may cause interruption of a Service provided to customers. For example, failure of more than one Link on a particular route, or loss of an Interconnection Node. Other circumstances that may cause Service Affecting Faults include: breakdown of major cable plant and loss of SS7 Signaling link set.

Service Credit means an amount determined or calculated in accordance with Annex E - Service Level Agreements in respect of a failure by Vodafone to comply with one or more of the Service Levels.

Service Handover Form is the form set out in Annex F – Planning, Forecasting and Provisioning as otherwise agreed in writing between the Parties.

Service Handover is the initiation of a Service pursuant to clause **Error! Reference source not found.** of Annex F – Planning, Forecasting and Provisioning.

Service Node (SN) is the major switching and/or routing elements in a Party's Network, which also provide national transit capability and customer connectivity via the access network.

Service Provider is a person that is licensed to provide Telecommunications Services to the public or licensed to own, establish or operate a telecommunications network to provide Telecommunications Services to the public. This includes providers of information or content provided using a Telecommunications Network.

Service Schedules means Annex C – Service Schedule.

Short Code means a code of three or more digits allocated by the CRA for access to a specific Telecommunications services as set out in the Qatar National Numbering Plan.

Short Message Service (SMS) is a messaging system representing an alphanumeric sequence of text, which uses the SS7 MAP protocol and generally conforms to GSM Technical Specs of GSM 03.40, GSM 04.11 and GSM 09.02 (as amended from time to time).

Signaling Point Codes have the meaning as given in Annex C – Service Schedule.

Signaling System No.7 (SS7) is a set of telephony signaling protocols described in ITU-T's Q.7XX-series recommendations, also known as "Common Channel Signaling System 7", CCSS7, C7, CCITT number 7, CCIS7.

Signaling Transfer Point (STP) means a device which transfers signaling from one link to another link in the signaling network that provides authorized access to MSCs, HLRs, SMSCs, SCP "IN" for both ISUP and SCCP traffic.

Site refers to a network facility location of a network provider.

SPAM is any unsolicited content (e.g. advertising, chain letters) sent by or on behalf of advertisers and marketers to a wireless mobile device at a time other than when the Customer requests it and for which the Customer has not previously given his consent to receive it.

SSU means Synchronization Supply Unit.

Successful Call is a chargeable Call that has passed across a POI and for which an Answer Signal is returned by the other Party's network.

Suspending Party has the meaning as given in clause 26 of the Main Body.

Switch is an telecommunications apparatus within a public telecommunications system that performs switching, routing, connecting and recording of calls and other network events, having the ability to connect to two or more destinations. "Switching" has a corresponding meaning.

Taxes means all taxes (including goods and services taxes), duties, levies, and other similar charges (and any related interest and penalties) however designated imposed under any law or regulation.

Technical Representative is a person within each organization that is suitably qualified and experienced with sufficient authority on technical issues that is the principal point of contact between the two Parties.

Telecommunications Equipment has the meaning given to it in the Telecommunications Law.

Telecommunications Facilities has the meaning given to it in the Telecommunications Law.

Telecommunications Law is the Decree Law No. 34 of 2006 in the State of Qatar, as may be amended from time to time.

Telecommunications means the transmission, emission or reception of writing, signs, signals, images, sounds, data, text or information of any kind or nature by wire, radio, optical or other electromagnetic means of communications, or by any other telecommunications means.

Telecommunications Network has the meaning given to it in the Telecommunications Law.

Terminating Party is the Party that receives Traffic for delivery to End User devices connected to its Network.

Termination Services or Interconnection Services are the Services described in Schedule 1 of Annex C – Service Schedule

Third Party is any party other than the Parties of this RIO.

Tolerable Discrepancy is the discrepancy of up to three percent (3%) of the total invoiced amount or a monetary value of less than QR 100,000 (excluding Government Royalties and Fees) per Service type will be acceptable.

Toll-Free Number is a Service number allocated within the National Numbering Plan for use in connection with a toll free Service in Qatar.

Toll-Free Number Range is a Number Range associated with Toll Free Numbers.

Traffic refers to Telecommunications signals that are conveyed across a Telecommunications Network or Networks, including, but not limited to, voice, SMS messages, MMS messages and IP packets.

Transit Media Gateway has the meaning as given in Annex C – Service Schedule.

Unidirectional Interconnection Link is a Link that allows conveyance of Traffic originating on only one end of the link.

Usage-Based Services is a Service as described in Annex C – Service Schedule that is billed on a per second, per minute, per message, per kilobyte or other usage-dependent increment.

Usage Report is a report stating the actual level of utilization of the Interconnection Services provided under this RIO Agreement in accordance with clause 2.5 of Annex B – Billing Processes and Procedures.

UTC means Universal Time Coordinated.

Video Call is a Call initiated by a user with appropriately equipped video and audio hardware connected to the Mobile Network of a Party that conveys audio and video content to another user with appropriately equipped video and audio hardware connected to the Mobile Network of a Party.

Voice Call is a Call conveying a voice, facsimile or data transmission in the voice band (300 Hz to 3.4 kHz).

Working Hours are from 07:00 to 15:00 on a Business Day.

Annex B – Billing Processes and Procedures

1. Chargeable Services

- 1.1 Chargeable Services are those defined in Annex C – Service Schedule. Charging and pricing of Services are determined in Annex H - Price List.
- 1.2 Delivered Services and related installation and usage Charges shall be invoiced according to the principles defined in this RIO and in particular according to the procedures defined in this Annex B – Billing Processes and Procedures. The value of Charges incurred shall be calculated using the prevailing prices as defined in Annex H - Price List and the formulas defined in this Annex B – Billing Processes and Procedures.

2. Billing Format

- 2.1 Billing for Interconnection Link Services: not used
 - (a)
- 2.2 Billing for Interconnection Services (Usage-Based Services):
 - (a) Both parties will invoice the other Party for Usage-Based Services in the manner defined in Annex C – Service Schedule according to the prices included in Annex H - Price List.
 - (b) Usage-based traffic shall be charged as specified in Annex H - Price List. Such traffic shall be invoiced pursuant to the provisions of clause 3 of this Annex B – Billing Processes and Procedures.
 - (c) In cases in which traffic originates from either Party 's Network and terminates on Networks of a Third Party (e.g. international operators), the Party receiving the traffic shall bill the other Party in accordance with the appropriate Service Schedules in Annex C – Service Schedule and the prices given in Annex H - Price List.
 - (d) Charges will continue to accrue for Usage-Based Services until the parties cancel the relevant Service. The Party that wishes to cancel one or more Services shall provide notice of the request for cancellation to the other Party according to the cancellation requirements as listed in clause **Error! Reference source not found.** of Annex F – Planning, Forecasting and Provisioning in order for that Party to initiate the cancellation actions.
 - (e) Cancellation of any single Service element will not affect the continuation of or accrual of charges for any other Service(s).
- 2.3 Detailed Billing Information for Usage Based Services:
 - (a) Vodafone and the OLO will collect and record the following Detailed Billing Information to the extent applicable for each call or other type of traffic that is included in a Service Schedule, regardless of whether it is chargeable:
 - i. Unique identification number for the relevant interconnection Switch;
 - ii. Dialed digits;

- iii. Calling Line Identification (CLI);
- iv. The date and the time when the answer signal is received by the Party providing the Detailed Billing Information;
- v. Chargeable duration as determined pursuant Annex C – Service Schedule (whether measured or derived);
- vi. The Service type involved to the level of detail specified in the relevant Service Schedule; and
- vii. Such other information as may be agreed between the parties.

2.4 Retention of Detailed Billing Information:

- (a) Vodafone and the OLO shall store the Detailed Billing Information for a period of not less than six (6) months, or such other period as agreed in writing between the Parties, after each Billing Period in a format, manner and detail that would be sufficient to enable re-processing if it were to be necessary to recalculate the amounts due from one Party to the other, especially in cases where the relevant prices have changed. This period shall apply unless any statutory and/or fiscal data retention regulations require a longer period, in which case such longer period shall apply.

2.5 Usage Report

- (a) Vodafone and the OLO will process each of their respective versions of the Detailed Billing Information specified in clause 2.3(a) of this Annex B – Billing Processes and Procedures and compile the information using the format of the matrix outlined below in Table 1 and the form presented in Attachment 1, or such other form of Usage Report to which Vodafone and the OLO may from time to time reasonably agree in writing.

Table 1: Usage Report Matrix

Billing Period:	mm yyyy		
Traffic Type	(e.g. geographic numbering range call, toll-free numbering range call, mobile numbering range)		
Service Type	Total Number of calls N	Total Duration M	Total Revenue R
TOTAL	L:N	L:M	L:R

Where: mm yyyy = the Billing Period month and year

Where: N = the total number of calls

Where: M = the total Chargeable call Duration

Where: R = the total Revenue Charge which will comprise: M x Rate per minute; or N x Rate per call; or M x Rate per minute plus N x Rate per call

- (b) For the purposes of determining the appropriate applicable Billing Period and for accounting purposes, Calls will be considered to fall entirely within the Billing Period in which they finish.
- (c) Vodafone and the OLO shall exchange Usage Reports together with the resulting invoice that is provided pursuant to clause 3 of this Annex B – Billing Processes and Procedures, within thirty (30) Calendar Days from the end of the Billing Period.

3. Billing, Invoicing, Disputes and Payment

3.1 The Billing Period for Services under an Agreement will be monthly. The beginning of the Billing Period is 00:00 hours on the first day of each Calendar Month or such other time as the parties may agree in writing from time to time. The end of each Billing Period will be 23:59 hours on the last day of each Calendar Month or such other time as the parties may agree in writing from time to time.

- (a) At the end of each Billing Period, the Billing Party will submit to the Billed Party invoices for Charges as outlined in the appropriate schedules contained in Annex H - Price List for which the Billing Party is entitled to charge the Billed Party during such Billing Period. Invoices shall be presented in a format to be agreed between the parties.
- (b) Invoices may include the Charges incurred during a Billing Period as well as Charges incurred up to three (3) Calendar Months prior to the Billing Period to which an invoice relates.
- (c) If the Billing Party has omitted or miscalculated Charges from an invoice, the Billing Party may include or amend (respectively) those Charges in a later invoice, as long as the Billing Party is able to substantiate these Charges to the Billed Party and the inclusion or amendment is made within six (6) months of the issuing of the invoice..
- (d) All invoices shall be supported and accompanied by Billing Information to enable the Billed Party accurately to process, validate and pay such invoices. If the Billed Party makes an overpayment in error, it shall notify the Billing Party accordingly within thirty (30) Calendar Days of the date on which the overpayment was made with sufficient details for the Billing Party to be able to identify the overpayment. If the Billing Party confirms the overpayment, the Billed Party shall return the amount overpaid to the Invoiced Party
- (e) Unless mutually agreed otherwise in writing, each Party shall deliver invoices by email to the other parties Billing Representative followed up by hand delivery of a paper copy of each invoice within forty-eight (48) hours. Upon receiving the invoice by e-mail, the Billed Parties Billing Representative will confirm receipt by email. The Billing Party has to take necessary steps to acquire proof of invoice delivery.
- (f) All Charges payable under an Agreement will be calculated in accordance with this Annex B – Billing Processes and Procedures and at the rates specified in Annex H - Price List of this RIO as appropriate, as may be agreed in writing between the parties from time to time.

- (g) Invoices issued shall be paid on or before the due date, which is thirty (30) Calendar Days from the Issue Date (**Due Date**).
- (h) Invoices are due and payable in Qatari Riyals.

3.2 Estimated Bills:

- (a) If either the Billing or Network System fails to provide all of the Billing Information necessary for the Billing Party to prepare a full invoice, the Billed Party will, at the request of the Billing Party, use its reasonable endeavors to supply the missing Billing Information to the Billing Party. There will be no legal liability on the Billing Party arising from the preparation of an incorrect invoice by the Billing Party where the inaccuracies in the said invoice result from inaccuracies in such Billing Information provided by the Billed Party to the Billing Party. Both parties acknowledge that Billing Information supplied by the Billed Party pursuant to this clause 3.2 of this Annex B – Billing Processes and Procedures will have been supplied via a suitable system and that neither Party can warrant that the information is free of error. Notwithstanding the above, each Party will use best endeavors to ensure its systems and processes are error free and full reconciliation is the normal target.
- (b) In the event, taking into account the process outlined in clause 3.2(a) of this Annex B – Billing Processes and Procedures, that Billing Information is not available to the Billing Party in time to produce an invoice pursuant to clause 3.1(a) of this Annex, the parties agree that an estimated invoice may be produced. This estimate will be calculated using the following approach for the required detail of each separate traffic stream in the Services Schedules: traffic month N = average of traffic for months (N-1) (N-2) and (N-3).
- (c) Both Vodafone and the OLO will advise the other Party if an invoice is an estimate and shall provide the reasons for using estimates.
- (d) Final clearing of estimated invoices must take place within three (3) months of the date of issue of the estimated invoice. Reconciliation will be undertaken in accordance with actual volumes that are received, and revised amounts due as a result of such reconciliation will be reflected in subsequent invoices.

3.3 Billing Reconciliation:

- (a) Reconciliation of traffic flows between Vodafone and the OLO will be done monthly. The OLO will compare its version of the Usage Report to Vodafone's corresponding version of the report, which each Party shall supply to the other Party pursuant to clause 2.5(c) of this Annex B – Billing Processes and Procedures.
- (b) The OLO and Vodafone agree that a Tolerable Discrepancy will be acceptable. This shall mean that in cases in which there is a discrepancy between the Usage Report supplied by the Billing Party and the relevant report generated by the Billed Party and the amount of the discrepancy is equal to or less than a Tolerable Discrepancy, the Billing Reconciliation Procedure shall not apply. In all other cases,

- discrepancies will be subject to the Billing Reconciliation Procedure.
- (c) If the Billed Party notifies the Billing Party within fifteen (15) Business Days of the Delivery Date of a discrepancy between the Usage Report, and such discrepancy is greater than the Tolerable Discrepancy the Billing Reconciliation Procedure shall apply.
 - (d) Billing Reconciliation Procedure:
 - i. Vodafone and the OLO will act in good faith to resolve any Billing Discrepancies and/or investigate the source of Billing Discrepancies in a timely manner.
 - ii. Within ten (10) Business Days of the time the Billed Party notifies the Billing Party of a Billing Discrepancy, the Billing Party must supply the Billed Party with Detailed Billing Information, as described in clause 2.3 of this Annex B – Billing Processes and Procedures, and the Billed Party must provide similar information to the Billing Party within the same time period.
 - iii. Each Party will review the data supplied by the other Party in order to determine the source of the discrepancy in the Usage Reports.
 - iv. In order to reconcile the Billing Discrepancy the Billing Representatives from both Parties will meet within ten (10) Business Days of receipt by the Billed Party of the detailed Billing Information referred to in clause 2.3 of this Annex B – Billing Processes and Procedures.
 - v. After the Parties identify the source of the Billing Discrepancy and undertake suitable corrective actions, both parties will produce new Usage Reports and compare such reports to determine whether these new reports are acceptable to both parties and/or reflect any Billing Discrepancies.
 - vi. If the Parties fail to reach an agreement regarding the source of the Billing Discrepancy within thirty-five (35) Business Days of the time the Billed Party notifies the Billing Party of a Billing Discrepancy, the Billing Dispute Resolution Procedure shall apply.
 - (e) In the event that Billing Discrepancies occur for three (3) consecutive months, and it becomes apparent that the Billing Discrepancies are caused by one of the Parties in more than 95% of the cases, the other Party has the right to initiate a procedure to investigate the source of the consecutive Billing Discrepancies in accordance with the Billing Reconciliation Procedure.
 - (f) Notwithstanding the provisions of this clause 3.3 of this Annex B – Billing Processes and Procedures, either Party may waive its rights to participate in a Billing Reconciliation Procedure by immediately adjusting its Usage Report for the particular Service to eliminate any Billing Discrepancies or adjust the discrepancy to a Tolerable Discrepancy.
 - (g) If the Parties fail to resolve a Billing Discrepancy pursuant to the process

set out in this clause 3.3 of this Annex B – Billing Processes and Procedures, either Party may elect to engage an independent qualified accountant, to investigate the source of the discrepancy and recommend an equitable solution. The accountant to be engaged shall be mutually agreed between the parties prior to engagement. The findings of the accountant shall be binding on both parties. The parties will each bear half the costs of such accountant.

- (h) Notwithstanding the Billing Dispute Resolution Procedure included in this Annex, either Party may pursue any other remedy available in law or equity if a Billing Dispute is not resolved to their satisfaction. In all cases, however, parties are encouraged to negotiate in good faith to attempt to resolve any outstanding Billing Dispute.
- (i) For the avoidance of doubt, unresolved billing reconciliation may not be referred to the general Dispute Resolution Procedures provided in this RIO..

3.4 Review of Billing Accuracy:

- (a) Notwithstanding the provisions of clause 3.3 of this Annex B – Billing Processes and Procedures, if the Parties, through the course of monitoring their respective Billing Information, note persistent inconsistencies when comparing Billing Information provided by the other Party's Billing System, the latter Party will use their reasonable endeavours to ascertain the cause of such inconsistency.
- (b) If a Party believes that, as a result of previously undetected errors in the Billing Information, there were under or over payments, it may request a review of the Billing Information for any Billing Period within six (6) months of the date of the end of that Billing Period.
- (c) In the event that either Party requests a review of Billing Information pursuant to clause 3.3(d) of this Annex B – Billing Processes and Procedures, the Billing Reconciliation Procedure shall be initiated. During that time the parties will continue to work together in good faith, taking more frequent measurements and exchanging detailed information as considered necessary by either Party.

3.5 Billing Discrepancies:

- (a) For the avoidance of doubt, if the Billed Party determines that for a given Service type the Billing Party's invoice is not consistent with its own calculations, but the discrepancy is a Tolerable Discrepancy, then the Billed Party will pay the Billing Party's invoice in full and by the Due Date.
- (b) If the Billed Party disagrees with any of the Charges for any of the Services on an invoice issued by the Billing Party, the amount of which exceeds a Tolerable Discrepancy, then that part and value of the invoice shall be temporarily suspended for investigation and correction, if necessary, without otherwise affecting liability for settlement of the remainder of that invoice. In such case, Vodafone and the OLO shall follow the Billing Reconciliation Procedure.
- (c) If the Billing Reconciliation Procedure has not been completed before

the Due Date, and the amount of the discrepancy with respect to a specific Service type as detailed in the relevant invoices is greater than a Tolerable Discrepancy, the total invoiced amount, less the disputed amount, will be due and payable on the Due Date.

- (d) If upon completion of the Billing Reconciliation Procedure it is concluded that there is no error or that the monetary value of such an error is less than or equal to a Tolerable Discrepancy, then the Billed Party shall pay promptly within five (5) Business Days of the date of such agreement the value of the disputed amount for which payment was suspended in clause 3.5(c) of this Annex B – Billing Processes and Procedures.
- (e) If upon completion of the Billing Reconciliation Procedure the Billing Party concedes that there is an error in the billing of a value greater than a Tolerable Discrepancy then the Billing Party shall issue a revised invoice, which corrects the error and will be payable within ten (10) Business Days of receipt. In cases in which the Billed Party has already paid the original invoice, in accordance with clause 3.1, then the Billed Party shall be reimbursed any extra amount it paid due to the billing error within ten (10) Business Days of such correction. Alternatively, the Parties may agree that the Billing Party shall include a credit equal to the amount of the error on the next payable invoice.

3.6 Payment:

- (a) Subject to the provisions stated below, all Charges are due and payable by the Due Date.
- (b) If the Billed Party initiates a Billing Dispute with respect to an amount due under an invoice, but such Billing Dispute is not resolved before the Due Date; and the amount subject to Dispute is less than or equal to a Tolerable Discrepancy, then the total amount of the invoice is due and payable on the Due Date.
- (c) If the Billed Party initiates a Billing Dispute with respect to an amount due under an invoice, but such Billing Dispute is not resolved before the Due Date; and the amount subject to dispute is more than a Tolerable Discrepancy, then the balance amount of the invoice that is not subject to the Billing Dispute is due and payable on the Due Date.
- (d) Notwithstanding any pending Billing Dispute, if either Party defaults in the payment when due of any sum payable by that Party under this RIO its liability shall be increased to include interest on such sum from the Due Date until the date of actual payment (both before and after judgment) at the annual rate which is five (5) percentage points above the base rate of Qatar Central Bank during such period. All such interest shall be calculated on the basis of the actual number of days elapsed, over a Calendar Year and compounded at monthly rates.
- (e) All applicable Taxes and Surcharges, Government Royalties and Fees will be included in the Charges. The OLO shall be liable for those charges.

3.7 Billing Dispute Notification:

- (a) If the Billing Reconciliation Procedure fails to resolve a Billing

Discrepancy pursuant to clause 3.3 of this Annex B – Billing Processes and Procedures, and the Billed Party wishes to continue to dispute an invoice in good faith, the Billed Party must notify the Billing Party in writing (**Billing Dispute Notice**) within five (5) Business Days of the expiration of the period of time set out in clause 3.3(d) of this Annex B – Billing Processes and Procedures, (**Billing Dispute Notification Period**). Such notices must be sent to the Billing Representatives.

(b) A Billing Dispute is only valid in cases in which the Billed Party has reasonable justifications, which include:

- i. The Billing Party's Billing System is, or has been, defective or inaccurate in respect of the recording of the calls which are subject to the Billing Dispute; or
- ii. The reconciliation procedure for billing discrepancy set out in clause 3.3(d) of this Annex B – Billing Processes and Procedures is followed and it is determined that there is, or has been, a discrepancy between the invoice in dispute and the records generated by the Billing Party's billing system; or
- iii. There is, or has been, a fraud perpetrated by the Billing Party; or
- iv. The Billing Party has made some other error in respect of the recording of the calls or calculation of the Charges that are the subject of the Billing Dispute.

(c) A Billing Dispute Notice given under this clause 3.6(e) of this Annex B – Billing Processes and Procedures must specify:

- i. The reasons for which the Billed Party disputes the invoice;
- ii. The amount in dispute; and
- iii. Details required to identify the relevant invoice and Charges in dispute including:
 - (1) The invoice reference number;
 - (2) The invoice date;
 - (3) The invoice amount and
 - (4) Any additional information to resolve the Billing Dispute.

3.8 Billing Dispute Resolution Procedure

- (a) The Billed Party agrees to pay the undisputed portion of any invoice in accordance with the normal payment procedures set out in clause 3.6 of this Annex B – Billing Processes and Procedures.
- (b) In cases in which the Billed Party has already paid an amount, but subsequently disputes part or all of such amount, and notifies the Billing Party of a Billing Dispute accordingly within the Billing Dispute Notification Period, the Billing Party is not obliged to refund parts or all of such amount unless and until the Billing Dispute is resolved in favour of the Billed Party.

- (c) The parties agree to use their reasonable endeavours to promptly resolve any Billing Disputes notified under clause 3.7(c) of this Annex B – Billing Processes and Procedures.
- (d) If the parties are unable to resolve a Billing Dispute within thirty (30) Calendar Days (or such other period as the parties may agree in writing) from the date in which the Billing Dispute Notice is received (**Negotiation Period**), either Party may seek the consent of the other Party to extend the Negotiation Period, and include the reasons for the request for an extension. The other Party is, however, under no obligation to agree to such an extension.
- (e) In cases in which an International Correspondent of the Billing Party is involved in a Billing Dispute, the Billing Dispute Resolution Procedure shall be suspended for a reasonable period of time pending resolution of the Billing Dispute with such an International Correspondent. As a general rule, the period of suspension will not exceed two (2) months. However, the parties recognize that some Billing Disputes involving International Correspondents may take longer to resolve, in which case the Billing Party must promptly inform the Billed Party of the anticipated period expected to be required to reach a resolution.
- (f) If a Billing Dispute is not resolved during the Negotiation Period, or during an extension granted under clause 3.8(d) or clause 3.8(e) of this Annex B – Billing Processes and Procedures, the Billing Dispute may be escalated according to the procedure described in clause 3.8(g) of this annex (**Billing Dispute Escalation Procedure**).
- (g) The Billed Party may refer a Billing Dispute to the Billing Dispute Escalation Procedure by notifying the Billing Party's Billing Representative. Each of the parties shall appoint a designated representative that has authority to settle the Billing Dispute, and that is at a higher level of management than the Billing Representatives. These representatives shall meet as often as they reasonably deem necessary in order to resolve the Billing Dispute and shall negotiate in good faith. The parties shall have the discretion to conduct these negotiations as they see fit. However, all reasonable requests for relevant information made during these negotiations should be satisfied.
- (h) If the parties fail to resolve a Billing Dispute pursuant to the process set out in clause 3.8(g) of this Annex, either Party may elect to engage an independent qualified accountant, to investigate the source of the discrepancy and recommend an equitable solution. The accountant to be engaged shall be mutually agreed between the parties prior to engagement. The findings of the accountant shall be binding on both parties. The parties will each bear half the costs of such accountant.
- (i) Once a Billing Dispute has been resolved to the Parties' satisfaction, the liable Party shall pay immediately any outstanding amounts.
- (j) Notwithstanding the Billing Dispute Resolution Procedures included in this Annex, either Party may pursue any other remedy available in law or equity if a Billing Dispute is not resolved to their satisfaction. In all cases, however, Parties are encouraged to negotiate in good faith to

- attempt to resolve any outstanding Billing Dispute.
- (k) For the avoidance of doubt, Billing Disputes may not be referred to the general Dispute Resolution Procedures provided in this RIO.

Attachment 1 –Interconnection Service Reports

1. Termination Services:

Billing Period:	Start date:_____		End date:_____		
Call Type	Service Schedule	Switch # or POI	calls	Minutes	Charge
Vodafone Geographic Number Ranges and Short Codes	1A				
From OLO					
From Non-OLO					
Vodafone Mobile Number Ranges	1B				
From OLO					
From Non-OLO					
Vodafone Toll-Free Number Ranges	1C				
Vodafone Video Call	1D				
Vodafone Emergency Service Numbers	1E				
Call termination Services to Vodafone geographic and mobile numbers for Inbound international calls	1F				

2. Mobile Message Termination Services:

Billing Period:	Start date:_____		End date:_____		
Call Type	Service Schedule	Switch # or POI	Number of Messages	Charge	
Vodafone SMS Termination Service	2A				
Vodafone MMS Termination Service	2B				
Picture Message					
Video Message					

3. Vodafone Outgoing International Call Conveyance:

Billing Period:	Start date: _____		End date: _____		
Call Type	Service Schedule	Switch # or POI	calls	Minutes	Charge
International call Conveyance	3				
Country 1					
Country 2					
.....					
Country N					
Total					

4. Sample Interconnection Link Report: not used

Annex C – Service Schedule

Schedule 1 – Termination Services (Fixed Interconnection Services)

1. General

- 1.1 In this Schedule 1 – Termination Services, a reference to a clause or Annex unless stated otherwise, is to a clause or attachment of this Schedule 1 – Termination Services.
- 1.2 Vodafone will supply Termination Services to the other Party in accordance with clause 6 (Network Interconnection) of this RIO (Main Body).
- 1.3 The Party requesting the Termination Service pursuant to this Schedule must initiate the process set out in the relevant provisioning clauses of Annex F – Planning, Forecasting and Provisioning, if it wishes to receive the Termination Service for a traffic type not previously covered by a request under the relevant service provisioning clauses.
- 1.4 The Terminating Party will only be required to provide Termination Services to the Originating Party if the following conditions are met:
 - (a) The Interconnection Link Service is provisioned;
 - (b) The Originating Party have established one or more Points of Interconnection at which it will handover traffic for termination by the Terminating Party;
 - (c) The Originating Party have complied with Annex G - Operational Procedures, including any pre-commissioning testing.

2. Conditions of Service

- 2.1 The Terminating Party shall provide Termination Services to the Originating Party for the term at the same standard and Quality of Service as such Parties provide similar Services on their own Networks.
- 2.2 The Parties shall agree in advance all necessary technical requirements, including Call set-up and clear down sequences, for the conveyance of Calls pursuant to this Schedule.
- 2.3 Each Party shall locate and correct Faults that occur in its Network which affect the conveyance of Traffic in accordance with such parties' normal engineering practices.
- 2.4 Nothing in this clause requires Vodafone to perform any changes in its Network or to commence the supply of Termination Services until the Parties have completed all necessary Data Management Amendments and all network conditioning in line with **Error! Reference source not found..**
- 2.5 The Requesting Party may, at any time, request Vodafone to cease supplying the Service with thirty (30) calendar day notice upon being granted such approval from the CRA, and such Party shall cease supplying such Services as soon as practicable or at such later time as agreed, but in any event shall be subject to the minimum period, which shall be no less than three (3) months.. In the event the Originating

Party requests that the Terminating Party cease supplying the specified Termination Services within the minimum period, the Originating Party shall pay the Terminating Party the remainder of the minimum period for such Termination Services. After the minimum period, the Originating Party may, at any time, request the Terminating Party to cease supplying the specified Termination Services. In such an instance, the Terminating Party shall cease supplying the specified Termination Service as soon as practicable or at such later time as specified by the Originating Party.

3. Number Range Activation

- 3.1 Both Parties shall provide the other Party with at least twenty (20) Business Days notice prior to any request to open Number Range(s). The requesting Party shall advise the other Party of details of the Number Range(s) to be activated; the date activation is required and provide an associated routing procedures in accordance with the Network Plan.
- 3.2 If the other Party can activate the Number Range(s) on the required date then that request will be put into effect by the Ready for Service Date. However where this is not possible, such Party will advise within five (5) Business Days that the activation cannot be performed by the required date and will advise an alternative date by which the request can be met.

4. Service Provisioning

- 4.1 Except as otherwise agreed between the Parties and as set out in the Network Plan, this clause applies where a Party wishes to use Termination Services provided by the other Party for a traffic type, except where the process in this clause has already been undertaken for that traffic type.
- 4.2 A Party may request a Termination Service by means of a request form as set out in Annex F – Planning, Forecasting and Provisioning.
- 4.3 The Party receiving the request shall acknowledge, in writing, receipt of requesting Party's request under clause 4.2 of this Service Schedule within five (5) Business Days.
- 4.4 Following receipt of a request under clause 4.2 of this Service Schedule the Party receiving the request shall assess that request and notify the requesting Party within ten (10) Business Days of acknowledgement that either:
 - (a) The implementation of the request for the Termination Service involves only Network conditioning in Terminating Party's Network, in which case the negotiation period to agree technical interconnection arrangement prior to installation shall be twenty (20) Business Days; or
 - (b) The implementation of the request in respect of the requested Termination Service involves work in addition to or as alternative to Network conditioning in Terminating Party's Network, in which case negotiation period to agree the technical interconnection arrangement prior to installation shall be forty (40) Business Days.
- 4.5 The Parties shall forthwith negotiate in good faith the requirements, implementation charges and timetable for the use of the Termination Service in accordance with the

request pursuant to clause 4.2 of this Service Schedule for the negotiation period set out in clause 4.4 of this Service Schedule and in accordance to Annex F – Planning, Forecasting and Provisioning, Annex G - Operational Procedures, and Annex H - Price List. In the event that agreement is not reached either Party may commence the Dispute Resolution Procedure in accordance with clause 25 (Resolution of Disputes) of this RIO (Main Body).

- 4.6 Where the Parties have reached an agreement, in accordance with clause 4.5 above, the Terminating Party will commence implementation in accordance with the agreed timetable.
- 4.7 Nothing in this clause requires the Termination Service providing Party to perform any changes in its Network or to commence the supply of Termination Service until the Parties have completed all necessary Data Management Amendments, and all Network conditioning Charges have been agreed.

5. Forecasts

- 5.1 The Originating Party shall at the beginning of each quarter provide forecasts of Termination Services traffic in accordance with Annex F – Planning, Forecasting and Provisioning.

6. Charging

- 6.1 For the conveyance of Termination Services, the Originating Party shall pay the Terminating Party the charges calculated in accordance with the applicable rates for such Call Termination Services, as specified in Annex H - Price List.
- 6.2 Unless otherwise specifically stated in the individual Service description, charging for Termination Services will be in accordance with this clause and clause 13 (Charging for Interconnection Services) of the Main Body of this RIO.
- 6.3 The Terminating Party will, for interconnected traffic for which it is providing a Termination Service, collect a Call Data Record (CDR) for each individual terminating interconnected Call on a call-by-call basis and process such records in accordance with this clause.
- 6.4 The CDRs collected by the Terminating Party in accordance with this clause shall be the source of the data used by the Terminating Party for bill verification and to invoice for the Termination Service provided under this Schedule.
- 6.5 The calculation of Charges for Termination Services will be based on the amount of Traffic as set forth in Annex H - Price List.
- 6.6 The chargeable time for each Call, unless specifically stated as otherwise, shall be the “conversation time” in accordance with Section 1.2.2 of ITU-T Recommendation D.150 (June, 1999).
- 6.7 Calls shall be charged on a per-second basis. Charges shall not be payable under an Agreement by either Party to the other for unsuccessful Calls.
- 6.8 The total usage data for each type of Call for each monthly billing period shall be rounded to the nearest minute.
- 6.9 Calls that cross over into the next Billing Period shall be billed in the Billing Period in

which those Calls end.

7. Routing

- 7.1 The conveyance of traffic pursuant to this Schedule shall be in accordance with the routing procedures set out in the Network Plan.

Schedule 1A – Fixed Call Termination Service to Vodafone’s Geographic Numbers and Short Codes

1. Service Definition

- 1.1 The Call Termination Service to Vodafone’s Geographic Numbers and Short Codes means a service for the conveyance of a Voice Call originating from the Calling Party connected to the Originating Party Network and handed over at the Point of Interconnection for termination to the Geographic Number and Short Codes of the Called Party connected to Vodafone Fixed Network.

2. Conditions of Service

- 2.1 Subject to the provisions of this Schedule, Vodafone will convey Calls handed over from the Originating Party’s Network at Vodafone’s designated Service Node to the appropriate Vodafone Network Termination Point for a subscriber number within a Geographic Number Range.
- 2.2 The Call Termination Service to Vodafone Geographic Numbers shall be limited to Calls to numbers within Geographic Number Ranges allocated to Vodafone by CRA.
- 2.3 Calls to Vodafone Geographic Numbers originating on a Network other than that of the Originating Party, including inbound international calls, shall be charged as incoming national or international Calls at the applicable rate for such Calls terminated to Vodafone Geographic Numbers as set out in Annex H - Price List or as agreed by the parties in the case of inbound international calls.

Schedule 1B – Mobile Call Termination Service to Vodafone Mobile Numbers

Service Definition

- 2.4 The Call Termination Service to Vodafone Mobile Numbers means a service for the conveyance of a Voice Call originating from a Calling Party connected to the Originating Party Network and handed over at a Point of Interconnection for termination to the Mobile Number of the Called Party connected to Vodafone Mobile Network.

3. Conditions of Service

- 3.1 Subject to the provisions of this Schedule, Vodafone shall convey Calls handed over from the Originating Party's Network at Vodafone's designated Service Node to the appropriate Vodafone Network Termination Point for Vodafone's Mobile Number Ranges.
- 3.2 The Call Termination Service to Vodafone Mobile Numbers shall be limited to Calls to a numbers within Mobile Number Ranges allocated to Vodafone by CRA.
- 3.3 Calls to Vodafone Mobile Numbers originating on a Network other than that of the Originating Party, including inbound international calls, shall be charged as incoming national or international Calls at the applicable rate for such Calls terminated to Vodafone Mobile Numbers as set out in Annex H - Price List or as agreed by the parties in the case of inbound international calls.

Schedule 1C – Call Termination Service to Vodafone Toll-Free Numbers (reverse charging)

1. Service Definition

- 1.1 The Call Termination Service to Vodafone Toll-Free Numbers means a service for the conveyance of a Call originating from a Calling Party connected to the Originating Party Network and handed over at a Point of Interconnection for termination to the specified Toll-Free Number on Vodafone Network.

2. Conditions of Service

- 2.1 Subject to the provisions of this Schedule, Vodafone shall convey Calls handed over from the Originating Party's Network at the Interconnection Service Node to the appropriate Access Provider Network Termination Point to the specified Toll-Free Number.
- 2.2 The Call Termination Service to Vodafone's Toll-Free Numbers shall be limited to Calls to Toll-Free Number Ranges allocated to Vodafone by CRA.
- 2.3 Originating Party shall ensure that calls to Vodafone Toll-Free Numbers are free of calling charges to their subscribers
- 2.4 For the avoidance of doubt, the translation of non-geographic numbers is defined in clause 5 of the Main Body
- 2.5 The applicable reverse charging rate is set out in Annex H - Price List.

Schedule 1D – Mobile Call Termination Service to Vodafone Video Call Service

1. Service Definition

- 1.1 Vodafone Video Call Termination Service means a service for the conveyance of a Video Call from a Calling Party connected to the Originating Party Network and handed over at a Point of Interconnection for termination to the Mobile Number of the Called Party connected to Vodafone Mobile Network.

2. Conditions of Service

- 2.1 Subject to the provisions of this Schedule, Vodafone shall convey Video Calls handed over from the Originating Party's Network at Vodafone's designated Interconnection Service Node to the appropriate Vodafone Network Termination Point for the specified Mobile Number.
- 2.2 Vodafone Video Call Termination Service shall be limited to Video Calls to Mobile Number Ranges allocated to Vodafone by CRA.
- 2.3 Video Calls to Vodafone Mobile Numbers originating on a Network other than that of the Originating Party, including inbound international calls, shall be charged as incoming national or international Calls at the applicable rate for such Calls terminated to Vodafone Mobile Numbers as set out in Annex H - Price List or as agreed by the parties in the case of inbound international calls.

Schedule 1E – Fixed Call Termination Service to Access Provider Emergency Service Numbers

1. Service Definition

- 1.1 The Fixed Call Termination Service to Access Provider Emergency Service Numbers means a service for the conveyance of a Voice Call originating from a Calling Party connected to the Originating Party Network and handed over at the Point of Interconnection for termination at the National Emergency Center of the Ministry of Interior connected to Vodafone Fixed Network.

2. Conditions of Service

- 2.1 Subject to the provisions of this Schedule, Vodafone will convey Calls handed over from the OLO Network at an Access Provider designated Interconnection Service Node to the appropriate Access Provider Network Termination Point for the designated number for the National Emergency Center of the Ministry of Interior (**NEC**).
- 2.2 Vodafone is only obligated to provide the services set out in this Schedule 1E where the OLO is not authorized to establish a direct link with NEC or where the OLO, for reasonable reasons, is unable temporarily, in a reasonable time, to establish its own links with the NEC. In any event, the OLO shall be solely responsible for the use of the temporary link to the NEC and shall hold harmless and indemnify Ooredoo against all damages, costs, claims, expenses (including legal costs) by a Third Party arising from, or in connection with the supply of the link to the NEC pursuant to this Schedule 1E. In the latter case, Vodafone reserves the right to terminate the services under this Schedule 1E in the event the OLO is directed by the CRA to establish its own links and fails to establish its own links in a reasonable time. The Parties agree that, in the event of national emergency or the failure of its own links, calls to the NEC can be terminated through interconnection.
- 2.3 The OLO must provide Vodafone with the CLI for all Voice Calls to Access Provider Emergency Service Numbers for the purpose of enabling the NEC to locate, identify or trace (as the case may be) the Calling Party.
- 2.4 The OLO must co-operate with the NEC and satisfy any request that may be made by the NEC to provide assistance to locate, identify or trace (as the case may be) the Calling Party.
- 2.5 Notwithstanding the clause 5 of the Main Body, Vodafone agrees to perform appropriate number translation of emergency service short code numbers in accordance with the Network Plan. The handover of Voice Calls at a Point of Interconnection will be in the form of a dialed number as assigned by the CRA.
- 2.6 Vodafone is not liable to the OLO for any loss or damage (including any Consequential Loss) arising from, or in connection with, the supply of the Call Termination Service to Vodafone Emergency Service Numbers pursuant to this Service Schedule 1E.
- 2.7 The OLO shall hold Vodafone harmless and shall indemnify Vodafone against all damages, costs, claims, expenses (including legal costs) by a Third Party arising

from, or in connection with, the supply of the Call Termination Service to Vodafone Emergency Service Numbers pursuant to this Service Schedule 1E.

- 2.8 The OLO shall order sufficient redundant telecommunications transmission links for the conveyance of the Emergency Calls to the POI (Emergency Call Links are independent from ordinary traffic links and exclusively used for Emergency traffic and cannot convey normal customers traffic).
- 2.9 The rates for Call Termination Service to Access Provider Emergency Service Numbers are set out in Annex H - Price List.

Schedule 1F - Call Termination Services to Vodafone Geographic and Mobile Numbers for Inbound International calls

1. Service Definition

- 1.1 The service relates to a termination of a call which originates outside of the State of Qatar and is initially received by an OLO and handed over by the OLO at a Point of Interconnection for termination to the Number of the Called Party connected to Vodafone Fixed Network or Vodafone Mobile Network (OLO Inbound International Call Termination Service).

2. Conditions of Service

- 2.1 Subject to the provisions of this Schedule, Vodafone will convey Calls handed over from the OLO Network at a Vodafone designated Service Node to the appropriate Vodafone Network Termination Point for a subscriber number within a Vodafone Geographic Number Range or for Vodafone's Mobile Numbers.
- 2.2 The Inbound International Call Termination Service to Vodafone Geographic Numbers or Vodafone Mobile Numbers, as the case may be, shall be limited to Calls to numbers within Geographic Number Ranges or Mobile Number Ranges allocated to Vodafone by CRA.
- 2.3 The charges for inbound international call termination service to Vodafone Geographic Numbers or Vodafone Mobile Numbers shall be negotiated with the OLO.

Schedule 2 – Mobile Message Termination Services

1. General

- 1.1 This Schedule 2 – Mobile Message Termination Services sets out the terms and conditions under which Vodafone will provide the Mobile Message Termination Services to the Originating Party.
- 1.2 In this Schedule 2 – Mobile Message Termination Services, a reference to a clause or annex unless stated otherwise, is to a clause or attachment of this Schedule.
- 1.3 Vodafone and the OLO shall supply Mobile Message Termination Services in accordance with clause 6 (Network Interconnection) of the Main Body of this RIO in respect of the message types for which the process in clause 3 (Service Provisioning) of this Service Schedule has been followed.
- 1.4 The process in Annex F – Planning, Forecasting and Provisioning (Service Provisioning) of this Service Schedule must be initiated by the Party that wishes to receive the Mobile Message Termination Service for the message types that are not covered by this RIO made under clause **Error! Reference source not found.** of Annex F – Planning, Forecasting and Provisioning.
- 1.5 Vodafone will only be required to provide Mobile Message Termination Services to the Originating Party if the following conditions are met:
 - (a) The Interconnection Link Service is provisioned;
 - (b) The Parties have established one or more Points of Interconnection at which the Parties agree the Originating Party will handover messages for termination by the Terminating Party;
 - (c) The Parties have complied with Annex G - Operational Procedures and the Network Plan, including any pre-commissioning testing.

2. Conditions of Service

- 2.1 Vodafone shall convey messages for the term at the same standard and Quality of Service as Vodafone conveys similar messages within Vodafone Network.
- 2.2 The Parties shall agree in advance all necessary technical requirements, including protocol and sequences, for the conveyance of messages pursuant to this schedule.
- 2.3 Each Party shall locate and correct Faults that occur in its Network that affect the conveyance of messaging traffic in accordance with such Party's normal engineering practices.
- 2.4 For the provision of Mobile Message Termination Services, originating Party shall pay Vodafone a charge calculated in accordance with the applicable rates specified from time to time in Annex H - Price List.
- 2.5 SPAM:
 - (a) The Parties acknowledge that the transmission of SPAM from a Party's Network to Customers on the other Party's Network is undesirable. Each Party shall use reasonable endeavours to discourage the transmission of SPAM.

- (b) Each Party shall have the right to monitor and possibly block SPAM that could adversely affect their network or customers.
- (c) In line with clause 2.5 of this Service Schedule, Vodafone may, without liability, immediately suspend the Mobile Message Termination Services in relation to a particular Originating Party in the event that SPAM is sent from that Originating Party.
- (d) Suspension of Service pursuant to clause (c) above shall be communicated to the Originating Party within twenty-four (24) hours of suspension.

3. Service Provisioning

- 3.1 Except as otherwise agreed between the Parties and as set out in the Network Plan, this clause applies where a Party wishes to use Mobile Message Termination Services provided by Vodafone for a message type, except where the process in this clause has already been undertaken for that message type.
- 3.2 A Party may request a Mobile Message Termination Service by means of a request form as set out in Annex F – Planning, Forecasting and Provisioning.
- 3.3 After receiving the request Vodafone shall acknowledge, in writing, receipt of requesting Parties' request under clause 3.2 of this Service Schedule within five (5) Business Days.
- 3.4 Following receipt of a request under clause 3.2 of this Service Schedule, Vodafone shall assess that request and notify the requesting Party within ten (10) Business Days of acknowledgement that either:
 - (a) The implementation of the request, in respect of the requested Mobile Message Termination Service, involves only Network conditioning in Vodafone's Network, in which case the negotiation period to agree technical interconnection arrangement prior to installation shall be twenty (20) Business Days; or
 - (b) The implementation of the request in respect of the requested Mobile Message Termination Service involves work in addition to or as alternative to Network conditioning in Vodafone's Network, in which case negotiation period to agree the technical interconnection arrangement prior to installation shall be forty (40) Business Days.
- 3.5 The Parties shall forthwith negotiate in good faith the requirements, implementation charges and timetable for the use of the Mobile Message Termination Service in accordance with the request under clause 3.2 of this Service Schedule for the negotiation period set out in clause 3.4 of this Service Schedule and in accordance to Annex F – Planning, Forecasting and Provisioning, and Annex H - Price List. In the event that agreement is not reached either Party may commence the Dispute Resolution Procedure in accordance with clause 25 (Resolution of Disputes) of the Main Body of this RIO.
- 3.6 Where the Parties have reached an agreement, in accordance with 3.5 above, Vodafone will commence implementation in accordance with the agreed timetable.
- 3.7 Nothing in this clause requires Vodafone to perform any changes in its Network or to

commence the supply of Mobile Message Termination Service until the Parties have completed all necessary Data Amendments, and all Network conditioning Charges in line with **Error! Reference source not found.** have been agreed.

- 3.8 The requesting Party may, at any time, request Vodafone to cease supplying the Mobile Message Termination Service, and such Party shall cease supplying such Services as soon as practicable or at such later time as agreed, but in any event shall be subject to the minimum period, which shall be no less than three (3) months. In the event the Originating Party requests that the Terminating Party cease supplying the specified Termination Services within the minimum period, the Originating Party shall pay the Terminating Party the remainder of the minimum period for such Termination Services. After the minimum period, the Originating Party may, at any time, request the Terminating Party to cease supplying the specified Termination Services. In such an instance, the Terminating Party shall cease supplying the specified Termination Service as soon as practicable or at such later time as specified by the Originating Party.

4. Numbering

- 4.1 The Originating Party shall transmit an accurate A-number with each SMS/MMS.
- 4.2 An SMS/MMS message shall be handed over so that Vodafone's customer is able to immediately reply to that SMS/MMS message from the Originating Party's customer.
- 4.3 The Originating Party shall not have complied with clause 4.1 of this Service Schedule if it transmits a modified A-number to the Terminating Party of the SMS or MMS message.
- 4.4 In respect of any SMS or MMS messages handed over from the Originating Party's Network to Vodafone's Network, there shall be no charge to Vodafone for the provision by the originating Party of any number information provided by the Originating Party, including the A-number.

5. Forecasts

- 5.1 The Originating Party shall at the beginning of each Quarter provide forecasts of SMS Traffic and MMS Traffic in accordance with Annex F – Planning, Forecasting and Provisioning.

6. Charging

- 6.1 Vodafone shall collect a Call Data Record (CDR) that includes each individual message and process such records in accordance with this clause.
- 6.2 The CDRs collected in accordance with this clause shall be the source of the data used for bill verification as per this clause and to invoice for the Mobile Message Termination Services provided under this schedule.
- 6.3 The calculation of Charges for the Mobile Message Termination Services will be based on the number and type of messages successfully delivered in accordance with the applicable rates set out in Annex H - Price List. For the purposes of determining whether a message has been successfully delivered, the following provisions will apply:

- (a) Successful delivery for MMS messages is deemed to have occurred when the “MM4_Forward.RES” message is sent by Vodafone to the Originating Party; and
- (b) Successful delivery for SMS messages is deemed to take place:
 - i. If the SMS message is delivered via SIGTRAN, successful delivery is deemed to take place when a “Successful MT Forward SM Acknowledgement” message is sent by Vodafone to the Originating Party. This message confirms that the SMS has been successfully delivered onto Customer’s device.
 - ii. If the SMS message is delivered via SMPP, successful delivery is confirmed by a “Submit_SM_RESP” message sent by Vodafone to the Originating Party. This message confirms that the SMS has been successfully delivered on Vodafone ’s Network, not on the Customer’s device.

6.4 An SMS or MMS message handed over from the Originating Party to Vodafone shall not be chargeable where that message is handed over during the period of any suspension of the Mobile Message Termination Services as per clause 2 of this Service Schedule.

7. Billing Information

7.1 Billing verification shall be in accordance with Annex B – Billing Processes and Procedures and Annex H - Price List.

8. Routing

8.1 The conveyance of SMS and MMS messages shall be in accordance with the routing procedures set out in the Network Plan.

Schedule 2A –Access Provider Short Messaging Service (SMS) Termination Service

1. Service Definition

- 1.1 Vodafone Short Messaging Service Termination Service means a service for the conveyance of a Short Message Service (SMS) message handed over by the Originating Party to Vodafone at a Point of Interconnection for delivery to an End User's device via Vodafone Mobile Network.

2. Conditions of Service

- 2.1 The principle of SMS hand-over shall be that an SMS message shall be handed over by the Originating Party from the Originating Party's Network to Vodafone's Mobile Network at the agreed Point of Interconnection, having regard without limitation to good Network design principles and practices.
- 2.2 The agreed Point of Interconnection shall be included in the Network Plan.
- 2.3 The rate for SMS Termination Service is set out in Annex H - Price List.

Schedule 2B – Vodafone Multimedia Messaging Service (MMS) Termination Service

1. Service Definition

- 1.1 Vodafone Multimedia Messaging Service Termination Service means a Service for the conveyance of an MMS message handed over by the Originating Party to Vodafone at a Point of Interconnection for delivery to an End User's device via Vodafone Mobile Network. MMS messages may contain pictures, video or other content as agreed by the Parties.

2. Conditions of Service

- 2.1 The principle of MMS hand-over shall be that an MMS message shall be handed over by the Originating Party from the Originating Party's Network to Vodafone's Mobile Network at the agreed MMS Point of Interconnection, having regard without limitation to good Network design principles and practices.
- 2.2 The agreed MMS Point of Interconnection shall be included in the Network Plan.
- 2.3 The rate for SMS Termination Service is set out in Annex H - Price List.

Schedule 3 – Vodafone Outgoing International Call Conveyance

1. General

- 1.1 This Schedule 3 – Vodafone Outgoing International Call Conveyance sets out the terms and conditions under which Vodafone will provide the International Call Conveyance Service to the Originating Party.
- 1.2 In this Schedule 3 – Vodafone Outgoing International Call Conveyance, a reference to a clause or attachment unless stated otherwise, is to a clause or attachment of this schedule.
- 1.3 Vodafone will supply International Call Conveyance in accordance with clause 6 (Network Interconnection) of the Main Body of this RIO in respect of the Services for which the processes in the relevant Service provisioning clauses have been followed with respect to the relevant international destination.
- 1.4 The Originating Party must initiate the provisioning process set out in the clause **Error! Reference source not found.** of this Service schedule if it wishes to receive International Call Conveyance Service not covered by this RIO under clause 4 of this Service Schedule.
- 1.5 Vodafone will only be required to provide International Call Conveyance to The Originating Party if the following conditions are met:
 - (a) The Interconnection Link Service is provisioned;
 - (b) The Parties have established one or more Points of Interconnection at which the Parties agree the Originating Party will handover Outgoing International Voice Calls;
 - (c) The Originating Party has complied with Annex G - Operational Procedures, including any pre-commissioning testing.

2. Service Definition

- 2.1 Vodafone Outgoing International Call Conveyance means a Service for the conveyance of a Call from a Calling Party connected to the Originating Party Network and handed over at a Point of Interconnection to Vodafone Network, for delivery to a Called Party connected to the Network of an international Correspondent.

3. Conditions of Service

- 3.1 Subject to the provisions of this Schedule 3 – Vodafone Outgoing International Call Conveyance, Vodafone shall only provide Vodafone Outgoing International Call Conveyance Service if applicable rates for this Service are negotiated between the parties.
- 3.2 Vodafone shall provide Vodafone Outgoing International Call Conveyance for Calls using the leading dialed digits "00" and handed over from the Originating Party's Network for delivery via the agreed Point of Interconnection.
- 3.3 The Parties will comply with all necessary technical requirements in relation to the conveyance of Calls set out in the Network Plan.
- 3.4 Vodafone shall not be obliged under this schedule to make its Network suitable for

the conveyance of Outgoing International ISDN Calls.

- 3.5 Vodafone shall provide Vodafone Outgoing International Call Conveyance Service for the contract period and at the same standard and Quality of Service as it conveys similar calls originating in Vodafone Network.
- 3.6 Each Party shall locate and correct Faults that occur in its Network that affect the provision of International Call Conveyance Service in accordance with such Party's normal engineering practices

4. Service Provisioning – Initial Procedure

- 4.1 This clause applies where the Originating Party wishes to use International Call Conveyance Service provided by Vodafone in respect of which the process in this clause has not already been undertaken.
- 4.2 The Originating Party shall notify Vodafone by means of a request form as set out in Annex F – Planning, Forecasting and Provisioning, if it requires the use of International Call Conveyance Service.
- 4.3 Vodafone shall acknowledge in writing receipt of the Originating Party's request under clause **Error! Reference source not found.** within five (5) Business Days.
- 4.4 Following receipt of a request under clause **Error! Reference source not found.**, Vodafone shall assess that request and notify the Originating Party within ten (10) Business Days of acknowledgement that either:
 - (a) The implementation of the request, in respect of the requested International Call Conveyance Service, involves only Network conditioning in Vodafone's Network, in which case the negotiation period to agree technical interconnection arrangement prior to installation shall be twenty (20) Business Days; or
 - (b) The implementation of the request in respect of the requested International Call Conveyance Service involves work in addition to or as alternative to Network conditioning in Vodafone's Network, in which case negotiation period to agree the technical interconnection arrangement prior to installation shall be forty (40) Business Days.
- 4.5 The Parties shall forthwith negotiate in good faith the requirements, implementation charges and timetable for the use of the International Call Conveyance Service in accordance with the Originating Party's request under clause **Error! Reference source not found.** for the negotiation period set out in clause **Error! Reference source not found.** and in accordance to Annex F – Planning, Forecasting and Provisioning, and Annex H - Price List. In the event that agreement is not reached either Party may commence the Dispute Resolution Procedure in accordance with clause 25 (Resolution of Disputes) of this RIO.
- 4.6 Where the Parties have reached an agreement, in accordance with clause **Error! Reference source not found.** above, Vodafone will commence implementation in accordance with the agreed timetable.
- 4.7 Nothing in this clause requires Vodafone to perform any changes in its Network or to commence the supply of International Call Conveyance Service until the Parties have

completed all necessary Data Amendments, and all network conditioning Charges in line with **Error! Reference source not found.** have been agreed with the Originating Party.

- 4.8 The requesting Party may, at any time, request Vodafone to cease supplying the Service with thirty (30) calendar day notice, and such Party shall cease supplying such Services as soon as practicable or at such later time as agreed, but in any event shall be subject to the minimum period, which shall be no less than three (3) months. In the event the Originating Party requests that the Terminating Party cease supplying the specified Termination Services within the minimum period, the Originating Party shall pay the Terminating Party the remainder of the minimum period for such Termination Services. After the minimum period, the Originating Party may, at any time, request the Terminating Party to cease supplying the specified Termination Services. In such an instance, the Terminating Party shall cease supplying the specified Termination Service as soon as practicable or at such later time as specified by the Originating Party.

4.9 .

5. Forecasts

- 5.1 The Originating Party shall at the beginning of each Quarter provide forecasts for International Call Conveyance Services in accordance with Annex F – Planning, Forecasting and Provisioning.

6. Charging

- 6.1 Except to the extent stated otherwise in this Service Schedule, charging for International Call Conveyance Service will be in accordance with the provisions of Annex B – Billing Processes and Procedures and this clause.
- 6.2 Vodafone shall, for those Calls for which it is providing an International Call Conveyance Service, collect a Call Data Record (CDR) for each individual Call on a call-by-call basis and process such records in accordance with this clause.
- 6.3 The CDRs collected by Vodafone in accordance with this clause shall be the source of the data used by Vodafone for bill verification and to invoice for the International Call Conveyance Service provided under this Schedule.
- 6.4 The calculation of Charges for International Call Conveyance Service will be based on the amount of traffic and the applicable destination as determined by the longest match of dialed digits to the prefixes corresponding to such destinations.
- 6.5 The chargeable time for each Call, unless specifically stated as otherwise, shall be the “conversation time” in accordance with Section 1.2.2 of CCITT Recommendation D.150 (version Mar del Plata, 1968; amended at Melbourne, 1988).
- 6.6 Calls shall be charged on a per second basis. Charges shall not be payable as per this RIO by the Originating Party to Vodafone for unsuccessful Calls.
- 6.7 The total usage data for each applicable destination for each monthly Billing Period shall be rounded to the nearest minute.
- 6.8 Calls that cross over into the next Billing Period shall be billed in the Billing Period in

which those Calls end.

7. Billing Information

- 7.1 Vodafone shall use its reasonable endeavours to provide appropriate Billing Information for International Call Conveyance Service in accordance with the format set out Annex B – Billing Processes and Procedures within thirty (30) Business Days from the end of each Billing Period together with the invoice for the International Call Conveyance Service in accordance with Annex B – Billing Processes and Procedures.

8. Routing

- 8.1 The conveyance of international Calls shall be in accordance with the routing procedures set out in the Network Plan.

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Annex D – Technical Information for Interconnection between Vodafone Qatar and OLOs

1. General

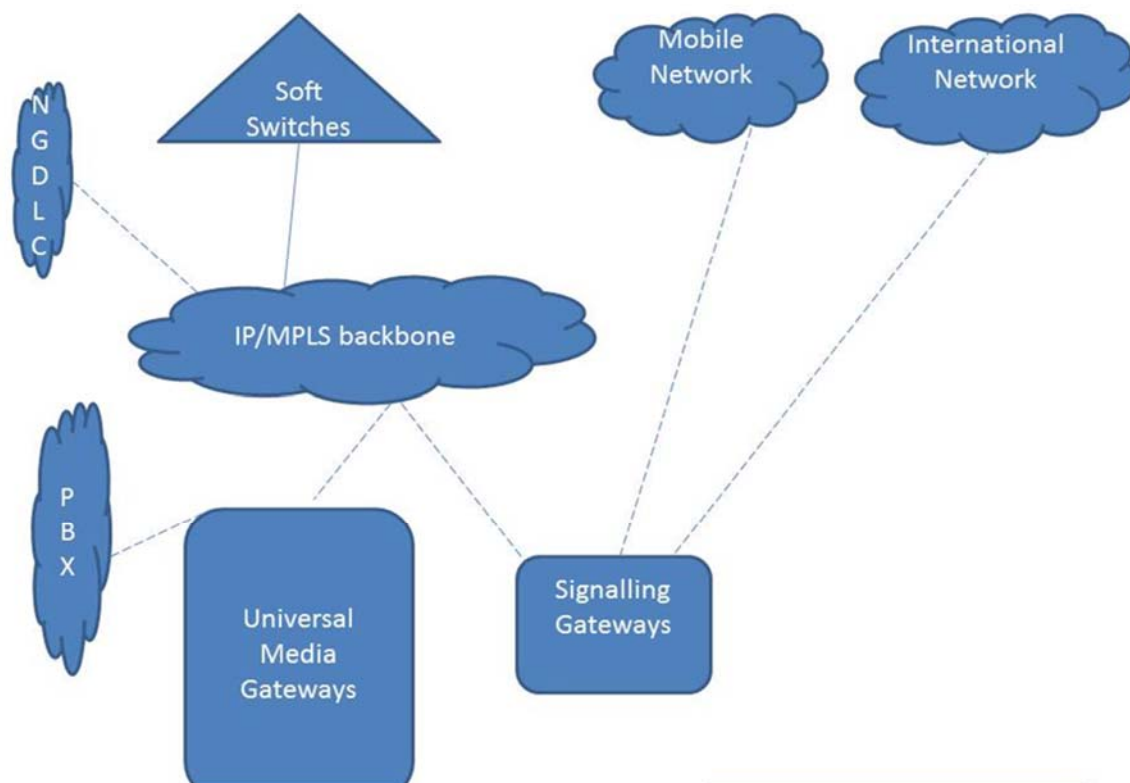
- 1.1 This Annex D – Technical Information provides general information about Vodafone's Network and describes options available for Interconnection with Vodafone's Network, and shall form the basis of Interconnection service provision discussions between the Parties.
- 1.2 The specific technical conditions for Interconnection with Vodafone's Network will occur in accordance with the Network Plan as agreed pursuant to Annex F – Planning, Forecasting and Provisioning. In the event of any inconsistency between the Network Plan and this Annex D – Technical Information, the Network Plan takes precedence.
- 1.3 Vodafone operates three different Networks:
 - (a) Vodafone International Services;
 - (b) Vodafone Fixed Network;
 - (c) Vodafone Mobile Network.
- 1.4 Vodafone offers Interconnection separately to these Networks:
 - (a) Two International Gateways (Vodafone International), configured in 'active/standby' mode
 - (b) Two Fixed switching Gateways (Vodafone PSTN), configured in 'active/standby' mode
 - (c) Two Mobile Switches configured in load sharing mode
 - i. Two (2) Transit Media Gateways for voice Interconnection (Vodafone Mobile)
 - ii. Two (2) STPs for wireless signaling and SMS
 - iii. IP-VPN connectivity for MMS interworking

2. Vodafone PSTN

- 2.1 This section describes Vodafone's PSTN Network connection towards the OLO.
- 2.2 Architecture:
 - (a) The list of POIs, as of the date of this document, is presented in Attachment 2: Points of Interconnection and Signaling Point Codes. This list may be updated periodically. Additional POIs may be determined by agreement between Vodafone and OLO as part of the Network Plan and will be consistent with the following:
 - i. For Interconnection between Vodafone Networks and OLO Network, the initial requirement is to establish Interconnection with Vodafone Points of Interconnection offered, at the Service Node or at any other Point of Interconnection that is technically and economically feasible.

- ii. For Interconnection with OLO Network, the initial requirement is to establish Interconnection at a minimum of two (2) Points of Interconnection.
- (b) The current Access Provider fixed services core network includes two-level architecture of Service Nodes (SNs) and Local Exchanges (LEs).
- (c) The fixed services core network has two redundant Service Nodes that work in a master-slave mode, are geographically distributed over two different locations and are extensively interconnected by the transport elements of the core fixed Network. Vodafone will initially offer Interconnection at the SN level.
- (d) The Local Exchange (LE) is the basic building block for customer access to Vodafone's Public Switched Telephone Network (PSTN). Local Exchanges provide customer connectivity via the access network.
- (e) Most Local Exchanges also parent Remote Units (or Remote Switching Units), which extend the geographic area over which customers are served.
- (f) Service Nodes are the major switching elements in the Network and provide national transit capability, in addition to providing customer connectivity via the access network.

2.3 Vodafone's topology is as follows:



2.4 Points of Interconnect (POI):

- (a) Vodafone will physically interconnect its PSTN gateways with equivalent network elements of the OLO at designated POIs associated with a number of nominated SNs, if technically feasible.
- (b) Interconnection is provided as Customer-Sited Interconnection (CSI).
- (c) In the CSI mode, traffic is conveyed by Interconnection Links provided by Vodafone as described in Annex C – Service Schedule. Vodafone DDF and transmission terminal equipment will be installed at the boundary of or within the OLO site, to which Vodafone technicians should be granted access. Both Parties shall come to an agreement on adequate access arrangements that will allow Vodafone to fulfil its respective obligations. Should it not be possible to arrive at an agreement, such obligations will become null and void until such time as the access arrangements are agreed.

2.5 Interconnection Links and Routing:

- (a) Interconnection Links
 - i. Interconnection Links will be used as necessary to provide Interconnection routes for the conveyance of traffic into the other Party's Network. Routes will be established in accordance with the agreed Network Plan and capacity forecasts as stipulated in Annex F – Planning, Forecasting and Provisioning.
 - ii. Interconnection routes may be unidirectional or bidirectional as agreed between the Parties in the Network Plan.
 - iii. Route segregation may be based on traffic type (e.g., calls to geographic-national number ranges, mobile number ranges, international, etc.) and economic considerations. Such route segregation will be agreed between the Parties.
 - iv. The OLO will be responsible for those routes on which it sends Traffic to Vodafone and will dimension the routes to meet the Service Levels set out in Annex E - Service Level Agreements.
- (b) Signaling
 - i. Vodafone Network utilizes Signaling System No.7 (SS7) in accordance with ITU-T Q.7xx series standards with options as adapted to Qatar, as described in Attachment 3: Qatar SS7 Signaling Standard (ISUP & MTP) of this Annex, which provides the standard specifications for layers 1, 2 and 3 of the Message Transfer Part (MTP). This Attachment 3: Qatar SS7 Signaling Standard (ISUP & MTP) also provides the standard specifications for the ISDN User Part (ISUP). The Signaling Point Codes (SPCs) for the POI Service Nodes are provided in Attachment 2: Points of Interconnection and Signaling Point Codes of this Annex.

- ii. The utilization of SS7 links shall be maintained within the guidelines of ITU-T Q.706 Recommendations of 0.2 Erlang under normal load and 0.4 Erlang under high load (e.g. changeover of a parallel link).

2.6 Number Ranges:

- (a) Both Parties will ensure that sufficient and correct numbering information is sent from one Network to the other for correct delivery of traffic. The Parties will convey to each other telephone numbers in the national format as contained in the National Numbering Plan approved by CRA.
- (b) A Party transmitting traffic across a POI shall transmit all dialled digits in order to allow the receiving Party to process the traffic unless otherwise agreed between the parties and recorded in the Network Plan.
- (c) Each Party shall notify the other Party in writing, giving details of new number ranges allocated to the notifying Party and amendments to, or deletions of, existing number ranges in accordance with the provisions of Annex F – Planning, Forecasting and Provisioning and the Network Plan.
- (d) Vodafone shall be responsible for the number translation of short code dialled digits. This traffic will be presented to Vodafone Network based on the specific location of the Calling Party on a call-by-call unless otherwise agreed by the Parties. This Service is offered by Vodafone only if the OLO cannot connect directly to the customer.

2.7 Calling Line Identification (CLI) Presentation:

- (a) Both Parties will pass the CLI for all traffic for which Termination Services are provided, including such traffic that is forwarded from another Network, to the extent agreed between the Parties.
- (b) For traffic handed over from an authorized overseas system, Vodafone will convey, to the extent received, the CLI associated with such Traffic to the extent agreed between the Parties.
- (c) The Parties will resolve any service issues arising from the provision of CLI from the other Party's Network, where the CLI is not an actual directory number. A list of all such non-subscriber CLIs ("Dummy CLIs") will be notified by each Party to the other Party in writing for those Dummy CLIs already in use. The list will be updated from time to time to include those planned for use and for those Dummy CLIs that are no longer in use. Twenty (20) Business Days' advance notice from the commencement date will be given for Dummy CLIs planned for use.
- (d) For traffic for which CLI is not available, such as calls from customer service operator positions, the category of the calling customer will be clearly indicated in the Signaling message, or if the CLI is restricted by the supplementary service, then the CLIR (Calling Line Identification Restriction) will display the corresponding BIT value indicated in the Signaling message.
- (e) The Parties will comply with the following requirements and safeguards:

- i. Neither Party will manipulate the CLI of the original calling customer and the original calling customer CLI will accordingly be passed on in the conveyance of a call.
- ii. Neither Party will, in the handling of outgoing traffic, manipulate the number/code dialled by the calling customer.
- iii. Each Party acknowledges that it is not authorized to convey traffic other than as permitted by the terms and conditions of its License, and that neither Party has any obligation whatsoever to convey traffic that is identified by CLI as traffic that is unauthorized per the terms of the License of the other Party.
- iv. Each Party will set the A-bit of the Forward Call Indicator (FCI) of the Initial Address Message (IAM) of ISDN User Part (ISUP) to the value "1" to identify an international incoming call.

2.8 Transport:

(a) Synchronization:

- i. The Parties shall synchronise their clocks and other timing devices in order to ensure that there are no timing discrepancies between them.
- ii. Vodafone Network synchronization is guided by relevant ITU-T recommendations. In order to establish Interconnection, the OLO will fulfil the timing performance requirements of ITU-T recommendation G.811. This can be achieved for plesiochronous mode by deriving reference timing from the OLO's own Stratum-1 clock or receive the master timing signal from Vodafone .
- iii. The Parties are responsible for the management of synchronization in their respective Networks.
- iv. Confidential Information, not to be published on the website

(b) Interface Standards:

- i. Interconnection Interfaces: Vodafone will only consider Interconnection with equipment approved by CRA.
- ii. Electrical Interfaces
 - a) Electrical E-1 Interfaces:
 - 1. The Interconnection Link will be a 2 Mbit/s (E1) path having Electrical Interfaces as specified by ITU-T G. 703. For E1 (G.703), symmetrical pair cable

connections with 120 ohms impedance shall be available as follows:

- Bit rate (synchronous): 2048 kbit/s \pm 50 ppm
- Nominal value of pulse amplitude
- Symmetrical connectors: 3 V \pm 10 %
- Attenuation: 6 dB at 1024 kHz
- G. 704 Framing structures
- G. 823 Jitter requirements

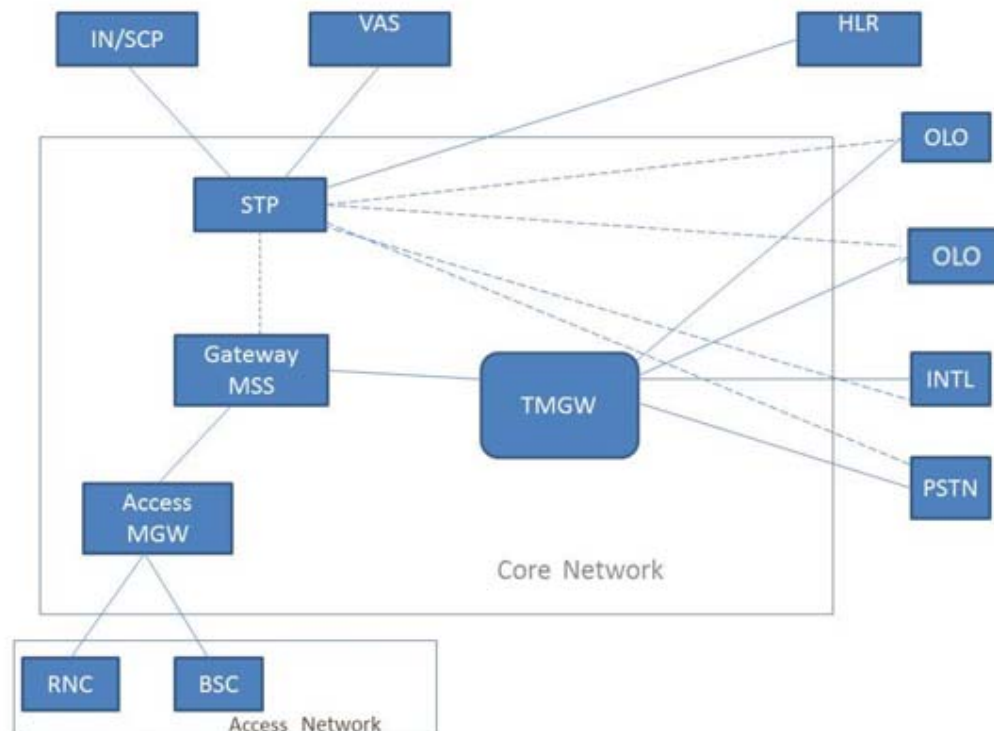
3. Vodafone Public Mobile Telecommunications Network

3.1 Scope:

- (a) The section describes the Interconnection of Vodafone Mobile Network to the OLO. The mobile network architecture is based on different transport/functional layers:
- i. Signaling layer based on STPs, supporting both narrowband SS7 and SIGTRAN.
 - ii. Voice Network using STM1 as transport.
 - iii. Data Network (Packet Switching traffic, MMS, etc ...).

3.2 Architecture:

- (a) The list of POIs, as of the date of this document, is presented in Attachment 2: Points of Interconnection and Signaling Point Codes. This list may be updated periodically. Additional POIs may be determined by agreement between Vodafone and OLO as part of the Network Plan and will be consistent with the following:
- i. For Interconnection between Vodafone Networks and OLO Network, the initial requirement is to establish Interconnection with Vodafone Points of Interconnection offered, at the Service Node or at any other Point of Interconnection that is technically and economically feasible.
 - ii. For Interconnection with OLO Network, the initial requirement is to establish Interconnection at a minimum of two (2) Points of Interconnection to ensure diversity and resilience. (The details of the initial Interconnection arrangement will be agreed during the initial network planning process and recorded in the Network Plan).
 - iii. Vodafone's architecture overview is as follows:



(b) General:

- i. Two Media Gateways (MGW) and two Signaling Transfer Points (STPs) are used for mobile Interconnection purposes. These are used for voice/video Interconnection and SMS.
- ii. The MMS interworking will use IP-VPN connectivity.

(c) Transit Media Gateway:

- i. The Media Gateways provide transit capabilities for the entire Vodafone Mobile Network. They shall work in a load-sharing mode.
- ii. Vodafone Mobile Network offers STM 1 connectivity on the Transit Media Gateways. Each Vodafone MGW may be connected to each OLO's POI in order to obtain optimal redundancy (fully meshed network) as agreed between the Parties and set out in the Network Plan.
- iii. In the event the Parties do not agree on the mesh network configuration, route diversity shall be managed by each operator by deploying redundant routes within its own Network.

(d) Signaling Transfer Point:

- i. The STPs are the only access to Vodafone Signaling network.
- ii. Vodafone POIs support both narrowband Signaling and

SIGTRAN.

- iii. The following table summarizes the Signaling protocols in use by Vodafone:

Protocol / Stack	Compliance
M3UA	RFC3332
SCTP	RFC2960
MTP	ITU Q701-709
ISUP	Q.761 -764
SCCP	ITU Q711-716
M2PA	SS7 links SIGTRAN
MAP	3GPP TS29.002 MAP version 3 is supported
SMS Service	3GPP TS23.040
MMS Service	3GPP TS23.140

3.3 Point of Interconnect (POI):

- (a) Vodafone will physically interconnect its Mobile Network with the OLO at the designated Points of Interconnection (POIs) as set out in Attachment 2: Points of Interconnection and Signaling Point Codes.
- (b) Interconnection is provided as Customer-Sited Interconnection (CSI) as described in clause 2.4(b) of this Annex.

3.4 Interconnection Links and Routing:

- (a) Links:
 - i. Interconnection Links will be used as necessary to provide Interconnection routes for the conveyance of traffic into the other Party's mobile network and vice versa. Routes will be established in accordance with the agreed Network Plan and capacity forecasts as stipulated in Annex F – Planning, Forecasting and Provisioning.
- (b) Responsibilities:
 - i. Each Party shall route the other Party's Traffic in accordance with the principle that routing within a Party's Network shall be equivalent to the routing of similar types of Traffic for such Party's own customers.
 - ii. The Parties shall develop and apply network traffic management strategies and procedures to maintain customer service quality and to protect the Parties' Networks as appropriate. The rules are defined in the

Annex G - Operational Procedures.

3.5 Interconnection Routing Rules:

- (a) Interconnection routes may be unidirectional or bidirectional as agreed between the Parties in the Network Plan.
- (b) Specific routes shall be dedicated to mobile-to-mobile traffic. Transit traffic for signaling and for termination services shall be provided subject to agreement between the Parties.
- (c) The Media Gateways and the STPs shall work in load-sharing mode for both incoming and outgoing signaling traffic. Both Parties must ensure that the traffic and signaling load are evenly distributed over the redundant POIs.
- (d) Both Parties will be responsible for the dimensioning of the routes to meet the Service level targets stated in Annex E - Service Level Agreements.
- (e) The same traffic will be conveyed from Vodafone's mobile network to the OLO's network. The main traffic routing categories are as follows:
 - i. Voice/Video calls termination to Vodafone Mobile subscribers
 - ii. SMS (Point-to-Point) termination to Vodafone Mobile subscribers
 - iii. MMS termination to Vodafone Mobile subscribers
- (f) Signaling:
 - i. If the narrowband signaling is used, the utilization of SS7 links shall be maintained at 0.2 Erlang under normal load and 0.4 Erlang under high load.
 - ii. If SIGTRAN is deployed, the IP Network used for transport of SS7 signaling shall meet the following requirements:

Switching time between Ethernet links in case of hardware fault	<500 ms
Maximum delay	200 ms
Maximum jitter	20 ms
Packet loss	0,01%
IP version	IPv4

- (g) Number Ranges: Numbering issues for Interconnecting mobile networks will be treated in the manner set out in this clause 2.6.
- (h) Both Parties will pass the CLI in the manner specified in clause 2.7 of this Annex D – Technical Information.

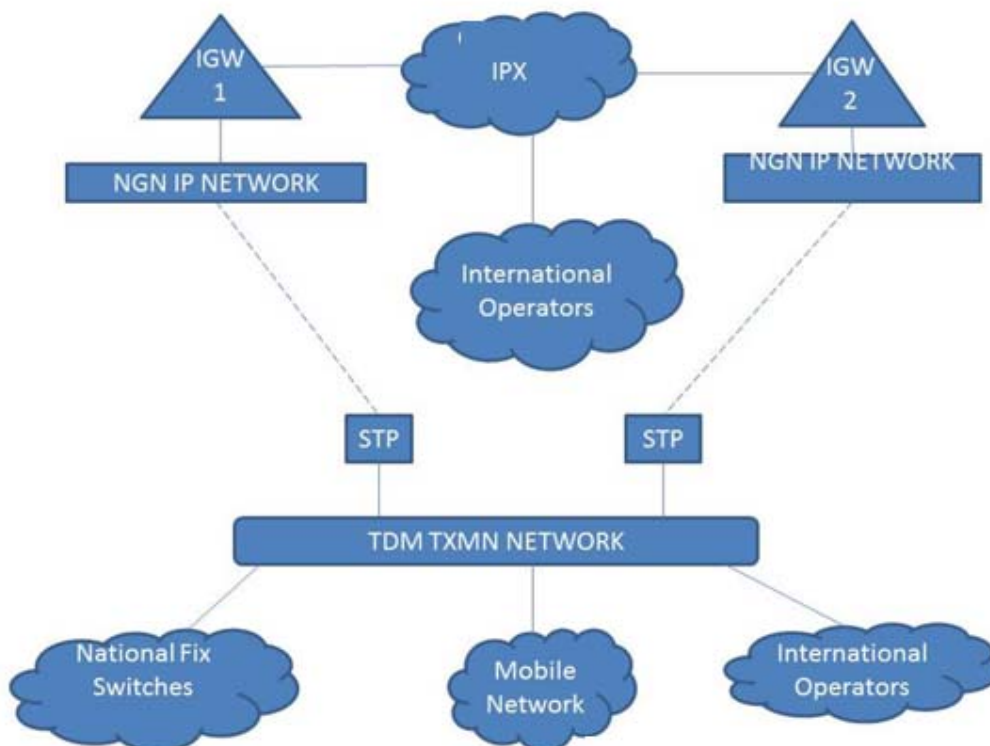
3.6 Transport:

- (a) Synchronization: Network synchronization specifications are set out in clause 2.8(a) of this Annex D – Technical Information.
- (b) Interface Standards are specified in clause 2.8(b) of this Annex D – Technical Information

4. Vodafone International Services

4.1 Architecture:

- (a) Two international switches of Vodafone with two fully redundant International Switches known as International Gateways and providing TDM and NGN based services. Both international gateways are working in dual homing configuration and installed in different geographic locations for geo redundancy. Moreover, traffic is distributed from these switches to four different sites for network resilience.
- (b) Signaling Transfer Point (STP):
Vodafone is providing fully redundant solution for SS7 and SIGTRAN (narrow and broadband) signalling through their state of the art STP/ITP systems. These signalling transfer points are installed in two different geo location for geo redundancy. Appropriate support and operation systems are in place to provide smooth operations and maintain agreed Service Levels.
- (c) Vodafone's International Network overview:



4.2 Points of Interconnection (POI):

- (a) Vodafone will physically interconnect its international gateways with equivalent network elements of the OLO at designated POIs associated with a number of nominated SNs.

4.3 Interconnection Links and Routing:

- (a) Interconnection Links shall be configured as described in clause 2.5(a)
- (b) Signaling parameters are described in clause 2.5(b).
- (c) Number Ranges: Numbering issues for interconnecting to Vodafone's international Networks will be treated in the manner set out in clause 2.6.
- (d) Confidential Information, not to be published on the website
- (e) Both Parties will pass the CLI in the manner specified in clause 2.7 of this Annex C – Service Schedule.

4.4 Transport:

- (a) International Transport Gateways:
 - iii. The nodes catering to the international transport gateway further distribute the Traffic to international destinations. Capacity management, which includes circuit provisioning, testing and commissioning is done at these nodes
- (b) Network synchronization specifications are set out in clause 2.8(a) of this Annex D – Technical Information.
- (c) Interface Standards are specified in clause 2.8(b) of this Annex D – Technical Information.

Attachment 1 – Distribution Frame Characteristics DDF and ODF

1. Digital Distribution Frame (DDF)

1.1 General:

- (a) DDFs are needed for termination of cables from and to multiplex equipment.
- (b) For 2Mbit/s uses 120 ohms termination a balanced termination block with break; and
- (c) Test facilities are provided.

1.2 Technical Requirements: DDFs are installed adjacent to transmission room as per ETSI standard.

2. Optical Distribution Frame (ODF)

2.1 General:

- (a) The Optical Distribution Frames are used to provide:
 - i. Patching.
 - ii. Possibility of re-arrangement.
 - iii. Access for Fiber testing.
- (b) General Characteristics:
 - i. Centralized and modular design.
 - ii. Single mode Fiber for installation and terminations.
 - iii. Connector type FC/PC.
- (c) ODF Design:
 - i. The ODF includes a patch panel with FC through connector. One side of this rear panel D3 FC/PC connectorized pigtails from the OCTB (Optical cable termination box) terminate on the through connectors.
 - ii. Connection to the appropriate Fiber is achieved by connection of the optical patch cord to the through connector associated with the relevant Fiber/pigtails. Once it terminated the pigtail should not be moved.
 - iii. Proper patch cord management is applied within the frame. This includes but not limited to, bending radius management, protection from physical damage, tempering and access length management.

Attachment 2 – Points of Interconnection and Signaling Point Codes

Confidential Information, not to be published on the website

Attachment 3 – Qatar SS7 Signaling Standard

As part of the Network Plan, as referenced in Annex F – Planning, Forecasting and Provisioning, a set of SS7 Signaling tests will be performed in order to insure the compatibility and interoperability between Vodafone and OLO Networks at the 3 MTP levels as well as ISUP & Supplementary Service Levels. These tests are extracted from the ITU-T Q.780, Q.781, Q.782, Q.784 and Q.785 Recommendations.

Purpose	Compliant recommendation or standard
MTP: used for the interworking between SoftX3000 and the SS7 Signaling network so that SoftX3000 can be interconnected to SPs or STPs in the SS7 Signaling network.	ITU-T Q.701 - Q.707
ISUP: used for the interworking between SoftX3000 and the PSTN so that SoftX3000 can provide ISUP trunks through TMGs and achieve the Interconnection with PSTN exchanges.	ITU-T Q.761 - Q.764, Q.730
SCCP: used to bear the INAP protocol so that SoftX3000 can be interconnected to SCPs in the IN through the SS7 Signaling network.	ITU-T Q.711 - Q.716
TCAP: used to provide the applications of SoftX3000 and SCPs with a number of functions and procedures that are not application specific, so that SoftX3000 can support the applications pertaining to IN services.	ITU-T Q.771 - Q.775
INAP: used to define the information streams between the functional entities of the I N so that SoftX3000 can support the Service Switching Function (SSF), the Call Control Function (CCF), the Specialized Resource Function (SRF) and the Call Control Access Function (CCAF) and act as the SSP over the standard IN architecture.	ITU-T Q.1218, Q.122x, Q.123x ITU-T X.208, X.209

Annex E - Service Level Agreements

Not used

Annex F – Planning, Forecasting and Provisioning

This Annex F – Planning, Forecasting and Provisioning provides details and forms for the planning and forecasting of Services between Vodafone and the OLO.

1. Planning

1.1 Provision of Network Information:

- (a) Vodafone and the OLO will cooperate in planning and implementing Interconnection to ensure as far as possible that their respective networks work together efficiently and effectively for the provision of the Services. Such cooperation will include the mutual exchange of relevant capacity and network topology information to facilitate preparing for and implementing Interconnection.

1.2 Network Plan:

- (a) Vodafone and the OLO will jointly formulate and agree on a Network Plan as set out in clause 6.2(d) of the Main Body of the present RIO.
- (b) The Network Plan will be part of the Interconnection Agreement and contain those elements necessary for Vodafone and the OLO to implement the provisions made under this RIO. Such information includes but is not limited to:
 - Traffic and Capacity Forecasts;
 - Numbering Plans, Short Codes and Dialing Format;
 - Contact Points for both Vodafone & OLO;
 - Network Diagram of all Points of Interconnection and its evolution;
 - Call Routing Procedures;
 - Circuit Identification Codes;
 - Transmission Plan and its evolution;
 - Switching Details;
 - Testing and Commissioning Procedures;
 - Signaling Plan;
 - Synchronization Plan;
 - Interconnection Performance Standards;
 - Networks Resilience, Diversity and Security;
 - Calls Handling Sequences;
 - Operation and Maintenance Principles;
 - Date of next review.
- (c) As part of the planning of the initial and ongoing capacity, each Party will provide the other Party, through the Joint Interconnection Committee, information on the availability (or otherwise) of sufficient transmission capacity at any relevant Vodafone or the OLO facility for establishing Interconnection Links.
- (d) The Network Plan will address the forecasts for the following twelve (12) months for the OLO's Interconnection requirements in terms of traffic and location and number of Interconnection Links, according to the terms defined.

1.3 Numbering:

- (a) Before opening new numbering blocks (including MSRN) on its Network, both Vodafone and the OLO will notify the other Party in writing at least twenty (20) Business Days in advance of the activation of such numbers.
- (b) Both parties must give not less than six (6) months prior written notice to the other Party before making any changes in its numbering structure that may necessitate modifications to the other Party's network. Implementation periods for changes to existing routings and for the introduction of new number ranges will be specified in the Network Plan.

1.4 Interconnection of new Switching Equipment:

- (a) In the event Vodafone or the makes Interconnection available on new switching facilities, that Party shall have completed all commissioning and testing activities in accordance with the recommendations of the switch vendor and industry best practices, including but not limited to interworking testing within its own network.
- (b) The delivery of Customer Sited Interconnection (CSI) is subject to the commissioning of an Interconnection Path to the OLO's Node.

1.5 Provisions for Network Alterations, Interconnection Alterations and Data Management are detailed in Annex G - Operational Procedures.

2. Services Forecasting

- 2.1 Vodafone and the OLO shall provide forecasts for the Services in good faith and use all reasonable endeavours to ensure that forecasts are as accurate as possible.
- 2.2 The OLO must provide a separate forecast each Quarter for new Interconnection Paths, Interconnection Links, capacity on Interconnection Links for the upcoming three (3) year period and must update that forecast on a rolling basis each Quarter, unless otherwise agreed between the Parties. All such forecasts shall be provided in accordance with the applicable forms set out in Attachments 2 and/or 3 (as the case may be) of this Annex F – Planning, Forecasting and Provisioning.
- 2.3 In addition to each Party's obligations under clause 5.3 of Annex G - Operational Procedures and to the extent that a Mass Call Event is not included in a forecast given by a Party for the relevant Quarter, each Party shall provide the other Party a forecast of any Mass Call Event at least twenty-one (21) Calendar Days in advance of the occurrence of the Mass Call Event.
- 2.4 If no forecasting form update is received, the forecast shall remain unchanged from that previously submitted until the following Quarter.
- 2.5 All forecasts provided for the upcoming 4 Quarters starting from the effective interconnection between Vodafone and the OLO shall be deemed Advanced Capacity Orders (**ACO**) unless otherwise agreed between Vodafone and the OLO.
 - (a) Forecasting changes: changes to forecasts in a given Quarterly forecasting period may be made without penalty or additional charges within the following thresholds:

Number of Quarters prior to the Quarter of the Proposed Ready for Service Date	Allowed change
4	+/- 10%
3	+/- 5%
2	+/- 2%
1	0%

- (b) Increases in forecasts for the first 4 Quarters starting from the date of effective interconnection between Vodafone and the OLO, in excess of the thresholds set out in clause 4.5((a) shall be subject to availability of equipment and resources and applicable charges for resulting increased equipment and/or labour costs. Vodafone can offer no guarantees that such increases in Advance Orders can be satisfied, but will use reasonable endeavours to accommodate such increases.
- (c) Decreases in forecasts for the first 4 Quarters starting from the date of effective interconnection between Vodafone and the OLO in excess of the thresholds set out in clause 4.5((a) shall be subject to reasonable charges being levied by Vodafone on the OLO for any costs reasonably and necessarily incurred as a result of planning for and potentially purchasing necessary equipment that cannot be reasonably used elsewhere in the Vodafone Network.
- (d) Decreases in ACOs for the remaining forecast Quarters are subject to applicable restrictions contained in the table above.

2.6 Forecast & Approval:

- (a) The Joint Interconnection Committee shall review all forecasts at a meeting to be convened within ten (10) days of receipt of the forecast by Vodafone.
- (b) Forecasts are to be agreed and approved by the Parties (such approval not to be unreasonably withheld or delayed).
- (c) If a forecast is approved, authorized representatives of both Parties will sign the forecasts to signify their commitment to the forecast.
- (d) If the Parties fail to agree to the forecast or any part thereof, then either Party may notify the other of a Dispute in accordance with clause 25 (Resolution of Disputes) of the Main Body of this RIO. Only those portions of the forecast with which the Parties are not in agreement shall be considered in dispute.

2.7 Forecast Review:

- (a) The Joint Interconnection Committee will review the OLO's forecasts on a Quarterly basis unless otherwise agreed between the Parties

3. New Services

- 3.1 Vodafone or the OLO may, at any time, request from the other Party an Agreement amendment to interconnect their respective Networks for the provision of:

- (a) Any Service or facility which the Requested Party provides either to itself or under an interconnection agreement with another Licensed Operator; or
 - (b) A new Service, belonging to a Relevant Market in which Vodafone is designated as dominant service provider, not currently provided or able to be provided under an Interconnection Agreement and has not previously been supplied pursuant to an Interconnection Agreement or any other agreement between the Requested Party and any other OLO.
- 3.2 Such requests shall be clearly marked as a request for a new Service pursuant to this clause 3.1.
- 3.3 Following a request, Vodafone or the OLO shall treat the other party in a fair and professional manner and offer the Service or facility on the basis applicable standard tariff terms and conditions.
- 3.4 The Party making the request shall provide the Party receiving the request with a written statement of its requirements at the time of its request, which must include the following information:
 - (a) Details of the New Interconnection Service or change to an existing Interconnection Service;
 - (b) The locations at which the New Interconnection Service or change to an existing Interconnection Service are required;
 - (c) Other relevant details sufficient to enable the other Party to assess whether a plan can be constructed to meet the request in the timescale sought,
 - (d) Any other information which the other Party would reasonably consider necessary.
- 3.5 The Party receiving the request shall acknowledge receipt not later than 5 (five) Business Days after receipt.
- 3.6 Not later than ten (10) Business Days, unless otherwise agreed by the parties, after receipt of a statement of requirements, the Party receiving the request shall confirm whether the statement of requirements is sufficiently detailed to enable it to provide the requested Service. If not, the Party receiving the request shall request any further clarification it may reasonably require.
- 3.7 Subject to the sufficiency of the statement of requirements, the Party receiving the request shall state in writing whether it is willing to negotiate in good faith in order to enter into negotiations not later than twenty (20) Business Days after the receipt of the statement of requirements unless otherwise agreed by the Parties.
- 3.8 In the event that the Party receiving the request indicates that it is willing to negotiate pursuant to clause 3.7 of this Annex F – Planning, Forecasting and Provisioning, the Parties agree to commence negotiations in good faith on the technical and commercial aspects of the New Interconnection Service or change to an existing Interconnection Service within twenty (20) Business Days after receipt of the statement of requirements.
- 3.9 If the Parties cannot agree on the technical and commercial terms for the New Interconnection Service or change to an existing Interconnection Service (or the Party

receiving the request indicates that it is not willing to negotiate to enter into an agreement), a Party may notify the other Party of a Dispute in accordance with clause 25 (Resolution of Disputes) of the Main Body of this RIO.

- 3.10 If the request is for a new Interconnection Service, the agreed technical, operational and commercial terms shall be incorporated into a revision to this RIO and submitted to CRA for approval. Such terms shall be included in the Interconnection Agreement as appropriate.
- 3.11 Any withdrawal of an interconnection Service shall be notified to CRA for approval and to the OLO two (2) Calendar Months in advance of the proposed date of withdrawal.

Attachment 1 – Interconnection Service Order Form

Interconnection Service Order Form	
OLO Details	
Order Date:	Other Licensed Operator reference:
Address:	Contact name:
	Company position:
Billing Address (if different):	Phone:
	Fax:
	E-mail:
Service Requested	
<input type="checkbox"/> Interconnection Link	No. Speed/Bandwidth:
<input type="checkbox"/> Other interconnection Service:	2 Mbps
	155 Mbps
	622 Mbps
	other _____
Interconnection Node Location:	
OLO Location:	
Required Delivery Date:	
As per SLA	Other:
Additional Information:	
Note: This order form will be completed and signed by a duly authorized representative of the OLO.	
Name: _____ Signature: _____	

Attachment 2 – Traffic and Capacity Forecasts

Traffic and Capacity Forecast by traffic type and per Interconnection Link/ Pol

TRAFFIC STREAMS	YEAR				YEAR				YEAR			
	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
OUTGOING TRAFFIC (Off-Net)												
NATIONAL VOICE (minutes)												
Mobile to Mobile												
Mobile to PSTN												
SMS TRAFFIC (Messages)												
MMS TRAFFIC (Messages)												
Text/Picture												
Video												
VIDEO TRAFFIC (minutes)												
Capacity (in Erlang)												
No. of Circuits (0.1% Blocking)												
No. of E1s (@ 70% Utilization)												

TRAFFIC STREAMS	YEAR				YEAR				YEAR			
	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
OUTGOING TRAFFIC (Off-Net)												
INTERNATIONAL VOICE (minutes)												
Outgoing via Vodafone Gateway												
Capacity (in Erlang)												
No. of Circuits (0.1% Blocking)												
No. of E1s (@ 70% Utilization)												

Attachment 3 – Interconnection Path Forecasting Form

Interconnection Path	
Address	
GPS co-ordinates	
Ready for Service Date	
Total Capacity	

Attachment 4 – Interconnection Link Handover Form

Not used

[illegible]

Attachment 5 – Interconnection Service Cancellation Form

Not used

[illegible]

Annex G - Operational Procedures

1. Network Alterations and Interconnection Alterations

- 1.1 Vodafone and the OLO each acknowledge that it may be necessary or desirable to undertake a Network Alteration or Interconnection Alteration (as the case may be) from time to time to allow the continuance of Services as per this RIO.
- 1.2 If a Party proposes to make a Network Alteration or Interconnection Alteration (as the case may be) (**Alteration**), that Party will send the other Party a notice in relation to that Alteration (**Alteration Notice**). At least twenty (20) Business Days notice shall be provided by the Requesting Party for each Network Alteration request.
- 1.3 The requested Party shall, if in a position to accept the Network Alteration proposed, provide an estimate of the costs involved within twenty (20) Business Days of receipt of a Network Alteration request.
- 1.4 The Party receiving the Alteration Notice shall only have the right to object to the Alteration where the proposed Alteration would have an unreasonable adverse impact on the receiving Party's Network.
- 1.5 If the Party receiving the Alteration notice objects to the Alteration because the proposed Alteration would have an unreasonable adverse impact on that Party's Network, that Party shall notify the Party proposing to perform the Alteration within ten (10) Business Days of receipt of the Alteration Notice. In these circumstances, the Parties shall make all reasonable efforts to resolve the situation, including recourse to the Dispute Resolution process as per clause 25 (Resolution of Disputes) of the Main Body of this RIO.
- 1.6 Subject to clause 1.4 of this Annex, the Receiving Party shall respond one (1) Calendar Month with an accurate estimate of the costs it would incur (if any) and the likely implementation time required as a result of the proposed Alteration. Following receipt of the estimated cost and time, the parties shall discuss and agree (with each Party acting reasonably and in a timely manner) the implementation of the proposed Alteration.
- 1.7 Except where the Alteration is agreed or in the case of a Planned Upgrade Program of this Annex, the Requesting Party shall pay the reasonable costs incurred by the other Party if the Alterations require the other Party to change its Network to allow Services to continue. In cases in which the Alteration is jointly agreed by the Parties as being to the mutual and proportionate benefit to both Parties, where it is required as a result of Force Majeure (as defined in clause 47 of the main body of the present RIO), or where there is a financial benefit accruing to the Party receiving the request, the Alteration shall be carried out on a shared cost basis in a proportion to be agreed between the Parties, each acting in good faith.
- 1.8 Not used
- 1.9 Not used
- 1.10 The Parties agree to fully co-operate and consult with each other on the implementation of Alterations and to keep each other informed of the steps involved, with a view to minimizing and, if possible, eliminating any disruption to the Services

supplied. The Parties agree to fully cooperate and consult with each other with a view to accommodating both Parties' reasonable expectations regarding the time commitments and implications of the proposed Alteration.

- 1.11 The Parties keep their right to modify, change or substitute underlying technology or the specifications of an Service to improve the functioning or performance of the Service or their respective Networks, provided that such modifications do not unreasonably adversely alter the functioning or performance of the Services supplied to the other Party. For the avoidance of doubt, such modifications may include replacement of elements of existing Network infrastructure or systems with alternate technology.

2. Data Management Amendments:

- 2.1 Vodafone and the OLO shall endeavour to minimize the number of Data Management Amendments in each other's Network by keeping the level of digit analysis carried out in their respective Networks to that minimum level required to ensure efficient routing and provide agreed upon Billing Information.
- 2.2 Except with respect to numbering changes pursuant to clause 1.3(b) of Annex F – Planning, Forecasting and Provisioning, in order to ensure the timely implementation of Data Management Amendments, notice of Data Management Amendments shall be provided by the Party requesting the amendment at least two (2) Calendar Months in advance.
- 2.3 Data Management Amendments required to activate new geographic or mobile customer Number Ranges allocated or amended by CRA shall be carried out on a free of charge basis.
- 2.4 If the Party receiving the request believes that it is not in a position to proceed with the requested Data Management Amendment, either within the timescales requested or in any other circumstances, the Party receiving the request shall advise the other Party within ten (10) Business Days of receipt of the request. In these circumstances the parties shall make all reasonable efforts to resolve the situation, including recourse to the Dispute resolution process as per clause 25 (Resolution of Disputes) of the Main Body of the present RIO.
- 2.5 In relation to all other Data Management Amendments requests that are jointly agreed as being to the mutual and proportionate benefit to both Vodafone and the OLO, or in cases in which there is a financial benefit accruing to the Party receiving the request, it shall be carried out on a shared cost basis in a proportion to be agreed between the Parties, each acting in good faith.

3. Interconnection Maintenance Process

3.1 Planned Engineering Work:

- (a) The Parties agree that maintenance, software upgrades or other network management measures may be necessary that may cause temporary disruption to the other Party's Network. Such measures that are not part of a Planned Upgrade Program or constitute a Network Alteration are considered Planned Engineering Work. For any Planned

Engineering Work within either Network that will result in an outage or degradation of Services between the Networks, the Party carrying out the engineering work will inform the other in accordance with the procedure detailed in this section.

- (b) The details of the work to be carried out will be recorded and communicated on the Advice of Planned Engineering Work Form as set out in Attachment 5 -- Advice of Planned Engineering Work. The form will state the date, time and duration of any Planned Engineering Work, the impact on the conveyance of Traffic between the Networks, any management procedures required, and any contingency measures to be taken by either or both Parties. The schedule and duration of the Planned Engineering Work proposed by the requesting Party will be agreed with the other Party before commencement of such work. Such Planned Engineering Work shall be scheduled in such way that the minimum traffic impairment is caused, e.g. outside normal Business hours.
- (c) The requesting Party, prior to carrying out any Planned Engineering Work, will give reasonable advance notice to the other Party, at least 10 (ten) Business Days.
- (d) The requesting Party will notify the other Party when the work is complete by completing the relevant section of the Advice of Planned Engineering Work Form, which will be transmitted to the other Party without unnecessary delay.

3.2 Safety of Persons and Equipment:

- (a) Both Parties will agree to ensure the protection and safety of persons and equipment at all times during the conduct of testing and engineering works activities.
- (b) The use of wrist straps, conducting mats and other safety precautions recommended by the equipment manufacturers shall be strictly followed at all times. Neither Party shall be held responsible for any consequences resulting due to the other Party's negligence in this regard.

3.3 Integrity of Networks:

- (a) Both Parties will take adequate measures to maintain the integrity of their Networks. Integrity of the Network refers to the ability of its systems to preserve and retain their original operational status and remain unaffected by Interconnection with other Networks.
- (b) Both Parties will ensure that:
 - i. Adequate measures are taken to prevent the transmission of any signaling message across interconnected Networks that have not been mutually agreed between the Parties or which does not comply with industry standards.
 - ii. Efficient arrangements are established for screening functions to detect and reject non-compliant signals which does not comply with industry standards.

- (c) Each Party is responsible for the safe operation of its own Network and will, so far as is reasonably possible, take all necessary steps to ensure that its Network and its Network operations:
 - i. Do not endanger the safety or health of any person, including employees and contractors of either Party, as well as the general public; and
 - ii. Do not cause physical or technical harm to the other Party's Network, including but not limited to causing damage, interfering with or causing deterioration to the operations of the other's Network.

3.4 Joint Operational Testing

- (a) Either Party may request testing when necessary to monitor network performance and/or address a Fault. Vodafone and the OLO will each be responsible for testing and monitoring the performance of their own Networks. Testing of the Interconnection Link will be kept to a minimum and will be avoided during times when the Network subject to testing is carrying its highest levels of Traffic.
- (b) Except under Emergency Conditions, the Party requesting a test will submit the Interconnection Link Testing Form as set out in **Error! Reference source not found.** to the other Party at least five (5) Business Days prior to the requested testing date. The Interconnection Link Testing Form shall include the specific date and time on which the requesting Party plans to conduct the testing and the estimated testing duration. The form will also include the reason for testing and the necessary details for the planning of testing, as well as the proposed test schedule. Under Emergency Conditions, the Parties shall conduct any necessary testing immediately and as mutually agreed.
- (c) No testing that may adversely affect the operational performance of a Interconnection Link may be carried out without the Parties' prior agreement, including any routine tests.
- (d) The Party receiving the request will respond in writing within two (2) Business Days of receipt of the Interconnection Link Testing Form, stating whether it is able to accommodate the testing on the proposed test dates. If the Party receiving the request is not able to perform the testing on the requested test dates because of technical or operational difficulties, an alternative schedule will be submitted in response to the initial request and discussed in good faith with the requesting Party.
- (e) The requested testing duration is subject to the mutual agreement of the Parties.
- (f) The Parties will act in good faith to complete all test items within the agreed testing period.
- (g) All test items and test results shall be recorded and signed by both Parties, and a copy of the test results shall be available in the respective site for reference.
- (h) Any request for extension to the testing duration beyond the agreed timeframe is subject to mutual agreement by the Parties.

- (i) Neither Party will be held responsible for any delay in completing the agreed upon testing unless such delay is directly attributable to one Party's fault or negligence.

4. Interconnection Testing

4.1 Testing Principles:

- (a) The purpose of Interconnection Testing is to provide reassurance that Vodafone and the OLO's Network can properly exchange traffic and that Interconnection of these two Networks will not adversely affect the existing Services provided by each Party to their respective customers.
- (b) Interconnection between the Parties Network's shall be carried out, and provision of Services under this RIO shall be provided only after the satisfactory completion of Interconnection Testing and only after the Parties are mutually satisfied with the Interconnection Testing results.
- (c) Interconnection testing shall be done free of charge.

4.2 Pre-requisites for Interconnection Testing:

- (a) Prior to conducting Interconnection Testing, the Party requesting Interconnection ("Requesting Party") shall fully test its Network to ensure that it conforms to the Interface Specifications found in Annex C – Service Schedule. Any defects in hardware or software of the Requesting Party's Network so discovered must be corrected before the commencement of Interconnection Testing.
- (b) Interconnection Testing shall be carried out in accordance with this Annex, Vodafone's testing manuals or as is otherwise agreed with Vodafone. All testing shall be completed prior to the final establishment or implementation of any of the following:
 - i. Initial Interconnection;
 - ii. A new Point of Interconnection;
 - iii. A Network Alteration;
 - iv. Reinstatement of a Service that has been suspended; or
 - v. Installation of new software or updated existing software that affects or is likely to affect the Parties' Interconnection arrangements, irrespective of whether such installation is considered a Network Alteration, is part of a Planned Upgrade Program or otherwise.

4.3 Testing Schedule:

- (a) The Requesting OLO shall book the required test date(s) and duration (collectively, "test period") by submitting the test order form set out in Attachment 1 -- Application Form for Interconnection Testing or Attachment 3 -- SS7 Inter-Networking Testing Manual to Vodafone at least ten (10) Business Days prior to the requested testing date. The test order form shall contain the necessary details for the testing setup, including the proposed test schedule and the requested test date(s).
- (b) Vodafone shall advise the Requesting OLO of the test date in writing within two (2) Business Days of receipt of the test order form. If

Vodafone is not able to perform the testing on the requested test dates, Vodafone shall propose an alternative test schedule with the response and negotiate in good faith with the Requesting OLO to arrange an alternative schedule.

- (c) The requested test period is subject to mutual understanding by Vodafone and the OLO. Both Parties shall act in good faith and make reasonable efforts to complete all test items within the estimated test period.
- (d) Any request by the Requesting OLO to extend the agreed test period is subject to mutual understanding by both Parties. The Requesting OLO shall make its request for extension within a reasonable time period prior to the end of the test period.
- (e) Vodafone shall not be liable to the Requesting OLO for any delay in completing all test items, unless such delay is directly attributable to Vodafone negligence or wilful misconduct.

4.4 Daily Time Table for Interconnection Testing:

- (a) All Interconnection Testing shall be carried out during normal business hours or as agreed between Vodafone and the OLO. Any Interconnecting Testing that affects traffic should be scheduled so as to minimize service disruption. Testing of the Interconnect Link and Signaling Link will be kept to a minimum and will be avoided during the busy hour periods.

4.5 Testing Results:

- (a) Interconnection of the Requesting OLO's Network to Vodafone's designated POI shall be carried out only upon satisfactory completion of the Interconnection Testing in accordance with Attachment 1 -- Application Form for Interconnection Testing or Attachment 3 -- SS7 Inter-Networking Testing Manual and after Vodafone is satisfied with the Interconnection Testing results.
- (b) In the event that Vodafone or the OLO identifies one or more Critical Problems, the Party causing the Critical Problem shall endeavour to resolve any such problems during the testing period. Otherwise, after the end of the first testing period, the Party causing the Critical Problem(s) shall resolve the Critical Problem(s) and subsequently demonstrate to the satisfaction of the other Party their resolution through completion of a new round of testing.

4.6 Cancellation and Delay in Testing:

- (a) The Requesting OLO shall adhere to the test period as mutually agreed.
- (b) Any request for cancellation of Interconnection Testing shall be made in writing by the Party seeking to cancel the test, with reasonable notice to the other Party.
- (c) In the event that Interconnection testing is completed or is terminated by one Party before the last day of the test period, the other Party may recover its reasonable costs related to the cancelled test from the Party cancelling the test.

5. Interconnection Traffic Management

5.1 Routing Management:

- (a) All routing will be carried out in accordance with the National Numbering Plan, as defined by CRA and amended from time to time. The Network Plan will conform to this requirement.
- (b) Each Party will manage the routing of outgoing calls from their origin to the POI and incoming calls from the POI to their destination.
- (c) Each Party will make reasonable efforts to ensure that all traffic to the Network of the other Party is successfully routed, using overflows to alternative routing in accordance with ITU-T Recommendations if necessary and possible.
- (d) Each Party may require the other Party to deliver incoming traffic to particular destinations on specific Interconnection Links and to request the use of proportional routing or other traffic management techniques. Such requirements shall be reviewed and agreed in the Network Plan.

5.2 Routing of the OLO traffic towards Vodafone:

- (a) The OLO will convey to Vodafone traffic of the type(s) described in the relevant Service Schedules included in this RIO.

5.3 Mass Call Events: In the case of a planned Mass Call Event, the following measures shall be undertaken:

- (a) The Party planning the Mass Call Event shall provide all relevant information regarding the planned Mass Call Event at least twenty-one (21) days in advance.
- (b) Any unplanned Mass Call Events shall be managed in accordance with clause 6.5 of this Annex G - Operational Procedures.
- (c) Neither Party shall be bound by the obligations contained in Annex E - Service Level Agreements for duration of a Mass Call Event with respect to network Services affected by such an Event.

6. Fault Management

6.1 Principles:

- (a) Each Party will maintain its own Fault Reporting resources that will be responsible for handling the Fault between Networks, coordinating Fault clearance (including escalations) within its own Network and subsequently reporting the clearance of the Fault to the other Party.
- (b) Each Party will provide twenty-four (24) hours contact points for Fault Reporting and as set out in the Network Plan.
- (c) A Party detecting a Fault that may negatively affect Services will endeavour to inform the other Party immediately (and in any event within fifteen (15) minutes) by the most appropriate means given the circumstances, in view of the contact details as set out in the Network Plan, regardless of the nature and ownership of the Fault and of the Fault Reporting procedure outlined below.

6.2 Fault Reporting Procedure:

- (a) Prior to activating the Fault Reporting procedure, the Party reporting the Fault must reasonably ensure that a genuine Fault exists and also that every effort has been made to prove that the Fault is not within the Network of the reporting Party.
- (b) All Faults will be reported using the Fault Report form provided in Attachment 4 -- Fault Report Form and communicated to the designated Point of Contact with contact details as set out in the Network Plan.
- (c) The Fault Report will include sufficient information to allow the recipient(s) to identify the Fault, carry out diagnostics and progress the Fault to restoration.
- (d) When a Party reports a Fault to the other Party, it will specify the classification of the Fault reported, (i.e., whether it is a Service Affecting Fault or Non-Service Affecting Fault). It will also exercise its expert judgment and discretion and state an opinion as to whether a Non Service Affecting Fault will eventually develop into a Service Affecting Fault.
- (e) Once in receipt of the Fault Report, the receiving Party will endeavour to identify the Fault and respond to the reporting Party within the timeframe agreed by the Parties.
- (f) The owner of facilities with the Fault will assume responsibility for restoration.
- (g) The Parties will cooperate in any investigation and follow-up actions and keep each other informed on the status of the progress of the Fault clearance in a timely manner.
- (h) Once the Fault has been repaired, the Party in receipt of the initial Fault Report will complete the Fault Closure section on the form and return it to the reporting Party.
- (i) The Fault will be considered to have been cleared when the Party who initiated the Fault Report has accepted the Fault Clearance information or confirms a successful test within two (2) hours of receipt of Fault Closure or fails to respond to the provision of the Fault clearance information within four hours.

6.3 Fault Escalation

- (a) Where a Fault persists after the Parties have followed the Fault reporting procedure in clause 6.2 and the Parties agree that progress of the remedy is not satisfactory, the Fault may be escalated according to the Fault escalation timescales and escalation reporting levels.
- (b) The reporting Party will immediately inform its own first level of escalation at the same time as notifying the Fault reporting point of the other Party for action.
- (c) The Parties will maintain the communication links at the affected site(s) and report on the progress of the restoration work.
- (d) The Parties will use the timescales shown in the table below as guidelines for the Fault escalation process. The timescales will be used in deciding whether the restoration of a Fault is being progressed satisfactorily. If the escalation time has expired and both Parties are satisfied with the progress of the Fault restoration, no immediate

escalation is necessary.

Fault Type	Maximum Time before Escalation		
	First Level	Second Level	Third Level
Service Affecting	Immediate (within (fifteen) 15 minutes)	One (1) hours	Two (2) Hours
Non-Service Affecting	Within thirty (30) minutes)	Eight (8) hours	Twenty-four (24) hours

- (e) All requests for escalation will be made to each Party's Fault reporting point as set out in the Network Plan.
- (f) Persistent Faults or issues that cannot be resolved satisfactorily through the normal channels will be escalated to the second level to expedite the Fault clearance process.
- (g) The Parties will notify their respective and appropriate officers as set out in the Network Plan when problems are encountered in the implementation or execution of the Fault escalation procedures.

6.4 Information, Communication and Notification:

- (a) Both Parties will provide a twenty-four (24) point of Contact as set out in the Network Plan to receive Network Traffic Management information and queries from each other.
- (b) Both Parties will maintain one database of in-Service Interconnection Links between their Networks in order to facilitate the management of Interconnection Link Services. These databases will contain inter alia the following information for each link, and will be reviewed and reconciled from time to time:
 - i. Service reference number
 - ii. A-end exchange (Vodafone): name, location, manufacturer, software release
 - iii. B-end exchange (the OLO): name, location, manufacturer, software release
 - iv. Transmission path - direction designation, type
 - v. Capacity
 - vi. Associated signaling link(s)
- (c) Under no circumstances will either Party be required to provide commercially sensitive information. Information that is supplied by either Party to the other in the context of Interconnection Link management may be used solely for network management and billing purposes. Both Parties will define and adhere to internal procedures that will ensure use of the other's information is restricted in this regard.

6.5 Traffic Controls:

- (a) Vodafone or the OLO may request a control from the other Party in instances where it may be necessary to re-direct or reduce the volume

of traffic to the Network of the other Party temporarily in order to ensure efficient operation of the Network.

- (b) The OLO may request re-routing of traffic or overflow from primary routes to pre-designated alternative routes. Such arrangements are subject to understanding between the two Parties and will be documented in their Network Plans.
- (c) Protective measures such as call-gapping may be requested by either Party to prevent overloads in the other's Network. Such measures, however, will only be applied to emergency or exceptional circumstances and after information has been exchanged and discussions held between Vodafone and the Other Licensed Operator.
- (d) When taking such measures, either Party will inform the other immediately. Advice of removal of the control will also be given without unnecessary delay.

Attachment 1 -- Application Form for Interconnection Testing

Interconnection Testing Request Form	
Business Address	Contact Person:
	Name:
	Email:
	Phone:
Testing period:	
From (dd.mm.yy): _____	
To (dd.mm.yy): _____	
(____ Days)	
Testing details:	
Supporting technical information for testing set-up:	
Vodafone SS7 Signaling information	
Signaling Point Code	
Signaling Mode	
Signaling Timeslot	
Signaling Link Code	
Circuit Direction	
Circuit Selection Order	

Agreed Schedule for Interconnection Testing
From _____ to _____ . (_____ Days)
<p>Note: This form will be completed and signed by a duly authorized representative of the OLO.</p> <p>Name:.....Signature:.....</p>

Attachment 3 -- SS7 Inter-Networking Testing Manual

This Attachment describes the test items for SS7 testing, the testing principles and the criteria for successful testing.

ITU-T Recommendations in the Q.78x series referred to herein are to the latest version.

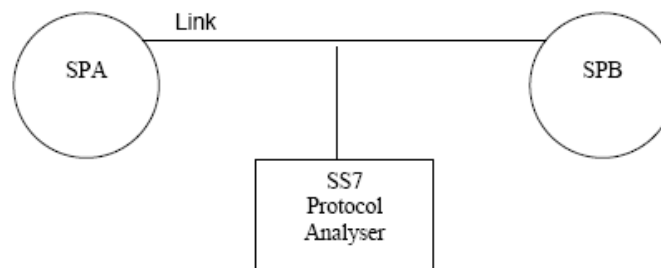
1. TESTING ACTIVITIES

1.1 SS7 Compatibility Test:

- (a) The ITU-T Recommendations Q.781 through Q.785 shall be used as guidelines for the following SS7 compatibility tests:
 - i. MTP Level 2;
 - ii. MTP Level 3;
 - iii. ISUP Basic Call Control; and
 - iv. ISUP Supplementary Services. The above SS7 compatibility tests are described below and shall be performed in a test environment.

1.2 Test Configuration:

- (a) Signaling links are required to be connected as shown below. An SS7 Protocol Analyzer shall be terminated across the two links to monitor and trap the SS7 messages exchanged between the two signaling points.



1.3 SS7 MTP Level 2:

- (a) The MTP level 2 test items are selected from the ITU-T Rec. Q.781 to confirm the protocol specified in Rec. Q.703.
- (b) The items to test are: normal/emergency alignment and activation/deactivation procedures.

1.4 SS7 MTP Level 3:

- (a) The MTP level 3 test items are selected from the ITU-T Rec. Q.782 to confirm the protocol specified in Rec. Q.704 and Rec. Q.707.
- (b) The items to test are: Signaling Link management, signaling message handling, changeover, change back and Signaling Link.

1.5 SS7 ISUP Basic Call Control:

- (a) The ISUP Basic Call Control Test is selected from ITU-T Rec. Q.784 to confirm the protocol specified in the ITU-T Rec. Q.761 to Rec. Q.764.
- (b) The items to test are: circuit supervision, normal Call setup, normal release, unsuccessful Call setup, and abnormal situations during a Call, special Call setup and various bearer services.

1.6 SS7 ISUP Supplementary Services:

- (a) The ISUP protocol test for supplementary services is selected from the ITU-T Rec. Q.785 to confirm the implementation of supplementary services in the ITU-T Rec. Q.730 and Rec. Q.767.
- (b) The items to test are: calling line identifier supplementary services.

1.7 Junction or Circuit Test:

- (a) The junction or circuit test shall confirm the speech connection between the IGS/SGS and the Requesting Party's Network through an actual Call through test.

2. SS7 Test Specification Attachments

2.1 SS7 MTP Level 2 - Q.781 Recommendation

- (a) Link State Control - expected signal units/orders: Q.781 Test Items 1.2 through 1.29

2.2 Q.781 Test Item 1.2 Timer T2

- (a) The purpose of this test is to check "Not Aligned" Timer T2. Timer T2 shall be in the range of 5 seconds to 150 seconds.

2.3 Q.781 Test Item 1.5 Normal alignment - correct procedure (FISU)

- (a) The purpose of this test is to check normal alignment procedure. The Parties shall confirm that the link aligns and enters "In-Service" state and confirm that the timer T4 normal proving period is in the range of 7.5 seconds to 9.5 seconds (nominally at 8.2 seconds).

2.4 Q.781 Test Item 1.21 Both ends set emergency

- (a) The purpose of this test is to check the emergency alignment procedure and timer T4 (Pe). The Parties shall confirm that correct emergency alignment procedure is performed. T4 (Pe) shall be between 400 to 600 ms.

2.5 Q.781 Test Item 1.29 Deactivation during link in Service

- (a) The purpose of this test is to check the deactivation of a Signaling Link from the "In Service" state. The Parties shall confirm that an "In Service" link can be put to "Out of Service" state by command.

2.6 Transmission failure: Q.781 Test Item 3.5

- (a) Q.781 Test Item 3.5 Link in Service (Break Tx path)
- (b) The purpose of this test is to test the response to a transmission failure when link is "In Service." The Parties shall confirm that SIOS is returned by A when the Tx link fails.

2.7 SS7 MTP Level 2 - Q.781 Recommendation

TEST ITEM	Q.781 TEST ITEM	TITLE	RESULT	DATE	TESTED BY	REMARK
1	1.2	Timer T2				
2	1.5	Normal alignment - correct procedure (FISU)				
3	1.21	Both ends set emergency				
4	1.29	Deactivation during link in Service				
5	3.5	Link in Service (Break Tx path)				

2.8 SS7 MTP Level 3 - Q.782 Recommendation

3. Signaling Link Management: Q.782 Test Items 1.1 and 1.2

3.1 Q.782 Test Item 1.1 First Signaling Link activation

- (a) The purpose of this test is to put into Service a Signaling Link set with 1 Signaling Link. The Parties shall confirm that the Signaling Link becomes available after alignment.

3.2 Q.782 Test Item 1.2 Signaling Link set deactivation (where applicable)

- (a) The purpose of this test is to remove from Service a Signaling Link set with 2 Signaling Links. The Parties shall confirm that the Signaling Link set becomes unavailable.

4. Signaling message handling: Q.782 Test Items 2.4.1 and 2.4.2

4.1 Load sharing within a link set (where applicable)

4.2 Q.782 Test Item 2.4.1 All links available

- (a) The purpose of this test is to check the load sharing within a link set has all the links available. The Parties shall confirm that Calls with different values of SLS are shared among the various Signaling Links.

4.3 Q.782 Test Item 2.4.2 With one link unavailable

- (a) The purpose of this test is to check the load sharing within a link set when one link is unavailable. The Parties shall confirm that Calls with different values of SLS are shared among the remaining available Signaling Links.

5. Changeover: Q.782 Test Item 3.20

5.1 Q.782 Test Item 3.20 Changeover as a compatibility test (where applicable)

- (a) The purpose of this test is to check the changeover procedure as a compatibility test. The Parties shall confirm that changeover procedure is performed over the other available Signaling Link. The procedure may be activated from one side or from both sides depending on the switch.

6. Change back: Q.782 Test Item 4.1

6.1 Q.782 Test Item 4.1 Change back within a link set (where applicable)

- (a) The purpose of this test is to check that the change back procedure is correctly performed on restoration of a link in a link set. The Parties shall confirm that the change back procedure is correctly performed and that the link can carry traffic.

7. Signaling link test: Q.782 Test Item 12.1

7.1 Q.782 Test Item 12.1 After activation of a link

- (a) The purpose of this test is to check the Signaling Link test procedure after activation of a Signaling Link. The Parties shall confirm that SLTM and SLTA messages are exchanged between the two signaling points and confirm that the link becomes available and can carry traffic.

7.2 SS7 MTP Level 3 - Q.782 Recommendation

TEST ITEM	Q.782 TEST ITEM	TITLE	RESULT	DATE	TESTED BY	REMARK
1	1.1	First Signaling Link activation				
2	1.2	Signaling link set deactivation				
3	2.4.1	Load sharing within link set - All links available				
4	2.4.2	Load sharing within link set With one link unavailable				
5	3.20	Changeover as a compatibility test				
6	4.1	Change back within a link set				
7	12.1	Signaling link test after activation of a link				

7.3 SS7 ISUP Basic Call Control - Q.784 Recommendation

8. Circuit supervision: Q.784 Test Items 1.2.1 through 1.2.6

8.1 Reset of circuits

8.2 Q.784 Test Item 1.2.1 Reset of circuits received on an idle circuit

- (a) The Parties shall verify that on receipt of a reset circuit message SP A will respond by sending a release complete message.

8.3 Q.784 Test Item 1.2.2 Reset of circuits sent on an idle circuit

- (a) The Parties shall verify that SP A is able to generate reset-circuit message.

8.4 Q.784 Test Item 1.2.5 Circuit group reset received

- (a) The Parties shall verify that on receipt of one circuit group reset message SP A will respond by sending a circuit group reset acknowledge message.

8.5 Q.784 Test Item 1.2.6 Circuit group reset sent

- (a) The Parties shall verify that SP A is able to generate a circuit group reset message.

9. Blocking of circuits: Q.784 Test Items 1.3.1.1 through 1.3.2.4

9.1 Circuit group blocking/unblocking

9.2 Q.784 Test Item 1.3.1.1 CGB and CGU received

- (a) The Parties shall verify that the circuit group-blocking feature can be correctly initiated.

9.3 Q.784 Test Item 1.3.1.2 CGB and CGU sent

- (a) The Parties shall verify that SP A is able to generate one circuit group blocking message and one circuit group unblocking message.

10. Circuit blocking/unblocking

10.1 Q.784 Test Item 1.3.2.1 BLO received

- (a) The Parties shall verify that the blocking/unblocking procedure can be correctly initiated.

10.2 Q.784 Test Item 1.3.2.2 BLO sent

- (a) The Parties shall verify that SP A is able to generate blocking messages.

10.3 Q.784 Test Item 1.3.2.3 Blocking from both ends; removal of blocking from one end

- (a) The Parties shall verify that the blocking/unblocking procedure can be correctly initiated.

10.4 Q.784 Test Item 1.3.2.4 IAM received on a remotely blocked circuit

- (a) The Parties shall verify that an IAM will unblock a remotely blocked circuit.

11. Normal Call Setup: Q.784 Test Items 2.2.1 through 2.2.2

11.1 Called address sending

11.2 Q.784 Test Item 2.2.1 “En bloc” operation

- (a) The Parties shall verify that a Call can be successfully established (all digits included in the IAM).

11.3 Q.784 Test Item 2.2.2 Overlap operation (with SAM)

- (a) The Parties shall verify that signaling point A can initiate a Call using an IAM followed by a SAM.

12. Successful Call setup: Q.784 Test Items 2.3.1 through 2.3.7

12.1 Q.784 Test Item 2.3.1 Ordinary Call setup (with various indications in ACM)

- (a) The Parties shall verify that a Call can be successfully completed using various indications in address complete messages.

12.2 Q.784 Test Item 2.3.2 Ordinary Call (with ACM, CPG and ANM)

- (a) The Parties shall verify that a Call can be successfully completed using address complete message, Call progress message and answer message.

12.3 Q.784 Test Item 2.3.3 Ordinary Call (with various indications in CON)

- (a) The Parties shall verify that a Call can be successfully completed using various indications in the connect message.

12.4 Q.784 Test Item 2.3.6 Blocking and unblocking during a Call (initiated)

- (a) The Parties shall verify that the circuit blocking and unblocking procedure can be correctly initiated during a Call.

12.5 Q.784 Test Item 2.3.7 Blocking and unblocking during a Call (received)

- (a) The Parties shall verify that the circuit blocking and unblocking procedure can be correctly received during a Call.

13. Normal Call release: Q.784 Test Items 3.1 through 3.7

13.1 Q.784 Test Item 3.1 Calling Party clears before address complete

- (a) The Parties shall verify that the Calling Party can successfully release a Call prior to receipt of any backward message.

13.2 Q.784 Test Item 3.2 Calling Party clears before answer

- (a) The Parties shall verify that the Calling Party can successfully release a Call prior to receipt of answer.

13.3 Q.784 Test Item 3.3 Calling Party clears after answer

- (a) The Parties shall verify that the Calling Party can successfully release a Call after answer.

13.4 Q.784 Test Item 3.4 Called Party clears after answer

- (a) The Parties shall verify that a Call can be successfully released in the backward direction.

13.5 Q.784 Test Item 3.5 Suspend initiated by the Network

- (a) The Parties shall verify that the Called subscriber can successfully clear and reanswer a Call.

13.6 Q.784 Test Item 3.6 Suspend and resume initiated by a Calling Party

- (a) The Parties shall verify that the Calling subscriber can successfully suspend and resume a Call.

13.7 Q.784 Test Item 3.7 Suspend and resume initiated by a Called Party

- (a) The Parties shall verify that the Called subscriber can successfully suspend and resume a Call.

14. Unsuccessful Call setup: Q.784 Test Items 4.1.1 through 4.1.7

14.1 Validate a set of known causes for release

- (a) The purpose of these tests is to verify that the outgoing signaling point will immediately release the Call if a release message with a given cause is received and the correct indication is given to the Calling Party.

14.2 Q.784 Test Item 4.1.1 Called subscriber busy: # 17 user busy

14.3 Q.784 Test Item 4.1.2 Destination circuits are busy: # 42 switching equipment congestion

14.4 Q.784 Test Item 4.1.3 Call rejected or not accepted due to SCR, SCA or IAB Service: #21 Call rejected

14.5 Q.784 Test Item 4.1.4 Calling to an unallocated number: #1 unallocated number

14.6 Q.784 Test Item 4.1.5 All outgoing routes/trunk busy: #34

14.7 Q.784 Test Item 4.1.6 Q.118 timer; no answer from Called Party: # 19 no answer from user

14.8 Q.784 Test Item 4.1.7 Address incomplete: #28

15. Abnormal situation during a Call: Q.784 Test Items 5.2.2 through 5.3.2

15.1 Timers

15.2 Q.784 Test Item 5.2.2 T9: waiting for an answer message

- (a) The Parties shall verify that if an answer message is not received within T9 after receiving an address complete message the connection is released by the outgoing signaling point.

15.3 Q.784 Test Item 5.2.4 T6: waiting for RES (Network) message

- (a) The Parties shall verify that the Call is released at the expiration of timer T6.

15.4 Q.784 Test Item 5.3.1 Reset of an outgoing circuit during a call

- (a) The Parties shall verify that on receipt of a reset message the Call is immediately released outgoing Call.

15.5 Q.784 Test Item 5.3.2 Reset of a circuit during an incoming circuit

- (a) The Parties shall verify that on receipt of a reset message, a Call is

immediately released - incoming Call.

16. Bearer Services: Q.784 Test Items 7.1.1 through 7.3.1

16.1 64 kb/s unrestricted

16.2 Q.784 Test Item 7.1.1 Successful Call setup

- (a) The Parties shall verify that a 64 kb/s Call can be successfully completed using appropriate transmission medium requirement and user Service information parameters.

16.3 Q.784 Test Item 7.1.2 Unsuccessful Call setup

- (a) The Parties shall verify that the Call will be immediately released by the outgoing signaling point if a release message with a given cause is received and, for circuits equipped with echo control, the echo control device is enabled.

17. kHz audio

17.1 Q.784 Test Item 7.2.1 Successful Call setup

- (a) The Parties shall verify that a 3.1 kHz audio Call can be successfully completed using appropriate transmission medium requirement and information parameters.

18. Speech

18.1 Q.784 Test Item 7.3.1 Successful Call setup

- (a) The Parties shall verify that a voice Call can be successfully completed using appropriate transmission medium requirement and information parameters.

18.2 SS7 ISUP Basic Call Control - Q.784 Recommendation

TEST ITEM	Q.784 TEST ITEM	TITLE	RESULT	DATE	TESTED BY	REMARK
1	1.2.1	RSC received on an idle circuit				
2	1.2.2	RSC sent on an idle circuit				
3	1.2.5	Circuit group reset received				
4	1.2.6	Circuit group reset sent				
5	1.3.1.1	CGB and CGU received				
6	1.3.1.2	CGB and CGU sent				
7	1.3.2.1	BLO received				

8	1.3.2.2	BLO sent				
9	1.3.2.3	Blocking from both ends; removal of blocking from one end				
10	1.3.2.4	IAM received on a remotely blocked circuit				
11	2.2.1	"EN BLOC" operation				
12	2.2.2	Overlap sending (with SAM)				
13	2.3.1	Ordinary Call (with various indications in ACM)				

TEST ITEM	Q.784 TEST ITEM	TITLE	RESULT	DATE	TESTED BY	REMARK
14	2.3.2	Ordinary Call (with ACM, CPG and ANM)				
15	2.3.3	Ordinary Call (with various indications in CON)				
16	2.3.6	Blocking and unblocking during a Call (initiated)				
17	2.3.7	Blocking and unblocking during a Call (received)				
18	3.1	Calling Party clears before address complete				
19	3.2	Calling Party clear before answer				
20	3.3	Calling Party clear after answer				
21	3.4	Called Party clear after answer				
22	3.5	Suspend initiated by the Network				
23	3.6	Suspend and resume initiated by a Calling Party				
24	3.7	Suspend and resume initiated by a Called Party				
25	4.1.1	Called subscriber busy: #17 user busy				
26	4.1.2	Destination circuits are busy: #42 switching equipment				

		congestion				
27	4.1.3	Call rejected or not accepted due to SCR, SCA or IAB Service : #21 Call rejected				
28	4.1.4	Calling to an unallocated number: #1 unallocated number				

TEST ITEM	Q.784 TEST ITEM	TITLE	RESULT	DATE	TESTED BY	REMARK
29	4.1.5	All outgoing routes/trunks busy : #34				
30	4.1.6	Address incomplete : #28				
31	4.1.7	Q.118 timer, no answer from Called Party: #19 no answer from user				
32	5.2.2	T9: waiting for an answer message				
33	5.2.4	T6: waiting for RES (Network) message				
34	5.3.1	Of an outgoing circuit				
35	5.3.2	Of an incoming circuit				
36	7.1.1	Successful call setup				
37	7.1.2	Unsuccessful call setup				
38	7.2.1	Successful Call setup (3.1kHz audio)				
39	7.3.1	Successful Call setup (Speech)				

18.3 SS7 ISUP Protocol for Supplementary Services Q.785 Recommendation

19. Calling Line Identifier Presentation (“CLIP”) and Calling Line Identifier Restriction (“CLIR”): Q.785 Test Items 3.1.1 through 3.4.2

19.1 Q.785 Test Item 3.1.1 CLIP - Network provided : sent

- (a) The Parties shall verify that CLIP (Network provided) can be correctly sent in the Calling Party number parameter.

19.2 Q.785 Test Item 3.1.2 CLIP - Network provided : received

- (a) The Parties shall verify that CLIP (Network provided) can be correctly received in the Calling Party number parameter.

19.3 Q.785 Test Item 3.2.1 CLIP - user provided : sent

- (a) The Parties shall verify that CLIP (user provided) can be correctly sent in the Calling Party number parameter.

19.4 Q.785 Test Item 3.2.2 CLIP - user provided : received

- (a) The Parties shall verify that CLIP (user provided) can be correctly received in the Calling Party number parameter.

19.5 Q.785 Test Item 3.3.1 CLIR - Network provided : sent

- (a) The Parties shall verify that CLIR (Network provided) can be correctly sent in the Calling Party number parameter.

19.6 Q.785 Test Item 3.3.2 CLIR -Network provided : received

- (a) To verify that CLIR (Network provided) can be correctly received in the Calling Party number parameter.

19.7 Q.785 Test Item 3.4.1 CLIR - user provided : sent

- (a) The Parties shall verify that CLIR (user provided) can be correctly sent in the Calling Party number parameter.

19.8 Q.785 Test Item 3.4.2 CLIR - user provided : received

- (a) The Parties shall verify that CLIR (user provided) can be correctly received in the Calling Party number parameter.

20. 3.4.1. SS7 ISUP Protocol for Supplementary Services Q.785 Recommendation

TEST ITEM	Q.785 TEST ITEM	TITLE	RESULT	DATE	TESTED BY	REMARK
1	3.1.1	CLIP - Network provided: sent				
2	3.1.2	CLIP - Network provided: received				

3	3.2.1	CLIP - user provided: sent				
4	3.2.2	CLIP - user provided: received				
5	3.3.1	CLIR - Network provided: sent				
6	3.3.2	CLIR - Network provided: received				
7	3.4.1	CLIR - user provided: sent				
8	3.4.2	CLIR - user provided: received				

Attachment 4 -- Fault Report Form

Interconnection Fault Reporting Form													
OLO	<table border="1"> <tr> <th>Fault reference</th> <th>Docket #</th> </tr> <tr> <td>Time of Report: hh: mm</td> <td>Date: dd/mm/yyyy</td> </tr> <tr> <td colspan="2">Other Licensed Operator Details:</td> </tr> <tr> <td>Other Licensed Operator Name:</td> <td>Address:</td> </tr> <tr> <td>Report Contact Name:</td> <td>E-mail Address:</td> </tr> <tr> <td>Phone number:</td> <td>Fax number:</td> </tr> </table>	Fault reference	Docket #	Time of Report: hh: mm	Date: dd/mm/yyyy	Other Licensed Operator Details:		Other Licensed Operator Name:	Address:	Report Contact Name:	E-mail Address:	Phone number:	Fax number:
	Fault reference	Docket #											
	Time of Report: hh: mm	Date: dd/mm/yyyy											
	Other Licensed Operator Details:												
	Other Licensed Operator Name:	Address:											
	Report Contact Name:	E-mail Address:											
Phone number:	Fax number:												
Fault Details													
Service Affected:													
<input type="checkbox"/> Interconnection Link													
<input type="checkbox"/> Termination Service													
<input type="checkbox"/> Mobile Message Termination Service													
<input type="checkbox"/> International Call Conveyance													
Service Reference: Fault Reference:													
Fault Description/symptoms													
Fault classification:													
<input type="checkbox"/> Service Affecting (Service degradation or Service interruption)													
<input type="checkbox"/> Non-Service Affecting (No impact on the Service).													
Vodafone	Fault Response (Acknowledgment)												
	Time of Response: hh:mm												
	Date: dd/mm/yyyy												
	Response Contact Name:												
	E-mail Address:												
	Phone number:												
	Fax number :												
	Fault Identified:												
	Ownership Accepted:												
	<input type="checkbox"/> Yes <input type="checkbox"/> No												
<input type="checkbox"/> Yes													
<input type="checkbox"/> No													
Diagnosis:													
Fault classification:													
<input type="checkbox"/> Service Affecting (Service degradation or Service interruption)													
<input type="checkbox"/> Non-Service Affecting (No impact on the Service).													
Fault Reference:													
Target Repair Time: hh-mm on dd/mm/yyyy													
OLO	Action taken:												
Fault Closure													

Name :	Designation:
Time of Closure: hh:mm	Date: dd/mm/yyyy
This is to confirm that the Fault referenced above has been repaired/cleared and hereby close the instance	
Comments:	

Attachment 5 -- Advice of Planned Engineering Work

Advice of Planned Engineering Work	
Planned Work Details	
Subject: <i>(Short description of the planned work)</i>	
Location: <i>(Location of the planned work)</i>	
Type of planned work:	
Reason for planned work:	
Time Window	
Start Date and Time : <i>dd/mm/yyyy hh/mm</i>	End Date and Time : <i>dd/mm/yyyy hh/mm</i>
Impact on the services :	
<input type="checkbox"/> Service Affecting - Affected Services:	
<input type="checkbox"/> Non-Service Affecting	
Estimated Service Interruption/degradation Duration:	
Starting from : <i>dd/mm/yyyy hh/mm</i>	
Type and Number of Interconnection Links affected:	
Effect of planned work:	
Activity initiator	
Name:	Designation:
Email Address:	Company:
	Phone number:
Remarks	

Annex H - Price List

21.