

APPENDIX 1

**DIRECTED AMENDMENTS TO SCHEDULE 14 – OSS/BSS CONNECTION &
PROFESSIONAL SERVICE**

SCHEDULE 14

OSS/BSS CONNECTION & PROFESSIONAL SERVICE

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OSS/BSS CONNECTION & PROFESSIONAL SERVICE

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SCHEDULE 14

OSS/BSS CONNECTION & PROFESSIONAL SERVICE

1. GENERAL

CLAUSE 1.1 – DIRECTED AMENDMENTS

1.1 This Schedule sets out the terms and conditions under which OpenNet will provide the Requesting Licensee with OSS/BSS Connection Services (“**OSS/BSS Connection & Professional Service**”) for Requesting Licensee to connect and access to the OpenNet Platform. The services also allow Requesting Licensee to integrate and interface its Routers, switches, Firewalls, Servers, etc (“**OSS/BSS Connection Equipment**”) with OpenNet’s OSS/BSS through a set of OpenNet SystemPlatform APIs offered by the OpenNet Platform. The OSS/BSS functions available to the Requesting Licensee include network coverage check, order management and fault management.

IDA notes that there is inconsistency in the use of terminology for OpenNet Platform API (i.e., “OpenNet’s Platform API”, “OpenNet Platform API”, “Open System API” and “API” have been used interchangeably). For consistency, IDA directs OpenNet to replace “Open System API” with “OpenNet Platform API” in this Clause 1.1 in the manner specified above.

1.2 Except as provided in this Schedule, the Requesting Licensee shall, at its own cost, provide all hardware, software and manpower needed to connect and access to the OpenNet Platform. Where any work or services are to be carried out by OpenNet under this Schedule, and the quantum of the Charge is not defined under Schedule 15 (Charges), the Requesting Licensee must pay all the reasonable costs incurred by OpenNet in provisioning OSS/BSS Connection & Professional Service, subject to the following conditions:

- (a) the costs incurred by OpenNet will relate to the work that OpenNet needs to perform in order to provision the OSS/BSS Connection & Professional Services for Requesting Licensee to connect and access to the OpenNet Platform;

- (b) before incurring the costs, OpenNet will provide Requesting Licensee with prior reasonable notice that the Requesting Licensee's request requires OpenNet to undertake such work and such notice shall clearly and with sufficient detail set out the following:
 - (i) the reasonable costs which OpenNet seeks to recover from the Requesting Licensee; and
 - (ii) based on the information set out in paragraph (i) above, a binding quote to the Requesting Licensee in respect of the work to be undertaken by OpenNet which shall be valid for a period of ten (10) Business Days (or such other time as may be agreed between the Parties) from the date they are notified to the Requesting Licensee by OpenNet;

CLAUSE 1.2 (c) – DIRECTED AMENDMENTS

- (c) OpenNet shall obtain the prior approval of the Requesting Licensee to the costs noted in the notice within the time period under paragraph (b)(ii). For the avoidance of doubt, the Requesting Licensee shall not be liable to bear any costs incurred by OpenNet under ~~e~~Clause 1.2 unless the Requesting Licensee has given its prior approval under this ~~e~~Clause 1.2(c), and OpenNet shall not be obliged to perform any work or service until the Requesting Licensee has agreed to such costs; and

For consistency, IDA directs OpenNet to replace “clause” with “Clause” in this Clause 1.2(c) in the manner specified above.

- (d) any dispute in respect of determining the reasonable costs set out in the notice shall be resolved in accordance with Schedule 17 of the ICO Agreement.

CLAUSE 1.3 – DIRECTED AMENDMENTS

1.3 The OpenNet Platform consists of:

- (a) Service Portal with contents and functionalities for Requesting Licensee to conduct business transactions with OpenNet; and
- (b) ~~OpenNet Platform~~**System** APIs exposed to Requesting Licensee's systems allowing electronic flow through business transactions.

To facilitate the Requesting Licensee connecting to the OpenNet Platform, two types of access methods are allowed (at Requesting Licensee's cost):

- (i) Internet via secure VPN
- (ii) Dedicated Leased Connection

The Internet via secure VPN connection or Dedicated Leased Connection may be ~~disconnected-unavailable~~ for reasons out of OpenNet's control. In the event that the Internet via secure VPN or Dedicated Leased Connection is unavailable and OpenNet is aware of such unavailability, OpenNet will inform the Requesting Licensee, via voice calls, email or fax, whichever is more convenient, of the unavailability without undue delay. OpenNet will provide such support and assistance as may be necessary to the Requesting Licensee in re-establishing the connection if requested by the Requesting Licensee. For the avoidance of doubt, if the Internet via secure VPN ~~connection~~ or Dedicated Leased Connection is not available~~down~~, the parties shall follow the procedures set out in eClause 9 of this Schedule.

Under IDA's Directed Modifications dated 26 July 2011, IDA required OpenNet to modify this Clause 1.3 to: (a) inform Requesting Licensees of any disconnections as soon as possible if OpenNet discovers such disconnections; and (b) to provide prompt support and assistance to re-establish the connections. IDA notes that OpenNet's proposed changes have failed to give full effect to IDA's required modifications. Accordingly, IDA directs OpenNet to amend this Clause 1.3 in the manner specified above to incorporate IDA's Directed Modifications.

IDA notes that there is inconsistency in the use of terminology for OpenNet Platform API (i.e., "OpenNet's Platform API", "OpenNet Platform API", "Open System API" and "API" have been used interchangeably). For consistency, IDA directs OpenNet to replace "System API" with "OpenNet Platform API" in this Clause 1.3 in the manner specified above.

For consistency, IDA directs OpenNet to replace "clause" with "Clause" in this Clause 1.3 in the manner specified above.

CLAUSE 1.4 – DIRECTED AMENDMENTS

1.4 If the Requesting Licensee wishes to obtain a copy of the relevant OpenNet Platform APIs in relation to the associated schedules of the ICO that it has signed up to, the Requesting Licensee may raise its request to OpenNet in writing and OpenNet shall provide the relevant OpenNet Platform API documentation within 3 Business Days of such request. OpenNet shall ensure that the OpenNet Platform API documentation provided will be sufficiently clear and comprehensive to enable the Requesting Licensee to develop the necessary interface programmes for the Requesting Licensee's system to connect to the OpenNet Platform. For the purpose of subscribing to B2B Web Service Interface, the Requesting Licensee shall adhere to all specifications (including OpenNet Platform APIs) provided by OpenNet.

IDA notes that OpenNet has amended this Clause 1.4 to allow Requesting Licensees, who have executed the ICO, to request the list of specifications (including OpenNet Platform APIs) from OpenNet. In this regard, it is no longer necessary for OpenNet to further specify that it will only provide the list of specifications (including OpenNet Platform APIs) only to those who have subscribed to B2B Web Services Interface. Accordingly, IDA directs OpenNet to amend the Clause 1.4 to remove the requirement for Requesting Licensees to subscribe to the B2B Web Service Interface so as to request for the list of specifications (including OpenNet Platform APIs) in the manner specified above.

Under IDA's Directed Modifications dated 26 July 2011, IDA required OpenNet to propose necessary modifications to Schedule 14 to make clear that it would provide sufficient OpenNet Platform API specification documentation to enable the Requesting Licensee to develop the necessary interface programmes for the Requesting Licensee's system to connect to the OpenNet Platform. IDA notes that OpenNet's proposed changes have failed to give full effect to IDA's required modifications. Accordingly, IDA directs OpenNet to amend this Clause 1.4 in the manner specified above to incorporate IDA's Directed Modifications.

IDA notes that there is inconsistency in the use of terminology for OpenNet Platform API (i.e., “OpenNet’s Platform API”, “OpenNet Platform API”, “Open System API” and “API” have been used interchangeably). For consistency, IDA directs OpenNet to replace “API” with “OpenNet Platform API” in this Clause 1.4 in the manner specified above.

CLAUSE 1.5 – APPROVED

1.5 OpenNet shall not be liable for any claims, damages or liabilities which may arise from OpenNet’s provision of the OSS/BSS Connection & Professional Services other than to the extent that it is the result of a negligent, wilful or reckless breach of this Schedule 14 by OpenNet.

2. MODE OF CONNECTION

CLAUSE 2.1 – DIRECTED AMENDMENTS

2.1 OpenNet offers the following modes for connectivity to the OpenNet Platform (“**Connection Modes**”):

- (a) Service Portal GUI, via
 - (i) Public Internet secured VPN Client software; or
- (b) B2B Web Services Interface, via
 - (i) Public Internet secured VPN ; or
 - (ii) Dedicated Leased Connection (refer to Section II of Annex 14B)

IDA notes that the word “Client” has not been defined. Accordingly, IDA directs OpenNet to replace “Client” with “client” in this Clause 2.1 in the manner specified above.

IDA notes that there is inconsistency in the use of terminology for OpenNet Platform (i.e., “OpenNet Platform”, “OpenNet’s Platform” and

“Platform” have been used interchangeably). For consistency, IDA directs OpenNet to replace “OpenNet platform” with “OpenNet Platform” in this Clause 2.1 the manner specified above.

CLAUSE 2.2 – DIRECTED AMENDMENTS

2.2 Clauses 3 and 4 detail the steps that the Requesting Licensee needs to perform to set up connectivity to the OpenNet’s Platform. If the Requesting Licensee requests ~~for~~ Standard Services – Connectivity via B2B Web Services Interface as set out in ~~e~~Clause 4, the Requesting Licensee will need to put in a request for OSS/BSS Professional Services as detailed in ~~e~~Clause 6.13(a).

IDA notes that the services as set out under Clause 4 is the Standard Services – Connectivity via B2B Web Services. IDA notes that the reference to Clause 3(a) is a typographical error and that the correct reference should be to Clause 6.1. For clarity and consistency, IDA directs OpenNet to amend this Clause 2.2 in the manner specified above.

For consistency, IDA directs OpenNet to replace “clause” and “Professional Services” with “Clause” and “OSS/BSS Professional Services” in this Clause 2.2 in the manner specified above.

IDA notes that there is inconsistency in the use of terminology for OpenNet Platform (i.e., “OpenNet Platform”, “OpenNet’s Platform” and “Platform” have been used interchangeably). For consistency, IDA directs OpenNet to replace “OpenNet’s Platform” with “OpenNet Platform” in this Clause 2.2 in the manner specified above.

CLAUSE 2.3 – DIRECTED AMENDMENTS

2.3 The following table (which is not exhaustive) lists the forms in the various Annexes that the Requesting Licensee will need to use to request ~~for the Professional Services~~ OSS/BSS Professional Services:

	Mode of Request	Request Forms Required and Sections to indicate
a.	Use of Service Portal GUI	i. Annex 14A-1 Section A.1.

		ii. Annex 14A-2 as required.
b.	Use of B2B Web Services <u>Interface</u>	i. Annex 14A-1 Section A.2 and Section B.1 (Section B.2 is optional). ii. Annex 14A-2 for B2B user account.
c.	Customisation of Web Services API <u>OpenNet Platform API</u>	i. Annex 14A-1 Section B.3 and Section B.1 Section (Section B.2 is optional). The detailed scope will be covered by the Project Study.

For consistency, IDA directs OpenNet to replace “B2B Web Services”, “Web Services API” and “Professional Service” with “B2B Web Services Interface”, “OpenNet Platform API” and “OSS/BSS Professional Services” respectively in this Clause 2.3 in the manner specified above.

3. STANDARD SERVICES – CONNECTIVITY VIA SERVICE PORTAL GUI

3.1 OpenNet will provide user account(s) and the required password(s) for access to the Service Portal in accordance to the order request in Annex 14A, subject to the Requesting Licensee requesting for connectivity via Service Portal GUI.

3.2 The Service Portal will provide the standard functionality of Account Management, Network Coverage Check, Order Management and Fault Management. A brief description of the various modules is as follows:

- (a) Account management include features like account password change, user account details change, viewing of billing reports.

Through the Service Portal, the Requesting Licensee’s administrator will be able to reset passwords, and manage user information. The Requesting Licensee will also be able to use self-help function to change its own password.

- (b) Network coverage check includes features like checking of rollout status (e.g. Homes Passed and Homes Reached), dwelling type, network rollout time schedule.

CLAUSE 3.2(c) – DIRECTED AMENDMENTS

- (c) Order management includes features like order submission, appointment booking, status enquiry and order cancellation.

For ordering of Schedule 1 services, the Requesting Licensee is able to determine if a Residential Premise is covered (Home Passed or Home Reached), as well as schedule installation appointments. The Requesting Licensee is also able to determine the status of the order as well as ~~Tie Cable~~Transmission Tie Cable information.

IDA understands that the term “Tie Cable” referred in this clause refers to the “Transmission Tie Cable”. For consistency, IDA directs OpenNet to replace “Tie Cable” with “Transmission Tie Cable” in this Clause 3.2(c) in the manner specified above.

- (d) Fault management includes features like fault reporting and tracking of resolution process, incident management.

The Requesting Licensee is able to submit Trouble Tickets via the Service Portal. The Requesting Licensee is also able to enquire regarding the Trouble Ticket’s status and update the Trouble Ticket with Residential End-User appointment times, should the fault rectification involve liaising with the Residential End-User. The Service Portal also supports features like cancellation and closing a ticket. Joint investigation with OpenNet may also be initiated via the Service Portal.

CLAUSE 3.3 – DIRECTED AMENDMENTS

3.3 Requesting Licensee shall access the Service Portal using the following connection option:

- (a) Requesting Licensee shall access the Service Portal GUI via ~~p~~Public Internet secured VPN client application. Requesting Licensee shall configure its own firewall settings and allow the VPN connection. Requesting Licensee is required to inform OpenNet of its IP address and port connection setting. Requesting Licensee shall ensure the client setup is according to the specifications indicated in order to be granted the access. For avoidance of doubt, the Requesting Licensee shall provide at its own cost the necessary equipment and facilities such as web browser and Internet connection, and install the VPN client application software provided by OpenNet to connect

and access to the Service Portal. The Requesting Licensee shall pay to OpenNet the Charges for provisioning the user account and connectivity setup for client-based Public Internet secured VPN access as provided in Schedule 15 (Charges).

For consistency, IDA directs OpenNet to replace “public Internet” with “Public Internet” in this Clause 3.3 in the manner specified above.

CLAUSE 3.4 – DIRECTED AMENDMENTS

3.4 Requesting Licensee will not be able to use the same ~~User Account~~ user account to login to the Service Portal simultaneously.

For consistency, IDA directs OpenNet to replace “User Account” with “user account” in this Clause 3.4 in the manner specified above.

DELETION OF FORMER CLAUSE 3.5 - APPROVED

4. STANDARD SERVICES – CONNECTIVITY VIA B2B WEB SERVICES

4.1 OpenNet will provide the standard functionality of the OSS/BSS interface which includes network coverage check, order management and fault management. A brief description of the various modules can be found in Clause 3.2 above.

CLAUSE 4.2 – DIRECTED AMENDMENTS

4.2 OpenNet will provide consultation for system integration and interfacing to OpenNet's Platform APIs as a value-added service under OSS/BSS Professional Services. The Requesting Licensee must pay the Charge(s) as defined in Schedule 15 (Charges). For the avoidance of doubt, OpenNet shall be entitled to charge ~~Professional Service~~ OSS/BSS Professional Services Charge and ~~Subject Matter Expert Charge~~ as defined in Schedule 15 (Charges) for such consultation. Where there is a need for the parties to engage a Subject Matter Expert, this shall be mutually agreed and the Subject Matter Expert Charge as defined in Schedule 15 (Charges) shall apply.

IDA understands that for most cases, OpenNet will be the party providing the consultation service. For such cases, the Professional

Service Charges in Schedule 15 (Charges) shall apply. Where the parties require the assistance of a Subject Matter Expert, this shall be mutually agreed and the Subject Matter Expert Charge in Schedule 15 (Charges) shall apply. For clarity, IDA directs OpenNet to amend this Clause 4.2 in the manner specified above.

For consistency, IDA directs OpenNet to insert “(Charges)” after the phrase “Schedule 15” in this Clause 4.2 in the manner specified above.

For consistency, IDA directs OpenNet to replace “Professional Service” with “OSS/BSS Professional Services” in this Clause 4.2 in the manner specified above.

IDA notes that there is inconsistency in the use of terminology for OpenNet Platform API (i.e., “OpenNet’s Platform API”, “OpenNet Platform API”, “Open System API” and “API” have been used interchangeably). For consistency, IDA directs OpenNet to replace “OpenNet’s Platform API” with “OpenNet Platform API” in this Clause 4.2 in the manner specified above.

CLAUSE 4.3 – DIRECTED AMENDMENTS

4.3 The Requesting Licensee will be charged for setup, support and use of OpenNet’s testing environment upon request, under OSS/BSS Professional Services. Such Charges are defined in Schedule 15 (Charges). ~~Following completion of the Project Study,~~ OpenNet shall provide the Requesting Licensee with the relevant eCharges in accordance with as stated in eClause 7.10 following OpenNet’s completion of the Project Study or the provision of the Implementation Schedule, as the case may be.

For consistency, IDA directs OpenNet to replace “clause” and “charges” with “Clause” and “Charges” respectively in this Clause 4.3 in the manner specified above.

For consistency, IDA directs OpenNet to insert “(Charges) after the phrase “Schedule 15” in this Clause 4.3 in the manner specified above.

Please refer to IDA’s directed amendments to Clause 7 in relation to a Simplified Process for Professional Service. Under the Simplified Process for Professional Service, OpenNet will be providing an Implementation Schedule instead of performing a Project Study. It is therefore necessary to amend this clause to take into account the above. Accordingly, IDA directs OpenNet to amend this Clause 4.3 in the manner specified above to incorporate the above.

For clarity, IDA directs OpenNet to rephrase this Clause 4.3 in the manner specified above.

CLAUSE 4.4 – DIRECTED AMENDMENTS

4.4 Requesting Licensee shall connect to the OpenNet Platform via host-to-host interface from Requesting Licensee’s system to the OpenNet Platform to implement flow-through business transactions with OpenNet using the following connection options for the eOpenNet systemPlatform API:

- (a) Requesting Licensee shall connect via the secured VPN. Requesting Licensee is required to inform OpenNet its IP address and port connection settings. Requesting Licensee shall ensure the VPN setup is according to the specifications in Annex 14B in order to be granted the access. The Requesting Licensee shall pay to OpenNet the Charges for provisioning the user account and connectivity setup for Public Internet secured VPN access as provided in Schedule 15 (Charges).
- (b) Requesting Licensee shall connect via Dedicated Leased Connection. Requesting Licensee is required to inform OpenNet its IP address and port connection setting. Requesting Licensee shall ensure the setup is according to the specifications indicated in order to be granted the access. The Requesting Licensee shall pay to OpenNet the Charges for provisioning the user account, the port required for connection to firewall, and the connectivity setup for Dedicated Leased Connection, as provided in Schedule 15 (Charges).

For the avoidance of doubt, the Requesting Licensee shall indicate in its request whether the connectivity is to its test platform and/or its production platform, and the Requesting Licensee shall only be liable for one set of Charges as provided in Schedule 15 (Charges) if the details of its test and production platform are provided within the same request and reside on the same site.

IDA notes that there is inconsistency in the use of terminology for OpenNet Platform API (i.e., “OpenNet’s Platform API”, “OpenNet Platform API”, “Open System API” and “API” have been used interchangeably). For consistency, IDA directs OpenNet to replace “open system API” with “OpenNet Platform API” in this Clause 4.4 in the manner specified above.

CLAUSE 4.5 – DIRECTED AMENDMENTS

- 4.5 Requesting Licensee will ~~not be required to have a separate account for B2B Web Services Interface and for Service Portal GUI to access the respective services~~ able to use the same account to interact with OpenNet’s APIs simultaneously, and will not be able to use the same account to access the Service Portal. For the avoidance of doubt, the Requesting Licensee can use the same account to interact with the OpenNet Platform API concurrently.

Under IDA’s Directed Modifications dated 26 July 2011, IDA required OpenNet to modify this Clause 4.5 to clarify that an account will not be able to be used to interact with OpenNet’s Service Portal GUI and OpenNet’s B2B Web Services Interface simultaneously, and to further clarify that multiple instances of the same account can otherwise be used to interact with OpenNet Platform APIs concurrently. IDA notes that OpenNet’s proposed changes have failed to give full effect to IDA’s required modifications. Accordingly, IDA directs OpenNet to amend this Clause 4.5 in the manner specified above to incorporate IDA’s Directed Modifications.

5. ORDERING AND PROVISIONING PROCEDURE FOR STANDARD SERVICES

CLAUSE 5.1 – DIRECTED AMENDMENTS

5.1 OpenNet shall process all ~~R~~requests for OSS/BSS Connections (“OSS/BSS Connection Requests”) on a ‘first come, first served’ basis.

-IDA notes that “Request” has not been defined. For clarity and consistency, IDA directs OpenNet to amend this Clause 5.1 in the manner specified above.

5.2 The Requesting Licensee shall use either of the Connection Modes specified in Clause 2 to access the functionality and services in the OpenNet Platform.

5.3 OpenNet will be responsible to setup and configure OpenNet’s firewall to allow the Requesting Licensee to connect and access to the OpenNet Platform using either Internet via secure VPN or Dedicated Leased Connection or both methods.

CLAUSE 5.4 – DIRECTED AMENDMENTS

5.4 Requesting Licensee shall be responsible to liaise with OpenNet to set up and configure its own firewall to facilitate connection and access between its users/systems and the OpenNet ~~p~~Platform.

IDA notes that there is inconsistency in the use of terminology for OpenNet Platform (i.e., “OpenNet Platform”, “OpenNet’s Platform”, “Platform” and “OpenNet platform” have been used interchangeably). For consistency, IDA directs OpenNet to replace “OpenNet platform” with “OpenNet Platform” in this Clause 5.4 in the manner specified above.

CLAUSE 5.5 – DIRECTED AMENDMENTS

5.5 If Requesting Licensee chooses to set up the Dedicated Leased Connection to the OpenNet Platform, the firewall port and the connectivity setup ~~charges~~Charges as stated in Schedule 15 (Charges) will be applicable.

For clarity and consistency, IDA directs OpenNet to replace “charges” with “Charges” in this Clause 5.5 in the manner specified above.

CLAUSE 5.6 - APPROVED

- 5.6 The Requesting Licensee shall provide the transmission link to implement the Dedicated Leased Connection in accordance with Annex 14B at its own cost.
- 5.7 To avoid firewall incompatibility and inter-operation issues, the Requesting Licensee shall agree to install and use only firewall and communication software certified by OpenNet or OpenNet appointed supplier(s) to interconnect with OpenNet Platform. Please refer to Annex 14B.

CLAUSE 5.8 – DIRECTED AMENDMENTS

- 5.8 The Requesting Licensee will appoint a single point of contact (“SPOC”) to liaise with OpenNet to provide the necessary network information, agree on schedule, resolve interconnection problems, testing, commission and other related activities using the:
- (a) Service Portal GUI via Public Internet secured VPN. In this regard, OpenNet does not envisage that the Requesting Licensee would require OSS/BSS Professional Services. Where the Requesting Licensee faces difficulties in establishing connectivity to or accessing the OpenNet Platform, OpenNet shall work with the Requesting Licensee to resolve the difficulties. This may involve OpenNet and the Requesting Licensee performing the Network eConnectivity Tests which shall be conducted in accordance with Appendix 1-A. For the avoidance of doubt, the above shall be considered as work to be undertaken under the setup for client-based Public Internet secured VPN; or
- (b) B2B Web Services Interface. In this regard, the Requesting Licensee shall acquire from OpenNet the OSS/BSS Professional Service for the setup, support and use of OpenNet’s test environment. To ensure that the Requesting Licensee integrates successfully to the OpenNet Platform, it is necessary for OpenNet and Requesting Licensee to perform the Network Connectivity Tests, Handshake Testing and end to end testing. The Network Connectivity Tests and Handshake Testing shall be conducted in accordance with Appendix 1-A and Appendix 1-B respectively. The Requesting Licensee may discuss with OpenNet on the necessary end to end testing. Alternatively, the Requesting Licensee may choose to adopt the end to end testing to be proposed by OpenNet which shall be conducted in accordance with Appendix 1-C (“End to End Testing”). For the avoidance of doubt, the work related to Network Connectivity Tests shall be considered as work to be undertaken under the connectivity setup for

client-based Public Internet secured VPN or connectivity setup for Dedicated Leased Connection , as the case may be.

Under IDA's Directed Modifications dated 26 July 2011, IDA required OpenNet to propose necessary modifications to Schedule 14 to clarify: (a) when Requesting Licensees are allowed to order the Standard Connectivity Service without ordering the OSS/BSS Professional Services; and (b) that Requesting Licensees are required to have successfully undergone the Platform Interconnection Testing Process in order to establish B2B Web Services Interface Connectivity. IDA notes that OpenNet's proposed changes have failed to give full effect to IDA's required modifications. Accordingly, IDA directs OpenNet to amend this Clause 5.8 in the manner specified above to incorporate IDA's Directed Modifications.

5.9 The Requesting Licensee shall appoint a user administrator to maintain the Requesting Licensee's user accounts & access rights. The Requesting Licensee administrator will manage the Requesting Licensee user accounts subscribed by the Requesting Licensee using the administrative functions in the Service Portal by a privileged user for each Requesting Licensee.

CLAUSE 5.10 – DIRECTED AMENDMENTS

5.10 For the purpose of establishing connectivity so as to access the OpenNet Platform using the B2B Web Services Interface, OpenNet will provide and expose sets of ~~OpenNet systemPlatform~~ APIs for the Requesting Licensee to integrate and interface with the OpenNet Platform via B2B ~~Web s~~Services Interface to support the Requesting Licensee's flow-through of business transactions and related operations. OpenNet will support the Requesting Licensee to setup and test its system interfaces with the OpenNet Platform APIs offered by the OpenNet Platform pursuant to the terms and conditions of OSS/BSS Professional Services.

Under IDA's Directed Modifications dated 26 July 2011, IDA required OpenNet to propose necessary modifications to Clause 5.10 to align it with the Scope of Professional Service and Simplified Process for Professional Service. IDA notes that OpenNet's proposed changes have

failed to give full effect to IDA's required modifications. Accordingly, IDA directs OpenNet to amend this Clause 5.10 in the manner specified above to incorporate IDA's Directed Modifications.

IDA notes that there is inconsistency in the use of terminology for OpenNet Platform API (i.e., "OpenNet's Platform API", "OpenNet Platform API", "Open System API" and "API" have been used interchangeably). For consistency, IDA directs OpenNet to replace "open system API" and "API" with "OpenNet Platform API" in this Clause 5.10 in the manner specified above.

For consistency, IDA directs OpenNet to replace "B2B Web Services" with "B2B Web Services Interface" in this Clause 5.10 in the manner specified above.

CLAUSE 5.11 – DIRECTED AMENDMENTS

5.11 Save for any act or omission by OpenNet which causes the Requesting Licensee to experience any issues, OpenNet shall not be responsible for any issues that may arise from Requesting Licensee's software which interfaces with ~~OpenNet Platform's open system APIs~~ OpenNet Platform APIs. ~~The~~ Requesting Licensee may request OpenNet to assist in investigating its software problems pursuant to the terms and conditions of OSS/BSS Professional Services, and the man-day(s) effort incurred shall be chargeable as per ~~Project Study fees estimated Charges~~ pursuant to ~~clause 7.12~~ Clause 7.10.

IDA notes that the reference to Clause 7.12 is a typographical error and that the correct reference should be to Clause 7.10. Accordingly, IDA directs OpenNet to replace "Clause 7.12" with "Clause 7.10" in this Clause 5.11 in the manner specified above.

For consistency, IDA directs OpenNet to replace "clause" with "Clause" in this Clause 5.11 in the manner specified above.

IDA notes that OpenNet will provide estimated Charges, rather than a Project Study fee, for its OSS/BSS Professional Services based on the requirement of the Requesting Licensees. Accordingly, IDA directs OpenNet to replace “Project Study fee” with “estimated Charges” in this Clause 5.11 in the manner specified above.

IDA notes that there is inconsistency in the use of terminology for OpenNet Platform API (i.e., “OpenNet’s Platform API”, “OpenNet Platform API”, “Open System API” and “API” have been used interchangeably). For consistency, IDA directs OpenNet to replace “OpenNet Platform’s open system API” with “OpenNet Platform API” in this Clause 5.11 in the manner specified above.

CLAUSE 5.12 - APPROVED

5.12 The Requesting Licensee shall submit its **OSS/BSS Connection Request** using the **OSS/BSS Connection Request** Form in the form of Annex 14A containing but not limited to the following information:

- (a) Required mode of Access
- (b) the Requesting Licensee’s contact details.
- (c) the services that the Requesting Licensee wishes to undertake.
- (d) any other useful information which the Requesting Licensee believes would be useful to OpenNet in assessing the Requesting Licensee’s request.
- (e) Within five (5) Business Days from the OSS/BSS Connection Request Date, OpenNet will notify Requesting Licensee with a unique reference number (or a similar form of identification in the notification) if its OSS/BSS Connection Request is accepted.

5.13 Within five (5) Business Days from the OSS/BSS Connection Request Date, OpenNet must notify the Requesting Licensee (and shall provide the Requesting Licensee with a unique reference number or a similar form of identification in the

notification) if its OSS/BSS Connection Request is rejected, for any one of the following reasons:

- (a) the **OSS/BSS Connection Request** is not in the prescribed form;
- (b) the **OSS/BSS Connection Request** does not contain the required information or the information provided is inaccurate or misleading;

CLAUSE 5.13(c) - APPROVED

- (c) the hardware resources are not available;

CLAUSE 5.13(d) – DIRECTED AMENDMENTS

- (d) the provision of ~~the connectivity to the OpenNet Platform~~ (“**OSS/BSS Connection**”) will give rise to significant technical or engineering issues;

IDA notes that the phrase “OSS/BSS Connection” is not defined. For clarity, IDA directs OpenNet to amend this Clause 5.13(d) in the manner specified above.

- (e) the Requesting Licensee has committed a material breach of the ICO Agreement or this Schedule.

CLAUSE 5.13 – DIRECTED AMENDMENTS

Where OpenNet rejects the OSS/BSS Connection Request, OpenNet must provide reasons explaining the basis for rejection. Where a Requesting Licensee’s OSS/BSS Connection Request, which does not contain any customisation to the OpenNet Platform API and which complies with OpenNet’s specifications for OSS/BSS Connections, is rejected due to Clause 5.13(c) or Clause 5.13(d), OpenNet shall continue to accept requests for Mandated Services from the Requesting Licensee via a dedicated email address and fax number. OpenNet will accord a higher priority to requests that are submitted via the OpenNet Platform.

Under IDA's Directed Modifications dated 26 July 2011, IDA required OpenNet to modify this Clause 5.13 to allow Requesting Licensees to submit orders for OpenNet's Mandated Services via fax or email where OpenNet rejects such Requesting Licensee's request for OSS/BSS Connection Service due to Clause 5.13(c) or Clause 5.13(d). IDA notes that OpenNet's proposed changes have failed to give full effect to IDA's required modifications. Accordingly, IDA directs OpenNet to amend this Clause 5.13 in the manner specified above to incorporate IDA's Directed Modifications.

CLAUSE 5.14 – DIRECTED AMENDMENTS

5.14 Where OpenNet is unable to offer the **OSS/BSS Connection** due to hardware resources unavailability under Clause 5.13(c), OpenNet shall take all reasonable measures to cater for additional resources where possible. The Requesting Licensee will be informed of the delivery date within three (3) Bbbusiness Dddays of the rejection.

Under IDA's Directed Modifications dated 26 July 2011, IDA required OpenNet to modify this Clause 5.14 to: (a) clarify that the unavailability of OSS/BSS Connection is limited to the rejection of OSS/BSS Connection because of hardware unavailability under Clause 5.13(c); and (b) clarify that OpenNet shall take all reasonable measures to cater for additional resources to address the unavailability. IDA notes that OpenNet's proposed changes have failed to give full effect to IDA's required modifications. Accordingly, IDA directs OpenNet to amend this Clause 5.14 in the manner specified above to incorporate IDA's Directed Modifications.

For consistency, IDA directs OpenNet to replace "business days" with "Business Days" in this Clause 5.14 in the manner specified above.

CLAUSE 5.15 – APPROVED

- 5.15 OpenNet will use its best endeavours to assist the Requesting Licensee to set up the **OSS/BSS Connection**. If the provision of the OSS/BSS Connection will give rise to significant technical or engineering issues, OpenNet shall propose alternative or interim solutions. Furthermore, OpenNet shall periodically update Annex 14B to include relevant information as mentioned in Clause 5.7.

INSERTION OF NEW CLAUSE 5.16 – DIRECTED AMENDMENTS

5.16 In the event that the Requesting Licensee decides to cancel its OSS/BSS Connection Request before the work is completed, the Requesting Licensee shall be liable for Cancellation Charges which shall include the work completed so far and any other incidental costs and/or expenses which are reasonably incurred by OpenNet in connection with the cancelled OSS/BSS Connection Request (to be recovered on a cost-oriented basis) in accordance with Clause 14.2 of Schedule 15 (Charges).

For clarity and completeness, IDA directs OpenNet to incorporate Clause 5.16 in this Schedule 14 to address applicable charges under a cancellation scenario.

6. VALUE-ADDED SERVICE: OSS/BSS PROFESSIONAL SERVICES (OBPS)

DELETION OF FORMER CLAUSE 6.1, CLAUSE 6.2 AND CLAUSE 6.3 – APPROVED

CLAUSE 6.1 – DIRECTED AMENDMENTS

6.1 Depending on the Requesting Licensee’s requirements, OpenNet shall provide ~~customised~~ OSS/BSS Professional Services (~~“Customised Services”~~) to the Requesting Licensee to help integrate and interface the Requesting Licensee’s systems with the OpenNet Platform. The ~~OSS/BSS Professional~~ Customised Services that could be ordered by the Requesting Licensee shall include the following services:

IDA notes that the OSS/BSS Professional Services offered by OpenNet could vary depending on the requirements of Requesting Licensees and hence the OSS/BSS Professional Services offered would be tailored to

each Requesting Licensee. However, as one of the OSS/BSS Professional Services to be offered is the customisation of OpenNet Platform APIs, it may be confusing if OpenNet associates and defines its OSS/BSS Professional Services as customised OSS/BSS Professional Services and Customised Service respectively. For clarity, IDA directs OpenNet to amend this Clause 6.1 in the manner above.

CLAUSE 6.1(a) – DIRECTED AMENDMENTS

- (a) Setup, support and use of OpenNet’s test environment. OpenNet ~~will~~shall configure a testing environment for testing the ~~customised interface~~interface or customised interface (where applicable) to support the Requesting Licensee’s systems, if it has requested for Standard Services – Connectivity via B2B Web Services Interface.

IDA notes that OpenNet may customise its interface where it is requested by the Requesting Licensee. Hence, the testing to be conducted may include testing of standard as well as customised interfaces. For clarity, IDA directs OpenNet to replace “customised interface” with “interface and/or customised interface (where applicable)” in this Clause 6.1(a) in the manner specified above.

For consistency, IDA directs OpenNet to replace “B2B Web Services” with “B2B Web Services Interface” in this Clause 6.1(a) in the manner specified above.

- (b) Consultation for system integration and interfacing using OpenNet Platform APIs.

CLAUSE 6.1(c) – DIRECTED AMENDMENTS

- (c) Customisation of OpenNet Platform APIs for system integration and interfacing. OpenNet ~~will~~shall provide the basic support for the customisation on the interface. OpenNet ~~shall~~will also provide assistance for troubleshooting on the customised interface in the OpenNet Platform. The

changes for customisation of OpenNet Platform APIs are subjected to the change mManagement pProcess under eClause 14.

For consistency, IDA directs OpenNet to replace “clause” with “Clause” in this Clause 6.1(c) in the manner specified above.

IDA notes that there is inconsistency in the use of terminology for OpenNet Platform API (i.e., “OpenNet’s Platform API”, “OpenNet API”, “Open System API” and “API” have been used interchangeably). For consistency, IDA directs OpenNet to replace “OpenNet APIs” with “OpenNet Platform APIs” in this Clause 6.1(c) in the manner specified above.

CLAUSE 6.2 – DIRECTED AMENDMENTS

6.2 In order to allow the Requesting Licensee to integrate successfully with the OpenNet pPlatform via B2B Web Services Interface, OpenNet ~~has proposed~~ requires two (2) phases of testing to be conducted under OpenNet OSS/BSS Professional Service. Phase 1 (Handshake Testing) is driven by OpenNet, and covers a suite of test cases for OpenNet Platform API validation on apre-defined data determined reasonably by OpenNet. Phase 1 (Handshake Testing) shall be conducted in accordance with Appendix 1-B. Phase 2 (~~End to End T~~esting, which commences after successful testing of Pphase 1) is driven by the Requesting Licensees. The Requesting Licensees will need to discuss with OpenNet the details of its test cases before commencement of the testing. Notwithstanding the above, the Requesting Licensee may choose to adopt the End to End Testing to be proposed by OpenNet which The Phase 1 (Handshake Testing) Tests shall be conducted in accordance with Appendix 1-BC. The Requesting Licensee may submit a request to OpenNet in writing for the details in relation to the Handshake Testing and End to End Testing (including the detailed test cases). OpenNet shall provide such details within three (3) Business Days of receiving such a request.

Please refer to IDA’s directed amendments to Clause 5.8. In addition, IDA also notes that OpenNet has proposed to provide details of its API documentation within three (3) Business Days of Requesting Licensee’s

request under Clause 1.4. Considering that details of Handshake Testing and End to End Testing would be similar to OpenNet's API documentation, IDA is of the view that it is reasonable for IDA to require OpenNet to similarly provide such testing details within three (3) Business Days from Requesting Licensee's request. Accordingly, IDA directs OpenNet to make consequential amendments to this Clause 6.2 in the manner specified above.

For consistency, IDA directs OpenNet to replace "B2B Web Services" with "B2B Web Services Interface" in this Clause 6.2 in the manner specified above.

IDA notes that there is inconsistency in the use of terminology for OpenNet Platform API (i.e., "OpenNet's Platform API", "OpenNet API", "Open System API" and "API" have been used interchangeably). For consistency, IDA directs OpenNet to replace "API" with "OpenNet Platform API" in this Clause 6.2 in the manner specified above.

IDA notes that there is inconsistency in the use of terminology for OpenNet Platform (i.e., "OpenNet Platform", "OpenNet's Platform" and "OpenNet platform" have been used interchangeably). For consistency, IDA directs OpenNet to replace "OpenNet platform" with "OpenNet Platform" in this Clause 6.2 in the manner specified above.

CLAUSE 6.3 – APPROVED

6.3 OpenNet will also provide consultancy services to advise the Requesting Licensees on how the Requesting Licensee may connect its system to the OpenNet Platform, which will be evaluated on a case-by-case basis via the Project Study.

CLAUSE 6.4 – DIRECTED AMENDMENTS

6.4 The Requesting Licensee may request some customisation of OpenNet Platform API(s) or additional API(s) to cater to ~~their~~its unique business requirements. Such customisation requests are outside of the standard services (i.e. connectivity via

Service Portal GUI and connectivity via B2B Web Services Interface) offered by OpenNet. Requesting Licensee shall provide OpenNet with detailed technical specification of its requirements.

Based on the current drafting, it is not clear what is meant by “standard services”. For clarity, IDA directs OpenNet to amend this Clause 6.4 in the manner specified above.

IDA notes that there is inconsistency in the use of terminology for OpenNet Platform API (i.e., “OpenNet’s Platform API”, “OpenNet API”, “Open System API” and “API” have been used interchangeably). For consistency, IDA directs OpenNet to replace “API” with “OpenNet Platform API” in this Clause 6.4 in the manner specified above.

CLAUSE 6.5 – DIRECTED AMENDMENTS

6.5 OpenNet shall evaluate the Requesting Licensee’s request(s) on a case-by-case basis ~~via the Project Study~~. For the avoidance of doubt, OpenNet shall be entitled to reject the Requesting Licensee’s request for any services which are not standard services conforming to Clause 6.1.

IDA understands that OpenNet’s intention is to have the ability to reject Requesting Licensee’s request which is outside the scope of Clause 6.1. For clarity, IDA directs OpenNet to amend this Clause 6.5 in the manner specified above.

IDA notes that the intent of this clause is to highlight that OpenNet will evaluate each Requesting Licensee’s request for Professional Service on a case-by-case basis and that OpenNet is entitled to reject such request that does not conform to Clause 6.1. Accordingly, IDA directs OpenNet to amend this Clause 6.5 in the manner specified above.

IDA further notes that there is typographical error as there is a missing word “basis” after the word “case-by-case”. Accordingly, IDA directs OpenNet to insert the word “basis” after the word “case-by-case” in this Clause 6.5 in the manner specified above.

CLAUSE 6.6 – DIRECTED AMENDMENTS

6.6 Where the Requesting Licensee requests to test any new or enhanced system functionalities, OpenNet will setup a platform test environment at Requesting Licensee's costs, which both OpenNet and the Requesting Licensee shall test before they are promoted into the OpenNet and Requesting Licensee production environment. This shall be a standard operation procedure to be followed by the Requesting Licensee to minimise the risks of deficient software functions causing disruptions to the NBN supply chain operation. For the avoidance of doubt, any new or enhanced system functionalities or APIs to be introduced by the Requesting Licensee to the OpenNet Platform are subject to the change management process under Clause 14 of this Schedule 14.

Under IDA's Directed Modifications dated 26 July 2011, IDA required OpenNet to modify this Clause 6.6 to align its with the Change Management Process. IDA notes that OpenNet's proposed changes have failed to give full effect to IDA's required modifications. Accordingly, IDA directs OpenNet to amend this Clause 6.6 to incorporate IDA's Directed Modifications in the manner specified above.

7. ORDERING OF OSS/BSS PROFESSIONAL SERVICES

(a) Ordering of OBPS

7.1 The Requesting Licensee shall submit its **OSS/BSS Professional Service Request** using **OSS/BSS Professional Service Request Form** in the form of Annex 14A including the detail document of the technical requirement. The Request Form and technical requirement document must be sent to an email account designated by OpenNet.

CLAUSE 7.2 – DIRECTED AMENDMENTS

7.2 Within five (5) Business Days of the date on which OpenNet receives the OSS/BSS Professional Service Request ("**Service Request Date**") and subject to ~~e~~Clause~~s~~ 5.1 and 5.2, OpenNet must notify the Requesting Licensee (and shall ~~provide~~provide the Requesting Licensee with a unique reference number or a similar form of

identification in the notification) if its Request is rejected, for any one of the following reasons:

- (a) the OSS/BSS Professional Service Request is not in the prescribed form;
- (b) the Requesting Licensee has committed a material breach of the ICO Agreement or this Schedule.

For consistency, IDA directs OpenNet to replace “clause” with “Clauses” and to insert “s” after “five (5) Business Day” in this Clause 7.2 in the manner specified above.

IDA notes that there is a typographical error. Accordingly, IDA directs OpenNet to replace “povide” with “provide” in this Clause 7.2 in the manner specified above.

CLAUSE 7.3 – DIRECTED AMENDMENTS

7.3 Within fifteen (15) Business Days from the Service Request Date and subject to ~~e~~Clauses 5.1 and 5.2, OpenNet must notify the Requesting Licensee (and shall provide the Requesting Licensee with a unique reference number or a similar form of identification in the notification) if its Request is rejected, for any one of the following reasons:

- (a) the Requesting ~~L~~icensee has not taken up the standard services for Connectivity via B2B Web Services Interface;
- (b) the OSS/BSS Professional Service Request ~~and additional requirement~~ does not contain the sufficient information or the information provided is inaccurate or misleading;
- (c) the hardware resources are not available;
- (d) the provision of the OSS/BSS Professional Service will give rise to significant technical or engineering issues;

Where the OSS/BSS Professional Request, which does not contain any customisation to the OpenNet Platform API and which complies with OpenNet’s specifications for OSS/BSS Connections, is rejected due to the reasons in Clause 7.3(c) or Clause

7.3(d), OpenNet shall continue to accept requests for Mandated Services from the Requesting Licensee via a dedicated email address and fax number. OpenNet will accord a higher priority to requests that are submitted via the OpenNet Platform. Where OpenNet is unable to offer the OSS/BSS Professional Services Connection due to hardware unavailability, OpenNet shall take all reasonable measures to cater for additional resources where possible. OpenNet shall inform tThe Requesting Licensee will be informed of the indicative delivery date within three (3) bBusiness dDays of the rejection. OpenNet shall use its best endeavours to provide OSS/BSS Professional Services to assist the Requesting Licensee to set up the OSS/BSS Connection. If the provision of the OSS/BSS Professional Services will give rise to significant technical or engineering issues, OpenNet shall propose alternative or interim solutions.

Under IDA's Directed Modifications dated 26 July 2011, IDA required OpenNet to modify this Clause 7.3 to: (a) address how OpenNet would handle the rejection of OSS/BSS Professional Services due to the unavailability of hardware resources; (b) clarify the situation where the Requesting Licensee requests the Standard Connectivity Service, complies with OpenNet's requirements (e.g., use the type of firewall stated by OpenNet) and consequently orders OpenNet's OSS/BSS Professional Services, this should not give rise to any significant technical or engineering issues. If there are issues arising from the above situation, the responsibility is on OpenNet to work with the Requesting Licensee to resolve these issues; and (c) allow the Requesting Licensee to submit orders for OpenNet's Mandated Services via fax and email where the Requesting Licensee's request for OpenNet's OSS/BSS Professional Services has been rejected under Clause 7.3(c) or 7.3(d). IDA notes that OpenNet has not made the modifications to bring the foregoing into effect. Accordingly, IDA directs OpenNet to amend this Clause 7.3 in the manner specified above to incorporate IDA's Directed Modifications.

For consistency, IDA directs OpenNet to replace "clause", "B2B Web Services" and "business days" with "Clauses", "B2B Web Services Interface" and "Business Days" respectively in this Clause 7.3 in the manner specified above.

IDA notes that Requesting Licensee's requirement will be captured in the OSS/BSS Professional Service Request. For clarity and to reduce confusion, IDA directs OpenNet to remove "and additional requirement" in this Clause 7.3 in the manner specified above.

DIRECTED AMENDMENTS

(b) **Project Study or Implementation Schedule**

Under IDA's Directed Modifications dated 26 July 2011, IDA required OpenNet to make the necessary modifications to incorporate the Simplified Process for Professional Service. IDA notes that OpenNet's proposed changes have failed to give full effect to IDA's required modifications. Accordingly, IDA directs OpenNet to amend the above in the manner specified above to incorporate IDA's Directed Modifications.

CLAUSE 7.4 – DIRECTED AMENDMENTS

7.4 OpenNet will provide a Project Study quotation within fifteen (15) Business Days upon receiving the Requesting Licensee's OSS/BSS Professional Service Request and the associated technical specification and requirement, ~~and~~ subject to ~~e~~Clause ~~14.16~~14.16. A pre-Project Study assessment will be conducted to evaluate the Requesting Licensee's requirements and ~~estimate~~ the lead-time required for the Project Study. OpenNet will provide the Requesting Licensee with the schedule and ~~fee quote~~ (which shall be computed based on the number of man-day(s) required to perform the Project Study using the per man-day Charge under Clause 14.3.1 of Schedule 15(Charges)) for the Project Study, as a result of the pre-Project Study. Where the Requesting Licensee orders OSS/BSS Professional Services for setup, support and use of OpenNet's test environment only (without any customisation of the existing OpenNet Platform APIs) for the purpose of establishing connectivity to the OpenNet Platform via B2B Web Service Interface and chooses to conduct End to End Testing in accordance with Appendix 1-C (including the acceptance of OpenNet's predefined list of test cases), OpenNet shall provide an implementation schedule for the said OSS/BSS Professional Service ("Implementation Schedule") within fifteen (15) Business Days upon receiving the Requesting Licensee's OSS/BSS Professional Service Request without a need for a pre-Project Study and

Project Study. For the avoidance of doubt, OpenNet shall not impose any charge in relation to the provision of the Implementation Schedule and shall provide details of the Implementation Schedule in accordance with the requirements under Clause 7.10. In addition, where OpenNet provides such an Implementation Schedule to the Requesting Licensee, Clause 7.5 to Clause 7.9 (inclusive) shall not be applicable to the Requesting Licensee.

Under IDA's Directed Modifications dated 26 July 2011, IDA required OpenNet to make the necessary modifications to incorporate the Simplified Process for Professional Service. IDA notes that OpenNet's proposed changes have failed to give full effect to IDA's required modifications. Accordingly, IDA directs OpenNet to amend this Clause 7.4 in the manner specified above to incorporate IDA's Directed Modifications.

IDA notes that there is a typographical error "14,16" and it should be "14.16". Accordingly, IDA directs OpenNet to replace "Clause 14,16" with "Clause 14.16" in this Clause 7.4 in the manner specified above.

For consistency, IDA directs OpenNet to replace "clause" with "Clause" in this Clause 7.4 in the manner specified above.

IDA notes that as a result of the pre-Project Study, OpenNet will advise on the schedule as well as fee for the Project Study. For clarity, IDA directs OpenNet to replace "quote" with "fee" in this Clause 7.4 in the manner specified above.

IDA notes that charges or Project Study Fee to perform the Project Study will be computed based on the man-day(s) required to perform the Project Study using the man-day rate under Clause 14.3.1 in Schedule 15 (Charges). For clarity, IDA directs OpenNet to insert "(which shall be computed based on the man-day(s) required to perform the Project Study using the per man-day charge under Clause 14.3.1 of Schedule

15(Charges))” after the phrase “with the schedule and quote” in this Clause 7.4 in the manner specified above.

CLAUSE 7.5 – DIRECTED AMENDMENTS

7.5 Within fifteen (15) Business Days (or such other time as may be agreed between the Parties) from the date of notification of the result of the pre-Project Study assessment under ~~e~~Clause 7.4, the Requesting Licensee shall confirm in writing whether it wishes to proceed with OSS/BSS Professional Service and whether it agrees to pay the ~~estimated Charges for the Project Study~~Project Study Fee.

IDA notes that the Charges for the Project Study stated in this Clause 7.5 refer to the Project Study Fee stated in Clause 7.4. For clarity, IDA directs OpenNet to replace “estimated Charges for the Project Study” with “Project Study Fee” in this Clause 7.5 in the manner specified above.

CLAUSE 7.6 – DIRECTED AMENDMENTS

7.6 Except where OpenNet has rejected an OSS/BSS ~~OSS/BSS Connection~~Professional Service Request under ~~e~~Clauses 7.2 and 7.3, and the Requesting Licensee has chosen to only acquire Service Portal GUI access~~only~~, OpenNet will commence on a Project Study. The Requesting Licensee must pay the Project Study Fee specified in the Project Study quotation under Clause 7.4. If the Requesting Licensee does not accept the quotation, or if the Requesting Licensee does not (for any reason whatsoever) inform OpenNet in writing of its acceptance of the quotation within ten (10) Business Days from the date of the quotation, the quotation and the OSS/BSS Connection Request shall be deemed cancelled.

IDA notes that there are typographical errors (i.e., “OSS/BSS Connection Request” should be “OSS/BSS Professional Service Request” and there is a missing word “Clause” before phrase “7.4.”). Accordingly, IDA directs OpenNet to amend this Clause 7.6 in the manner specified above.

For consistency, IDA directs OpenNet to replace “clause” with “Clause” in this Clause 7.6 in the manner specified above.

DELETION OF FORMER CLAUSES 7.6, 7.7 AND 7.8 – APPROVED

FORMER CLAUSE 7.10 – DIRECTED AMENDMENTS

7.7 In the event that the Requesting Licensee cancels the Request before the Project Study is completed, the Requesting Licensee shall be liable to ~~cancellation charges~~Cancellation Charges which shall be based on the amount of work done and any other incidental costs and/or expenses which are reasonably incurred by OpenNet in connection with the evaluation of the cancelled Request (to be recovered on a cost-oriented basis) in accordance with Clause 14.3.1 of Schedule 15 (Charges).

Under IDA's Directed Modifications dated 26 July 2011, IDA required OpenNet to make the necessary modifications to clarify the charges that it would recover from the Requesting Licensee. IDA notes that OpenNet's proposed changes have failed to give full effect to IDA's required modifications. Accordingly, IDA directs OpenNet to amend this clause in the manner specified above to incorporate IDA's Directed Modifications.

For consistency, IDA directs OpenNet to replace "cancellation charges" with "Cancellation Charges" in this clause in the manner specified above

7.8 The Project Study will define the project scope of work ("SOW") including deliverables, acceptance and timeline schedule, assess software, hardware and subject matter expert requirements.

7.9 OpenNet and the Requesting Licensee shall jointly define the SOW and the terms and conditions ("T&Cs") which shall include, but not be limited to, the following:

- (a) Key project assumptions.
- (b) OpenNet responsibilities.
- (c) Requesting Licensee responsibilities.
- (d) OpenNet deliverables.
- (e) Acceptance of deliverables.

(f) Change requests management

(g) Project schedule

(h) Payment terms

CLAUSE 7.10 – DIRECTED AMENDMENTS

7.10 Following completion of the Project Study, OpenNet shall provide the Requesting Licensee with the following information ascertained as a result of the Project Study:

(a) Scope of Work

(b) ~~Terms~~ & ~~Conditions~~

(c) Functional specification of the enhanced interface (where applicable);

(d) Implementation plan;

(e) the estimated Charges for the OSS/BSS Professional Services (including a breakdown of the major components of the Charges) and an outline of the major elements of the OSS/BSS Professional Services to be undertaken by OpenNet;

(f) provide an estimation of project man-day(s) required to complete the OSS/BSS Professional Services; and

(g) maintenance and support agreement (where applicable)

OpenNet shall be entitled to levy and receive the Project Study Fee provided in Schedule 15 (Charges) irrespective of whether the Requesting Licensee proceeds with the OSS/BSS ~~Connection~~ Professional Request immediately after completion of the Project Study. For the Implementation Schedule, OpenNet shall minimally provide the information in Clause 7.10(d) to Clause 7.10(f) (inclusive). For the avoidance of doubt, the estimated Charges associated with the Implementation Schedule shall be computed based on the number of man-day(s) required to perform the Handshake Testing and End to End Testing using the per man-day Charge under Clause 14.3.1 of Schedule 15(Charges).

IDA notes that there is a typographical error (i.e., “OSS/BSS Connection Request” should be “OSS/BSS Professional Service Request”). Accordingly, IDA directs OpenNet to amend this Clause 7.10 in the manner specified above.

For consistency, IDA directs OpenNet to replace “Terms and Conditions” with “T&Cs” in this Clause 7.10 in the manner specified above.

Under IDA’s Directed Modifications dated 26 July 2011, IDA required OpenNet to make the necessary modifications to incorporate the Simplified Process for Professional Service. IDA notes that OpenNet’s proposed changes have failed to give full effect to IDA’s required modifications. Accordingly, IDA directs OpenNet to amend this Clause 7.10 in the manner specified above to incorporate IDA’s Directed Modifications.

8. IMPLEMENTATION OF OSS/BSS PROFESSIONAL SERVICES

CLAUSE 8.1 – DIRECTED AMENDMENTS

8.1 Within fifteen (15) Business Days (or such other time as may be agreed between the Parties) from the date of notification of the result of the Project Study or from the provision of information under the Implementation Schedule under eClause 7.10, the Requesting Licensee shall confirm in writing whether it wishes to proceed with OSS/BSS Professional Service and whether it agrees to pay the estimated Charges for the OSS/BSS Professional Services work.

Please refer to IDA’s directed amendments to Clause 7 in relation to a Simplified Process for Professional Service. Under the Simplified Process for Professional Service, OpenNet will be providing an Implementation Schedule instead of the Project Study. It is therefore necessary to amend this clause to take into account the above.

Accordingly, IDA directs OpenNet to amend this Clause 8.1 in the manner specified above.

For consistency, IDA directs OpenNet to replace “clause” with “Clause” in this Clause 8.1 in the manner specified above.

CLAUSE 8.2 – DIRECTED AMENDMENTS

8.2 OpenNet shall use its reasonable endeavours to provide OSS/BSS Professional Services within the estimated ~~e~~chargesCharges and timeframe and in accordance to the agreed project SOW and T&Cs or within the estimated Charges and timeframe in accordance with the Implementation Schedule, as the case may be.

Please refer to IDA’s directed amendments to Clause 7 in relation to a Simplified Process for Professional Service. Under the Simplified Process for Professional Service, OpenNet will be providing an Implementation Schedule instead of the Project Study. It is therefore necessary to amend this clause to take into account the above. Accordingly, IDA directs OpenNet to amend this Clause 8.2 in the manner specified above.

For consistency, IDA directs OpenNet to replace “charges” with “Charges” in this Clause 8.2 in the manner specified above.

CLAUSE 8.3 – DIRECTED AMENDMENTS

8.3 OpenNet shall use its reasonable endeavours to complete the ~~OSS/BSS Professional Services Work~~OSS/BSS Professional Services work within the estimated ~~e~~Charges. If OpenNet’s costs increase above OpenNet’s estimate set out in the ~~notice~~Project Study under ~~e~~Clause 7.10 (as may be varied from time to time under this ~~e~~Clause 8.3), OpenNet shall provide the Requesting Licensee with a revised price estimate. OpenNet must obtain the prior approval of the Requesting Licensee to the revised price estimate and if the Requesting Licensee does not provide its approval, then, OpenNet may suspend the ~~OSS/BSS Professional Services Work~~OSS/BSS Professional Services work until the Requesting Licensee agrees to the revised price estimate. For the purpose of testing conducted under the Implementation Schedule, the following (where applicable) shall apply:

- (a) Requesting Licensee will be charged for the actual number of man-day(s) required where the actual man-day(s) required is less than the estimated number of man-day(s) required;
- (b) Where testing takes more man-day(s) than estimated under the Implementation Schedule, OpenNet shall be entitled to recover additional cost of the man-day(s) required from the Requesting Licensee where the extension is not attributable to any default on the part of OpenNet;
- (c) Where testing under the Implementation Schedule has to be suspended due to any default on the part of OpenNet, OpenNet shall not be entitled to impose any charges;
- (d) Where testing under the Implementation Schedule has to be suspended due to any default on the part of the Requesting Licensee, OpenNet shall be entitled to impose Charges according to Schedule 15 (Charges); or
- ~~(a)~~(e) In situations where testing under the Implementation Schedule takes more man-day(s) than estimated or has to be suspended and these are not due to the default of OpenNet or the Requesting Licensee, OpenNet should bear the cost of its own manpower (which it would incur ordinarily in any case with or without the Requesting Licensee's OSS/BSS Professional Service Request).

For consistency, IDA directs OpenNet to replace "clause" and "charges" with "Clause" and "Charges" respectively in this Clause 8.3 in the manner specified above.

IDA notes that the phrase "OSS/BSS Professional Services Work" is not defined. For consistency, IDA directs OpenNet to replace "OSS/BSS Professional Services Work" with "OSS/BSS Professional Services work" in this Clause 8.3 in the manner specified above.

IDA notes that the work "notice" used in this Clause 8.3 is ambiguous. For clarity, IDA directs OpenNet to replace "notice" with "Project Study" in this Clause 8.3 in the manner specified above.

Under IDA's Directed Modifications dated 26 July 2011, IDA required OpenNet to make the necessary modifications to incorporate the

Simplified Process for Professional Service. This should include addressing situations where actual number of man-day(s) expended is different from that estimated in the Implementation Schedule or where testing has to be suspended. IDA notes that OpenNet’s proposed changes have failed to give full effect to IDA’s required modifications. Accordingly, IDA directs OpenNet to amend this Clause 8.2 in the manner specified above to incorporate IDA’s Directed Modifications.

CLAUSE 8.4 – DIRECTED AMENDMENTS

8.4 OpenNet shall complete any implementation within a timeframe stated in the ~~quotation~~ Project Study or Implementation Schedule under eClause 7.10, as the case may be. Subject to delays that may result from suspension of the work under eClause 8.3, if OpenNet is not able to complete the work within the timeframe under this eClause 8.4, OpenNet shall inform the Requesting Licensee of when the work will be completed.

For consistency, IDA directs OpenNet to replace “clause” with “Clause” in this Clause 8.4 in the manner specified above.

IDA notes that the word “quotation” used in this Clause 8.4 could be mistaken to be the Project Study quotation (arising from the pre-Project Study assessment). For clarity, IDA directs OpenNet to replace “quotation” with “Project Study” in this Clause 8.4 in the manner specified above.

Please refer to IDA’s directed amendments to Clause 7 in relation to a Simplified Process for Professional Service. Under the Simplified Process for Professional Service, OpenNet will be providing an Implementation Schedule instead of the Project Study. It is therefore necessary to amend this clause to take into account the above. Accordingly, IDA directs OpenNet to amend this Clause 8.4 in the manner specified above.

DELETION OF FORMER CLAUSES 8.5, 8.6 AND 8.7 - APPROVED

CLAUSE 8.5 – DIRECTED AMENDMENTS

8.5 Prior to the commencement of testing under the Project Study, the Requesting Licensee must submit a detailed schedule with testing plans, testing timetables and the actual date of deployment to production no less than fifteen (15) Business Days before commencement of works for OpenNet’s approval (or such other time as may be agreed between the Parties). The Requesting Licensee shall not commence testing until it has received OpenNet’s approval in writing, provided always that OpenNet’s approval of the Requesting Licensee’s testing plans and timetables shall not be unreasonably withheld. For the purpose of testing under the Implementation Schedule, the parties shall follow the implementation plan and schedule in the Implementation Schedule.

Please refer to IDA’s directed amendments to Clause 7 in relation to a Simplified Process for Professional Service. Under the Simplified Process for Professional Service, OpenNet will be providing an Implementation Schedule for the Requesting Licensee to follow for the testing. It is therefore necessary to amend this clause to take into account the above. Accordingly, IDA directs OpenNet to amend this Clause 8.5 in the manner specified above.

CLAUSE 8.6 – DIRECTED AMENDMENTS

8.6 OpenNet ~~will~~shall assist in conducting the testing with the Requesting Licensee according to the agreed schedule.

For consistency, IDA directs OpenNet to amend this Clause 8.6 in the manner specified above.

8.7 Within three (3) Business Days after the completion of the OSS/BSS Professional Services, OpenNet will notify the Requesting Licensee and request the Requesting Licensee for a final acceptance of the OSS/BSS Professional Services.

FORMER CLAUSE 8.9 – DIRECTED AMENDMENTS

8.8 Where the Requesting Licensee has ordered OSS/BSS Professional Services as set out in ~~e~~Clause 6.1(c). OpenNet will provide the support for OSS/BSS Professional Services for a period of three (3) months from the date of final acceptance.

For consistency, IDA directs OpenNet to replace “clause” with “Clause” in this clause in the manner specified above.

FORMER CLAUSE 8.10 – DIRECTED AMENDMENTS

8.9 In the event that the Requesting Licensee decides to cancel its Request before the work is completed but after its acceptance of the agreement to pay the Professional Service Charge, the Requesting Licensee shall be liable to ~~e~~Cancellation ~~e~~Charges which shall include the work completed so far and any other incidental costs and/or expenses which are reasonably incurred by OpenNet in connection with the cancelled Request (to be recovered on a cost-oriented basis) in accordance with Clause 14.3.1 of Schedule 15 (Charges).

Under IDA’s Directed Modifications dated 26 July 2011, IDA required OpenNet to modify this clause to clarify the charges that it would recover from the Requesting Licensee. IDA notes that OpenNet’s proposed changes have failed to give full effect to IDA’s required modifications. Accordingly, IDA directs OpenNet to amend this clause in the manner specified above to incorporate IDA’s Directed Modifications.

FORMER CLAUSE 8.11 – DIRECTED AMENDMENTS

8.10 The Requesting Licensee shall pay for all software, hardware and subject matter experts and any other costs incurred for the project as stated in the project Scope of Work and ~~Terms & Conditions~~ in Clause 7.10 or the Charges stated in the Implementation Schedule in Clause 7.10, as the case may be.

Please refer to IDA’s directed amendments to Clause 7 in relation to a Simplified Process for Professional Service. Under the Simplified Process for Professional Service, OpenNet will be providing an Implementation Schedule instead of the Project Study. It is therefore

necessary to amend this clause to take into account the above. Accordingly, IDA directs OpenNet to amend this clause in the manner specified above.

For consistency, IDA directs OpenNet to replace “Terms and Conditions” with “T&Cs” in this Clause 8.10 in the manner specified above.

9. FAULT REPORTING AND CLEARING

CLAUSE 9.1 – APPROVED

9.1 The Requesting Licensee acknowledges that it is technically impracticable to provide fault free access to and use of the OpenNet Platform and OpenNet does not undertake to do so. The Requesting Licensee acknowledges that it may experience, and OpenNet shall not be liable for, disruption to the OpenNet Platform. The Requesting Licensee shall resubmit to OpenNet service requests affected by any system downtime of the OpenNet Platform. Notwithstanding the above, OpenNet shall be liable for disruption to the OpenNet Platform only if such disruption is caused solely by OpenNet or its appointed supplier(s).

9.2 The Requesting Licensee shall call, email or fax to OpenNet to report problem related to OpenNet Platform with details including the Requesting Licensee’s name, contact, nature of problems, problem description, application function etc. OpenNet shall respond by issuing an incident reference number to the Requesting Licensee for follow up.

9.3 It is the Requesting Licensee’s responsibility to determine the source of the fault at its own cost and to ensure that the fault does not lie within its own OSS/BSS Connection Equipment before reporting the fault to OpenNet.

CLAUSE 9.4 – DIRECTED AMENDMENTS

9.4 Upon receipt of a fault report from the Requesting Licensee under eClause 9.2, OpenNet shall investigate the cause of the fault experienced by the Requesting Licensee in a diligent and responsible manner as would be expected of a competent service provider. OpenNet shall update the Requesting Licensee as and when there is a change in status of the fault investigation/rectification work.

For consistency, IDA directs OpenNet to replace “clause” with “Clause” in this Clause 9.4 in the manner specified above.

CLAUSE 9.5 – APPROVED

- 9.5 If, following investigation, OpenNet determines that the fault is within the OpenNet Platform, OpenNet shall rectify the fault.
- 9.6 If, following investigation, OpenNet determines that no fault is found or the fault is not due to the OpenNet Network or equipment, then OpenNet shall charge the Requesting Licensee a No Fault Found Charge for the fault report in accordance with Schedule 15 (Charges).
- 9.7 If OpenNet is unable to identify any fault, OpenNet will call for a fault identification coordination meeting between OpenNet and the Requesting Licensee to identify the fault. The Requesting Licensee shall provide all reasonable assistance requested by OpenNet. Each Party is to bear its own cost for attending such fault identification coordination meeting as well as any testing or trouble-shooting activities required as a result of such a meeting.

CLAUSE 9.8 – APPROVED

- 9.8 The OSS/BSS Connection is deemed to be restored when OpenNet has tested and confirmed that the fault has been rectified and the OSS/BSS Connection has been restored and OpenNet provides written notification to the Requesting Licensee that the OSS/BSS Connection has been restored.

DELETION OF CLAUSE 9.9 – APPROVED

- 9.9 The Requesting Licensee acknowledges that OpenNet may temporarily disconnect the Requesting Licensee’s OSS/BSS Connection to perform reasonable fault analysis and line testing on the OSS/BSS Connection. OpenNet shall conduct such disconnection only as it reasonably considers necessary. OpenNet shall notify the Requesting Licensee at least thirty (30) minutes before the temporary disconnection and provide its reasons for the temporary disconnection.
- 9.10 Each Party shall maintain and store its own records of faults and repairs.

9.11 Where the fault lies within the OpenNet Platform, OpenNet shall evaluate the severity level of the problem reported and respond accordingly. See “Timeframe” section below for response times.

9.12 OpenNet shall resolve the reported problem based on a mutually agreed timeline between OpenNet and the Requesting Licensee.

CLAUSE 9.13 – DIRECTED AMENDMENTS

9.13 In the event the Requesting Licensee and OpenNet connection(s) at the Requesting Licensee’s end is faulty, the Requesting Licensee may request OpenNet to setup and configure Express Firewall Setup (for Emergency Public Internet secured VPN access) from its alternative Firewall at different location. Such request shall be subject to following terms and conditions:

(a) The Requesting Licensee shall pay the Express Firewall Setup ~~charge~~**Charge** as stated in Schedule 15 (Charges).

(b) The Requesting Licensee shall provide its own internet connection from its alternative firewall premises or work site at its own cost.

(c) The Requesting Licensee shall liaise with OpenNet to set up and configure OpenNet firewall to allow the emergency ~~p~~**P**ublic Internet secured VPN access from the Requesting Licensee’s alternative access sites.

(d) The Requesting Licensee shall inform and liaise with OpenNet to cease the emergency ~~p~~**P**ublic Internet secured VPN access when the alternative access to OpenNet Platform is no longer required.

For consistency, IDA directs OpenNet to replace “public Internet” and “charge” with “Public Internet” and “Charge” respectively in this Clause 9.13 in the manner specified above.

FORMER CLAUSE 9.15 – DIRECTED AMENDMENTS

9.14 Save as otherwise provided for in ~~e~~**C**lause 14 of this Schedule 14, OpenNet retains the right to suspend, modify, remove and/or to add to the OpenNet Platform in its sole discretion with immediate effect and without ~~notice and OpenNet will not be liable for any such action.~~

Under IDA's Directed Modifications dated 26 July 2011, IDA required OpenNet to modify this clause to remove the treatment of liability. IDA notes that OpenNet's proposed changes have failed to give full effect to IDA's required modifications. Accordingly, IDA directs OpenNet to amend this clause in the manner specified above to incorporate IDA's Directed Modifications.

For consistency, IDA directs OpenNet to replace "clause" with "Clause" in this Clause 9.14 in the manner specified above.

FORMER CLAUSE 9.16 – DIRECTED AMENDMENTS

9.15 Access to the OpenNet Platform may be suspended temporarily and without notice in circumstances of system failure, urgent system maintenance/repair (e.g. for rectification of severe bugs) ~~or repair~~ or for reasons beyond the control of OpenNet. For scheduled maintenance/repair, OpenNet shall notify Requesting Licensees according to Clause 10.4.

Under IDA's Directed Modifications dated 26 July 2011, IDA required OpenNet to modify the clause to qualify that OpenNet will only suspend access to OpenNet Platform without providing prior notification to the Requesting Licensee for circumstances beyond the control of OpenNet. As certain repair may not be urgent and could be performed after notification to the Requesting Licensee, IDA is of the view that OpenNet's proposed modifications are not adequate. Accordingly, IDA directs OpenNet to amend this clause in the manner specified above to incorporate IDA's Directed Modifications.

FORMER CLAUSE 9.17 – DIRECTED AMENDMENTS

9.16 Where the OpenNet Platform is unavailable, OpenNet shall ~~use its reasonable endeavours to~~ notify the Requesting Licensee without undue delay and accept requests for Mandated Services from the Requesting Licensee via a dedicated email address and fax number. For the avoidance of doubt, OpenNet shall continue to

accept requests for Mandated Services from the Requesting Licensee via a dedicated email address and fax number unless otherwise advised by OpenNet. OpenNet will accord a higher priority to requests that are submitted via the OpenNet Platform.

Under IDA’s Directed Modifications dated 26 July 2011, IDA required OpenNet to modify this clause to: (a) notify its Requesting Licensees of the unavailability of OpenNet Platform without qualification; and (b) notify its Requesting Licensees on OpenNet Platform’s unavailability, when OpenNet discovers it or when the same is brought to its attention, without undue delay. IDA notes that OpenNet’s proposed changes have failed to give full effect to IDA’s required modifications. Accordingly, IDA directs OpenNet to amend this clause in the manner specified above to incorporate IDA’s Directed Modifications.

9.18 Service level guarantees are not provided under this Schedule.

CLAUSE 9.19 – DIRECTED AMENDMENTS

9.19 OpenNet shall use its reasonable endeavours to respond to the Requesting Licensee in respect of the following:

IDA notes a typographical error in this clause. Accordingly, IDA directs OpenNet to replace the term “Request Licensee” with “Requesting Licensee” in this Clause 9.19 in the manner specified above.

Timeframe	Severity Level	Response Time
	Severity Level 1 – System and users are unable to do production works or critical business processes (in crisis mode).	Immediate.
	Severity Level 2 – A key system function is not usable but the system is able to continue operation.	Within 2 hours.
	Severity Level 3 – A feature or function is faulty but does not seriously impact	Within 24 hours.

	operation.	
	Severity Level 4 – A feature or function having a minor fault (e.g. Cosmetic problems) but does not impact operation or others issues that do not require immediate action.	Within 2 days or as agreed.

10. OTHER TERMS & CONDITIONS

CLAUSE 10.1 – DIRECTED AMENDMENTS

10.1 All new, modified or upgraded Requesting Licensee software system interfaces must be tested in the OpenNet Platform test environment before being promoted to the live production environment. In the event the Requesting Licensee does not comply with such procedure and such untested software system causes any interruption or damage to the OpenNet Platform, the Requesting Licensee shall be liable to pay ~~Professional Services charges~~OSS/BSS Professional Services Charges for man-day(s) effort incurred to recover system and data to resume normal operation.

For consistency, IDA directs OpenNet to replace “Professional Services charges” with “OSS/BSS Professional Services Charges” in this Clause 10.1 in the manner specified above.

CLAUSE 10.2 – DIRECTED AMENDMENTS

10.2 The Requesting Licensee shall, in accordance with ~~e~~Clause 14 of this Schedule 14, work with OpenNet to support testing of OpenNet-initiated OpenNet Platform API software changes including but not limited to implementation of new, modified and upgraded API(s).

For consistency, IDA directs OpenNet to replace “clause” with “Clause” in this Clause 10.2 in the manner specified above.

10.3 The OpenNet Platform will be available daily from 8am to 11pm with the exception of fault reporting functionalities, which will be operational 24 hours daily excluding specific scheduled maintenance periods. The daily maintenance of the OpenNet Platform shall be between 11pm and 8am of the next day, unless otherwise agreed.

CLAUSE 10.4 – DIRECTED AMENDMENTS

10.4 For scheduled maintenance activity and subject to Clause 9.1~~65~~ and 10.3, OpenNet shall inform the Requesting Licensee at least one (1) month in advance with the date and time of the scheduled maintenance as well as the functions/modules affected.

IDA notes a typographical error in this clause. Accordingly, IDA directs OpenNet to replace the term “Clause 9.16” with “Clause 9.15” in this Clause 10.4 in the manner specified above.

CLAUSE 10.5 – DIRECTED AMENDMENTS

10.5 OpenNet retains the right to terminate or suspend the Requesting Licensee’s named user accounts and take whatever action it considers appropriate in the event should the Requesting Licensee commits a material breach of any terms of this Schedule or any part of the ICO Agreement or to protect the integrity of the OpenNet Platform arising from the conduct of the Requesting Licensee.

Under IDA’s Directed Modifications dated 26 July 2011, IDA required OpenNet to modify this Clause 10.5 to clarify that OpenNet will only have the right to terminate or suspend an Requesting Licensee’s named user accounts: (a) if the Requesting Licensee has committed a material breach of the ICO Agreement; or (b) if there is a need to protect the integrity of the OpenNet Platform arising from the conduct of the Requesting Licensee. IDA notes that OpenNet’s proposed changes have failed to give full effect to IDA’s required modifications. Accordingly, IDA directs OpenNet to amend this Clause 10.5 in the manner specified above to incorporate IDA’s Directed Modifications.

DELETION OF FORMER CLAUSE 10.6 – APPROVED

10.6 All Charges are for work done by OpenNet on Business Days unless stated otherwise.

11. TERM OF LICENCE

CLAUSE 11.1 – DIRECTED AMENDMENTS

11.1 The term of an OSS/BSS Connection licence granted under this Schedule shall commence on the date of completion of the **OSS/BSS Professional Services** (“**Commencement Date**”) and continues for the term of either one (1) year (“**Term**”), or until the earlier occurrence of any of the following events:

- (a) either Party terminates the OSS/BSS Connection Service in accordance with Clause 13 of this Schedule;
- (b) the OpenNet ICO is revoked by the Authority under ~~e~~Clause 12.8 of the ICO Agreement; or
- (c) the Authority removes the requirement for OpenNet to provide OSS/BSS Connection Service under the OpenNet ICO or exempts OpenNet from providing OSS/BSS Connection Service under ~~e~~Clause 12.9 of the ICO Agreement.

For consistency, IDA directs OpenNet to replace “clause” with “Clause” in this Clause 11.1 in the manner specified above.

DELETION OF FORMER CLAUSE 11.2 – APPROVED

12. SUSPENSION OF LICENCE

12.1 OpenNet may suspend the Requesting Licensee’s OSS/BSS Connection Service licence at any time until further notice to the Requesting Licensee if the **OSS/BSS Connection** causes or is likely to cause physical or technical harm to any telecommunications network, system or services (whether of OpenNet or any other

person) including but not limited to causing damage, interfering with or causing deterioration in the operation of OpenNet's Network.

CLAUSE 12.2 – DIRECTED AMENDMENTS

12.2 Without limiting the exclusions or limitations of liability in this ICO Agreement, OpenNet shall not be liable to the Requesting Licensee for any Loss resulting from, or in connection with, suspension of access to **OSS/BSS Connection** under this ~~e~~Clause 12.

For consistency, IDA directs OpenNet to replace “clause” with “Clause” in this Clause 12.2 in the manner specified above.

13. TERMINATION OF LICENCE

13.1 The minimum contract term shall be for one year and automatically renewed yearly (“**Term**”), unless terminated pursuant to the prevailing agreement.

CLAUSE 13.2 – APPROVED

13.2 If any of the user accounts is inactive for more than six (6) months, OpenNet shall be entitled to recover the inactive user account upon giving the Requesting Licensee ten (10) Business Days prior notice, and the Requesting Licensee does not dispute such written notice by OpenNet.

13.3 At any time after the minimum contract term, OpenNet or the Requesting Licensee may terminate the OSS/BSS Connection Service by giving the other party not less than one month prior notice.

13.4 If the Requesting Licensee desires to terminate the OSS/BSS Connection Service before the end of a Term, the Requesting Licensee shall (i) give OpenNet at least one (1) month's prior written notice.

CLAUSE 13.5 – DIRECTED AMENDMENTS

13.5 OpenNet may terminate the licence of OSS/BSS Connection Service at any time with immediate effect by giving notice to the Requesting Licensee if the Requesting Licensee fails to complete the connection of its OSS/BSS platform ~~within thirty (30) Business Days~~ in accordance with Clauses 8.5 and 8.6. If the Requesting Licensee's

failure to complete installation is attributable to circumstances beyond the Requesting Licensee's reasonable control, OpenNet may grant a reasonable extension of time for installation to the Requesting Licensee at the Requesting Licensee's request. The Requesting Licensee's request under this clause must describe the circumstances beyond the Requesting Licensee's control and such request must be received prior to the expiry of the aforementioned ~~thirty (30) Business Days~~ period. OpenNet shall respond to the Requesting Licensee's request under this ~~e~~Clause 13.5 within two (2) Business Days from the date of receipt of such request.

For consistency, IDA directs OpenNet to replace "clause" with "Clause" in this Clause 13.6 in the manner specified above.

IDA notes that the connection to OpenNet Platform would depend on the schedule of the agreed Project Study or Implementation Schedule and it could take more than thirty (30) Business Days. It is therefore not appropriate to set a deadline of thirty (30) Business Days. Accordingly, IDA directs OpenNet to amend this Clause 13.5 in the manner specified above.

13.6 Either Party (**Terminating Party**) may terminate the licence of the OSS/BSS Connection Service:

- (a) if the other Party is in breach of this Schedule other than failure to pay any sum for which the Requesting Licensee has been invoiced, and such breach remains un-remedied for a period of sixty (60) Calendar Days after receiving notice from the Terminating Party; or
- (b) if the Requesting Licensee is in breach of this Schedule by its failure to pay any sum for which the Requesting Licensee has been invoiced, and such breach remains un-remedied for a period of fourteen (14) Calendar Days after receiving notice from the Terminating Party. For the avoidance of doubt, this sub-clause shall not apply pending the resolution of any Billing Dispute in accordance with the provisions of Schedule 16 (Billing).

13.7 OpenNet may immediately terminate a licence of OSS/BSS Connection Service if:

- (a) in OpenNet's reasonable opinion, the Requesting Licensee is using the OSS/BSS Connection Service in contravention of any applicable law, licence,

code, regulation or direction and OpenNet has the necessary confirmation from the relevant Governmental Agencies that the Requesting Licensee is in contravention of the applicable law, licence, code, regulation or direction;

CLAUSE 13.7(b) – DIRECTED AMENDMENTS

- (b) the Requesting Licensee’s OSS/BSS Connection Service licence has been suspended pursuant to ~~e~~Clause 12.1 of this Schedule, and the Requesting Licensee fails to rectify the fault resulting in the suspension within a period of sixty (60) Calendar Days from the date of suspension;

For consistency, IDA directs OpenNet to replace “clause” with “Clause” in this Clause 13.7(b) in the manner specified above.

- (c) the OSS/BSS Connection Service is used for a purpose other than for connecting to the OpenNet Platform to order services and report faults;

- (d) the OSS/BSS Connection Service has become unsafe or unfit for its purpose due to (but not limited to) ~~the~~ creation and/or sending of internet viruses, worms, Trojan horses, ping, flooding, mail bombing, or denial of service attacks; or due to any activities that disrupt the use of or interfere with the ability of others to effectively use ~~or access~~ the OpenNet Platform; or when the Requesting Licensee’s system is found to be behaving abnormally with reference to the results of ~~the h~~Handshake Testing, ~~end to end testing or End to End~~ ~~e2e~~Testing and day to day operations;

For consistency, IDA directs OpenNet to replace “handshake” and “e2e test” with “Handshake Testing” and “end to end testing or End to End Testing” respectively in this Clause 13.7(d) in the manner specified above.

DELETION OF FORMER CLAUSE 13.7(e) – APPROVED

CLAUSE 13.8 – APPROVED

- 13.8 OpenNet may terminate the licence of OSS/BSS Connection Service on five (5) Business Days prior written notice, if the Requesting Licensee removes or abandons its OSS/BSS Connection Service as detected by OpenNet due to inactivity or

otherwise, and the Requesting Licensee does not dispute such written notice by OpenNet.

CLAUSE 13.9 – DIRECTED AMENDMENTS

13.9 If a Requesting Licensee’s licence of an OSS/BSS Connection Service is to be terminated at any time during the Term because of the closure of an OpenNet OSS/BSS data centre, OpenNet must give the Requesting Licensee prior written notice at least three (3) months before the scheduled closure of such OpenNet OSS/BSS Data Centre. In the event of a closure of such OSS/BSS ~~Data Centre~~ data centre, OpenNet must take reasonable measures to minimise disruptions to the Requesting Licensee in the provision of its services to the RSPs or End Users. The Requesting Licensee shall bear its own costs associated with the closure of the OSS/BSS ~~Data Centre~~ data centre. However, in the event of downtime of the OSS/BSS Connection Service due to system migration or relocation, OpenNet shall give the Requesting Licensee three (3) months’ written notice before such system migration or relocation. In the event that the Requesting Licensee requests assistance from OpenNet within thirty (30) Business Days after receiving a notice under this Clause to provide an alternative solution to the OSS/BSS ~~data centre~~ Data Centre which is being terminated, OpenNet will use its reasonable endeavours in providing such assistance. The Requesting Licensee shall remain solely responsible for making any alternative arrangements as may be necessary to continue to provide its services to its customers and shall remove its OSS/BSS Connection prior to the closure of the OSS/BSS ~~data centre~~ Data Centre.

For consistency, IDA directs OpenNet to replace “Data Centre” with “data centre” in this Clause 13.9 in the manner specified above.

13.10 Upon expiry or termination of the licence of OSS/BSS Connection Service:

- (a) the Requesting Licensee must discontinue the use of its OSS/BSS Connection Services and remove its OSS/BSS Connection from OpenNet’s OSS/BSS data centre without undue delay;

CLAUSE 13.10(b) – DIRECTED AMENDMENTS

- (b) OpenNet shall reinstate the OpenNet Platform and recover/reinstate all firewall settings and recover the reasonable cost of such reinstatement (other than the cost of removing the user accounts) from the Requesting Licensee in accordance with the Termination Charge stated in Schedule 15 (Charges), other than in circumstances where the Requesting Licensee's discontinuation of the use of the OpenNet Platform is a direct result of OpenNet's decommissioning of the OpenNet OSS/BSS data centre under this Schedule 14, or where the termination occurs as a result of OpenNet's fault; and

For consistency, IDA directs OpenNet to insert "(Charges)" after the phrase "Schedule 15" in this Clause 13.10 (b) in the manner specified above.

CLAUSE 13.10(c) – DIRECTED AMENDMENTS

- (c) the Requesting Licensee shall pay OpenNet the Charges (where applicable) stated in Schedule 15 (Charges) for the OSS/BSS Connection Service for the remainder of the Term of the OSS/BSS Connection Service licence if the termination is the result of the Requesting Licensee's fault

Under IDA's Directed Modifications dated 26 July 2011, IDA required OpenNet to modify this Clause 13.10 to clarify that there are no monthly recurring charges in OpenNet's OSS/BSS Connection Service for the Standard Connectivity Service and hence there will not be any outstanding charges for the remainder of the Term of the OSS/BSS Connection Service licence. IDA notes that OpenNet's proposed changes have failed to give full effect to IDA's required modifications. Accordingly, IDA directs OpenNet to amend this Clause 13.10 in the manner specified above to incorporate IDA's Directed Modifications.

CLAUSE 13.11 – APPROVED

13.11 If the Requesting Licensee fails to discontinue the use of OpenNet Platform and remove its OSS/BSS Connection under Clause 13.10, OpenNet may at its sole discretion remove and/or dispose of the Requesting Licensee's OSS/BSS

Connection and reinstate the OSS/BSS Connection to its original condition. The Requesting Licensee shall pay to OpenNet all reasonable costs associated with the work undertaken by OpenNet including the cost of disposing the OSS/BSS Connection. In such event, the Requesting Licensee shall have no claim whatsoever against OpenNet related to or in connection with the work undertaken by OpenNet pursuant to this Clause 13.10.

14. CHANGE MANAGEMENT PROCESS FOR OPENNET PLATFORM APIS

NEW CLAUSE 14.1 – DIRECTED AMENDMENTS

14.1 OpenNet ~~will~~**shall** collate and maintain an OpenNet Platform APIs Change Management Register. ~~as per Please refer to Annex 14C. OpenNet shall publish~~ The OpenNet Platform API Register will be published on OpenNet's Service Portal its Service Portal.

IDA notes that OpenNet has decided to replace “OpenNet’s Service Portal” with “Service Portal” in this schedule. For consistency, IDA directs OpenNet to replace “OpenNet’s Service Portal” with “Service Portal” in this Clause 14.1 in the manner specified above.

For consistency, IDA directs OpenNet to replace “will” with “shall” in this Clause 14.1 in the manner specified above.

IDA notes that OpenNet will be the party publishing the OpenNet Platform API Register. Accordingly, IDA directs OpenNet to clarify the above in this Clause 14.1 in the manner specified above.

NEW CLAUSE 14.2 – DIRECTED AMENDMENTS

14.2 Proposed changes (“**Industry Affecting Changes**”) to the OpenNet Platform APIs are to be raised by Requesting Licensees to OpenNet by using the Change Proposal Form as per Annex 14D.

IDA notes that there is inconsistency in the use of terminology for OpenNet Platform API (i.e., “OpenNet’s Platform API”, “OpenNet Platform API”, “Open System API” and “API” have been used interchangeably). For consistency, IDA directs OpenNet to replace “API” with “OpenNet Platform API” in this Clause 14.2 in the manner specified above.

For clarity, IDA directs OpenNet to insert “by Requesting Licensees” after “APIs are to be raised” in this Clause 14.2 in the manner specified above.

NEW CLAUSE 14.3 – DIRECTED AMENDMENTS

14.3 OpenNet ~~shall~~will evaluate the validity of the Industry Affecting Changes using the following set of criteria:

- (a) The proposed changes are related to the OpenNet Platform APIs;
- (b) The proposed changes are consistent with ~~part of~~ the intended purpose of the OpenNet Platform; and
- (c) The proposed changes do not cause a drastic adverse impact to the performance and stability of OpenNet’s Platform

IDA notes that there is inconsistency in the use of terminology for OpenNet Platform (i.e., “OpenNet Platform”, “OpenNet’s Platform” and “Platform” have been used interchangeably). For consistency, IDA directs OpenNet to replace “Platform” and “OpenNet’s Platform” with “OpenNet Platform” in this Clause 14.3 in the manner specified above.

For consistency, IDA directs OpenNet to replace “will” with “shall” in this Clause 14.3 in the manner specified above.

For clarity, IDA directs OpenNet to replace “part of” with “consistent with” and to insert “adverse” after “do not cause a drastic” in this Clause 14.3 in the manner specified above.

NEW CLAUSE 14.4 – DIRECTED AMENDMENTS

14.4 If OpenNet rejects the proposed changes, OpenNet shall provide the reason for rejection to the Requesting Licensee. If OpenNet agrees to study the change by the Requesting Licensee, a unique change request number will be assigned to the submitted Change Proposal Form (“Change Proposal”) and the OpenNet Platform APIs Change Management Register will be updated accordingly by OpenNet.

For clarity, IDA directs OpenNet to amend this Clause 14.4 in the manner specified above.

NEW CLAUSE 14.5 –DIRECTED AMENDMENTS

14.5 The Change Management Review Committee (“Review Committee”) ~~shall~~will ~~comprise~~be formed by ~~OpenNet industry representatives, and~~ Requesting Licensees that have signed on to OpenNet’s Schedule 14 ~~to~~of the ICO Agreement ~~and IDA~~. The Review Committee shall meet every three (3) months to discuss and evaluate change requests. OpenNet ~~shall~~will provide secretarial support for the Review Committee and ~~IDA~~ will chair the Review Committee meetings.

IDA notes that where OpenNet and Requesting Licensees disagreed over the changes, the parties would resolve the disagreement over issues via the dispute resolution process provided for in the ICO. Considering that one of the possible escalation paths will be to surface the disagreement to IDA, and IDA may have to make a determination on the dispute, IDA is of the view that it is not appropriate for IDA to participate in the Review Committee meeting where the parties would be discussing on the issues. Moreover, given that the ICO is a contract between OpenNet and the Requesting Licensee, and that the OpenNet Platform is implemented and operated by OpenNet, IDA is of the view that it is more appropriate for OpenNet to chair the Review Committee. That said, where necessary, IDA is prepared to participate in the Review Committee meeting as an observer and to facilitate discussion between OpenNet and Requesting Licensees. Accordingly, IDA directs OpenNet to amend this Clause 14.5 in the manner specified above.

IDA notes that OpenNet will also be part of the Review Committee. Accordingly, IDA directs OpenNet to clarify the above in this Clause 14.5 in the manner specified above.

It is not clear to IDA who would be the industry representatives and who would decide to include them. To prevent any confusion and disagreement over this, IDA is of the view that the industry representatives should not be included in the Review Committee. Where it is necessary to include such industry representatives as observer or adviser, the Review Committee could collectively agree to invite and include them. Accordingly, IDA directs OpenNet to remove “industry representative” from this Clause 14.5 in the manner specified above.

For consistency, IDA directs OpenNet to replace “will” with “shall” in this Clause 14.5 in the manner specified above.

NEW CLAUSE 14.6 – DIRECTED AMENDMENTS

- 14.6 For the avoidance of doubt, when OpenNet needs to modify the OpenNet Platform APIs, OpenNet ~~shall~~^{will} follow the process described in this ~~e~~Clause 14, except for emergency cases or exceptional situations where:
- (a) OpenNet needs to take immediate actions where the integrity of the OpenNet Platform is at risk;
 - (b) There are imminent threats to life or property; or
 - (c) To comply with legal or regulatory obligations.

For consistency, IDA directs OpenNet to replace “clause” and “will” with “Clause” and “shall” respectively in this Clause 14.6 in the manner specified above.

NEW CLAUSE 14.7 – DIRECTED AMENDMENTS

- 14.7 All participants at such Review Committee meetings will discuss the objective of the Change Proposals, how the change would affect the Requesting Licensees’ ~~P~~platforms and the OpenNet Platform, timeframes and cost of implementation. These

~~will be taken into consideration,~~ before ~~OpenNet voting to~~ determines the action to be taken and determine appropriate implementation timeframes.

IDA notes that “Requesting Licensees’ Platform” is not defined. For clarity and consistency, IDA directs OpenNet to amend this Clause 14.7 to replace “Requesting Licensees’ Platform” with “Requesting Licensees’ platform” in the manner specified above.

Please refer to IDA’s directed amendments to Clause 14.16. Accordingly, IDA directs OpenNet to make consequential amendments to this Clause 14.7 in the manner specified above.

NEW CLAUSES 14.8 AND 14.9 – DIRECTED AMENDMENTS

14.8 If OpenNet initiates any changes to the existing OpenNet Platform APIs, OpenNet shall bear the costs of such changes and only those changes that are consequently necessary for the Requesting Licensee to continue to provide the Mandated Services in substantially the same manner as before the changes are made to the system in the absence of any direction to the contrary by the Authority.

14.9 If the Requesting Licensee initiates any changes to the existing OpenNet Platform APIs, the Requesting Licensee shall bear the costs of such changes and only those changes that are consequently necessary for OpenNet and/or other affected Requesting Licensees to continue to provide the Mandated Services in substantially the same manner as before the changes are made to the system in the absence of any direction to the contrary by the Authority.

There may be situations where IDA decides that a different cost bearing responsibility be adopted by the parties as a result of changes to the existing OpenNet Platform APIs. It is therefore important that the process caters to the above. Accordingly, IDA directs OpenNet to amend the Clauses 14.8 and 14.9 in the manner specified above.

(a) **Submission of Change Proposals**

NEW CLAUSE 14.10 – DIRECTED AMENDMENTS

14.10 Proposals to change the OpenNet Platform APIs Register may only be submitted by OpenNet or a Requesting Licensee that has signed onto Schedule 14 ~~to~~of the OpenNet ICO Agreement and which has submitted live orders via the ~~B2B~~OpenNet Platform. The initiator of the Change Proposal is required to provide the details at the Review Committee meeting.

IDA notes that there is inconsistency in the use of terminology for OpenNet Platform (i.e., “OpenNet Platform”, “OpenNet’s Platform”, “Platform” and “B2B Platform” have been used interchangeably). For consistency, IDA directs OpenNet to replace “B2B Platform” with “OpenNet Platform” in this Clause 14.10 in the manner specified above.

For clarity, IDA directs OpenNet to replace “of” with “to” in this Clause 14.10 in the manner specified above.

NEW CLAUSE 14.11 – APPROVED

14.11 These proposals should be submitted using a standard OpenNet Platform APIs Change Proposal Form as per Annex 14D that sets out:

- (a) Name of the proposer;
- (b) A description of the proposed change(s);
- (c) Justification/reasons for the change(s);
- (d) Preferred schedule for implementing the change(s); and
- (e) Any other relevant information.

NEW CLAUSE 14.12 – DIRECTED AMENDMENTS

14.12 In order to minimize the Review Committee efforts and encourage work efficiency, ~~the initiator of the Change Proposal shall make~~ every reasonable effort ~~should be made to include all accumulate multiple~~ amendments ~~together into~~ a single ~~Change P~~proposal, rather than submit multiple separate proposals. Where a Change Proposal is rejected by ~~the Review Committee~~OpenNet, the proposing party may resubmit the ~~Change P~~proposal only after fully responding to the reasons for rejection as given by ~~the Review Committee~~OpenNet, and using a new Change Proposal ~~f~~Form.

For clarity and consistency, IDA directs OpenNet to amend this Clause 14.4 in the manner specified above.

For consistency, IDA directs OpenNet to replace “form” with “Form” in this Clause 14.4 in the manner specified above.

Please refer to IDA’s directed amendments to Clause 14.16. Accordingly, IDA directs OpenNet to replace “the Review Committee” with “OpenNet” in this Clause 14.4 in the manner specified above.

(b) Consideration of Proposed Amendments

NEW CLAUSE 14.13 – DIRECTED AMENDMENTS

14.13 Subject to Clause ~~1.1~~14.3, proposed amendments of the OpenNet Platform API Register will be considered by OpenNet, in consultation with the Review Committee, under an agenda item at Review Committee meeting(s).

IDA notes that the reference to “Clause 1.1” is a typographical error and that the correct reference should be to “Clause 14.3”. Accordingly, IDA directs OpenNet to replace “Clause 1.1” with “Clause 14.3” in this Clause 14.13 in the manner specified above.

Please refer to IDA’s directed amendments to Clause 14.16. Accordingly, IDA directs OpenNet to make consequential amendments to this Clause 14.13 in the manner specified above.

NEW CLAUSE 14.14 – DIRECTED AMENDMENTS

14.14 OpenNet shall circulate the Change Proposal to all Review Committee members for comment, within three (3) Business Days of its receipt of such a Change Proposal, and at least ten (10) Business Days prior to the Review Committee meeting. The Review Committee members will conduct a high level impact assessment based on the Change Proposal. All comments should then be submitted to OpenNet at least ten (10) Business Days before the next Review Committee meeting date.

IDA notes that there is a typographical error. Accordingly, IDA directs OpenNet to insert “a” after “of its receipt of such” in this Clause 14.14 in the manner specified above.

For clarity, IDA directs OpenNet to insert “then” after “All comments should” in this Clause 14.14 in the manner specified above.

NEW CLAUSE 14.15 – DIRECTED AMENDMENTS

14.15 The high level impact assessment (to be conducted by each Review Committee member) shall include, but shall not ~~be~~ limited to the following:

- (a) Evaluation of business benefits for the Change Proposal;
- (b) Possible implementation solution(s) within the ~~Review Committee member~~ systems of OpenNet and/or the Requesting Licensees; and their impact(s) based on the Change Proposal; and
- (c) Provide order of magnitude cost estimate and estimated time for implementation.

IDA notes that there is a typographical error. Accordingly, IDA directs OpenNet to insert “be” after “shall include, but shall not” in this Clause 14.15 in the manner specified above.

IDA notes that the systems referred to in this Clause 14.15 belong to OpenNet and/or Requesting Licensees. For clarity, IDA directs OpenNet to clarify the above in this Clause 14.15 in the manner specified above.

(c) **Decisions on Proposed Amendments**

NEW CLAUSE 14.16 – DIRECTED AMENDMENTS

14.16 ~~The Review Committee~~OpenNet shall reach ~~make~~ a decision ~~consensus~~ to accept or reject each Change Proposal submitted for consideration in consultation with the Review Committee. ~~Consensus shall be reached by simple majority.~~ The Requesting Licensee who does not agree with the decision can raise its objection and provide the reasons and justifications for its objection. Where the parties are not able to resolve the disagreement, if no consensus can be achieved by Review Committee, the matter

shall be referred to the dispute resolution ~~scheme~~ provided in the Main Body of the ICO Agreement.

While IDA agrees that it is important that OpenNet consults and takes into consideration the views of the Review Committee (including any legitimate reasons/constraints why certain change should or should not be implemented) on the Change Proposal, IDA is of the view that the proposed process to make a decision based on simple majority may not be fair and reasonable. Considering that the OpenNet Platform is implemented and operated by OpenNet, IDA is of the view that it is more appropriate for OpenNet to make the decision to accept or reject each Change Proposal. IDA notes that the Requesting Licensees will not be put in a worse position as the cost incurred by them to make any consequential change necessary for them to continue to provide the Mandated Services in substantially the same manner will be borne by the initiator of the Change Proposal. In any case, if the parties (i.e., OpenNet and the Requesting Licensee(s)) are unable to resolve their disagreement over the issue, there is always the avenue to resolve the disagreement as per the existing dispute resolution process in the ICO. Accordingly, IDA directs OpenNet to amend this Clause 14.16 in the manner specified above.

For consistency, IDA directs OpenNet to replace “should” with “shall” in this Clause 14.16 in the manner specified above.

NEW CLAUSE 14.17 – DIRECTED AMENDMENTS

14.17 Following ~~the OpenNet’s Review Committee’s~~ acceptance of the Change Proposal, the Project Study will be conducted by OpenNet in consultation with the Requesting Licensee.

Please refer to IDA’s directed amendments to Clause 14.16. Accordingly, IDA directs OpenNet to replace “Review Committee’s” with “OpenNet’s” in this Clause 14.17 in the manner specified above.

NEW CLAUSES 14.18 – DIRECTED AMENDMENTS

14.18 Upon completion of the Project Study, OpenNet ~~shall~~^{will} release the tentative delivery schedule to the Review Committee. Within five (5) Business Days (or such other time as may be decided by OpenNet in consultation with the Review Committee), the Requesting Licensee shall ~~to~~ notify OpenNet in writing if it cannot meet ~~or does not agree with~~ the ~~implementation schedule~~^{change implementation schedule}. OpenNet, in consultation with the Review Committee, ~~shall~~^{will} propose the final ~~Implementation schedule~~^{change implementation schedule}. The Requesting Licensee shall support the final ~~Implementation Sschedule~~^{change implementation schedule} accordingly. If ~~no consensus can be reached by the Review Committee the parties cannot resolve the disagreement over the final change implementation schedule~~, then the matter shall be referred for dispute resolution in accordance with the Main Body of the ICO Agreement.

IDA notes that there is a typographical error. Accordingly, IDA directs OpenNet to remove the word “to” before the phrase “notify OpenNet in writing if it cannot meet the implementation schedule.” from this Clause 14.18 in the manner specified above.

For consistency, IDA directs OpenNet to replace “will” with “shall” in this Clause 14.18 in the manner specified above.

Please refer to IDA’s directed amendments to Clause 14.16. Accordingly, IDA directs OpenNet to make consequential amendments to this Clause 14.18 in the manner specified above.

To avoid confusion with the “Implementation Schedule” defined in Clause 7.4, IDA directs OpenNet to replace “implementation schedule” with “change implementation schedule” in this Clause 14.18 in the manner specified above.

IDA notes that there can also be a situation where the Requesting Licensee does not agree with the change implementation schedule. IDA is of the view that OpenNet shall treat such situations no differently from the situation where the Requesting Licensee is not able to meet the

change implementation schedule. Accordingly, IDA directs OpenNet to incorporate the above in this Clause 14.18 in the manner specified above.

NEW CLAUSE 14.19 – DIRECTED AMENDMENTS

14.19 The decision (acceptance or rejection) of ~~the Review Committee~~OpenNet in respect of each Change Proposal will be documented, and shall set out:

- (a) The submitted Change Proposal Form and any supporting information;
- (b) A concise summary of the reasons both for and against the proposed change; and
- (c) A concise summary describing the final decision of ~~the Review Committee~~OpenNet.

Please refer to IDA’s directed amendments to Clause 14.16. Accordingly, IDA directs OpenNet to replace “the Review Committee” with “OpenNet” in this Clause 14.19 in the manner specified above.

(d) **Register Update & Version Control**

NEW CLAUSE 14.20 – DIRECTED AMENDMENTS

14.20 Upon ~~a decision consensus~~by ~~the Review Committee~~OpenNet and confirmation of the ~~implementation schedule~~change implementation schedule by the Requesting Licensee, OpenNet ~~shall~~will request the ~~proposing party~~initiator of the Change Proposal to provide an updated version of the OpenNet Platform API Register, based on the current release provided on the OpenNet Platform.

Please refer to IDA’s directed amendments to Clause 14.16. Accordingly, IDA directs OpenNet to replace “consensus” and “the Review Committee” with “decision” and “OpenNet” respectively in this Clause 14.20 in the manner specified above.

For consistency, IDA directs OpenNet to replace “will” with “shall” in this Clause 14.20 in the manner specified above.

For clarity and consistency, IDA directs OpenNet to replace “proposing party” with “initiator of the Change Proposal” in this Clause 14.20 in the manner specified above.

To avoid confusion with the “Implementation Schedule” defined in Clause 7.4, IDA directs OpenNet to replace “implementation schedule” with “change implementation schedule” in this Clause 14.20 in the manner specified above.

NEW CLAUSE 14.21 – DIRECTED AMENDMENTS

14.21 The initiator of the Change Proposal~~proposing party shall~~~~should~~ undertake verification of the updated OpenNet Platform API Register against the Change Proposal prior to implementation. In the event of any error/discrepancy, the initiator of the Change Proposal~~proposing party shall~~~~should~~ refer the matter(s) to OpenNet for appropriate action.

For clarity and consistency, IDA directs OpenNet to replace “proposing party” with “initiator of the Change Proposal” in Clause 14.21 in the manner specified above.

For consistency, IDA directs OpenNet to replace “should” with “shall” in this Clause 14.21 in the manner specified above.

NEW CLAUSE 14.22 – DIRECTED AMENDMENTS

14.22 Upon successful verification of the updated OpenNet Platform APIs Register, OpenNet and the initiator of the Change Proposal~~proposing party~~ shall implement the updated OpenNet Platform APIs Register in their relevant systems. This step should occur prior to implementation by any other party.

For clarity and consistency, IDA directs OpenNet to replace “proposing party” with “initiator of the Change Proposal” in Clause 14.22 in the manner specified above.

NEW CLAUSE 14.23 – DIRECTED AMENDMENTS

14.23 OpenNet shall implement the revised OpenNet Platform APIs Register, including any necessary testing efforts, within the ~~implementation schedule~~change implementation schedule. OpenNet shall thereafter formally advise the Requesting Licensee that the updated OpenNet Platform APIs Register is available for implementation, and the Requesting Licensee shall implement the revised Register in accordance with the ~~implementation schedule~~change implementation schedule.

To avoid confusion with the “Implementation Schedule” defined in Clause 7.4, IDA directs OpenNet to replace “implementation schedule” with “change implementation schedule” in this Clause 14.23 in the manner specified above.

ANNEX 14A-1
OSS/BSS CONNECTION & PROFESSIONAL SERVICE

REQUEST FOR OSS/BSS CONNECTION & PROFESSIONAL SERVICE

Date of Application : _____

Application Reference Number : _____

DIRECTED AMENDMENTS

ORDERING OF STANDARD SERVICES

A. Request for OSS/BSS Mode of Access is sought for either or both connection :

1. ~~OpenNet~~ Service Portal GUI:
 - a. Public Internet secured VPN ~~cClient software~~Application Connection
2. B2B Web Services ~~Interface~~ through ~~oOpenNet system~~Platform API:
 - a. ~~Public~~ Internet via secured VPN
 - b. Dedicated Leased Connection

IDA notes that there is inconsistency in the use of terminology for OpenNet Platform API (i.e., “OpenNet’s Platform API”, “OpenNet Platform API”, “Open System API” and “API” have been used interchangeably). For consistency, IDA directs OpenNet to replace “open system API” with “OpenNet Platform API” in this Annex 14A-1 in the manner specified above.

For consistency with the Connection Modes specified in Clause 2.1, IDA directs OpenNet to amend this Annex 14A-1 in the manner specified above.

ORDERING OF PROFESSIONAL SERVICES

DIRECTED AMENDMENTS

B. Request for OSS/BSS Professional Services

1. Setup, support and use of OpenNet’s test environment
2. Consultation for system integration and interfacing using OpenNet Platform APIs
3. Customisation of OpenNet ~~Platform~~ APIs for system integration and interfaces

IDA notes that there is inconsistency in the use of terminology for OpenNet Platform API (i.e., “OpenNet’s Platform API”, “OpenNet Platform API”, “Open System API” and “API” have been used interchangeably). For consistency, IDA directs OpenNet to replace “OpenNet API” with “OpenNet Platform API” in this Annex 14A-1 in the manner specified above.

No of Attachment(s) : _____

Name : _____ Name of Requesting License : _____
Designation : _____ [Company Name]
Contact Number : _____
Fax Number : _____ Company Stamp: _____
Signature : _____

OpenNet
 Not Approved Reason for Rejection : _____
 Approved OpenNet Reference Number: _____

OpenNet
Sign : _____ Contact Number : _____
Name: _____ Fax Number : _____

OpenNet Endorsement
Received Date : _____ Queue Status : _____ Processed Date: _____

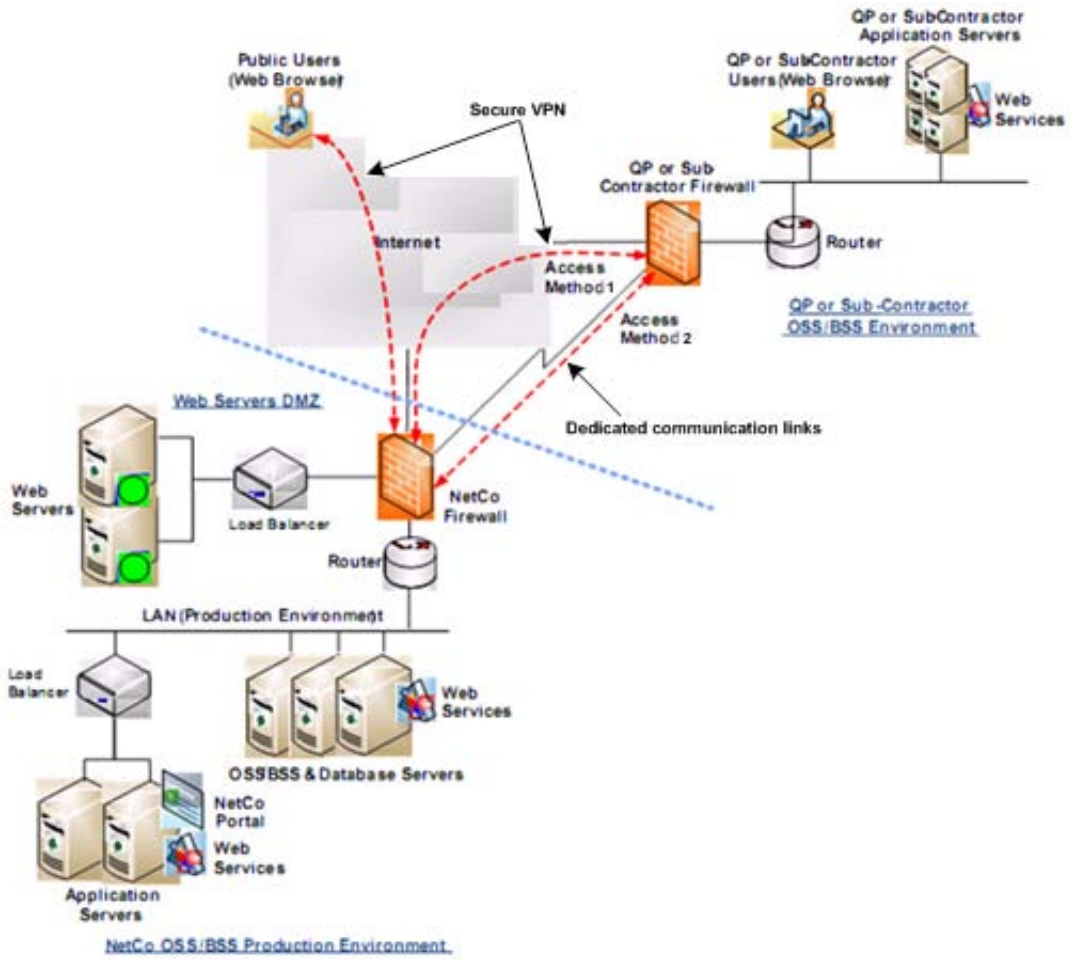
Annex 14A-2

REQUEST FOR USER ACCOUNT	
Date of Application : _____	Application Reference Number : _____
<p>Requesting Licensee Information :</p> <p>(select either one of option)</p> <p>Organisation: _____</p> <p><input type="checkbox"/> 1st New User Account (ICO Registration No: _____)</p> <p><input type="checkbox"/> New User Account <input type="checkbox"/> Change Password <input type="checkbox"/> Remove User Account</p>	
<p>1st User Account Information:</p> <p>Name: _____ Designation: _____</p> <p>Contact Number: _____ Email: _____</p>	
<p>Subsequent User Account Information:</p> <p>Name: _____ Designation: _____</p> <p>Contact Number: _____ Email: _____</p>	
<p>Subsequent User Account Information:</p> <p>Name: _____ Designation: _____</p> <p>Contact Number: _____ Email: _____</p>	
<p>Subsequent User Account Information:</p> <p>Name: _____ Designation: _____</p> <p>Contact Number: _____ Email: _____</p>	
<p>Subsequent User Account Information:</p> <p>Name: _____ Designation: _____</p> <p>Contact Number: _____ Email: _____</p>	
<p>Name : _____ Name of Requesting License : _____</p> <p>Designation : _____ [Company Name]</p> <p>Contact Number : _____</p> <p>Fax Number : _____ Company Stamp: _____</p> <p>Signature : _____</p>	
<p><input type="checkbox"/> Application returned – incomplete/illegible</p> <p><input type="checkbox"/> Not Approved Reason for Rejection: _____</p> <p><input type="checkbox"/> Approved OpenNet Approval Code: _____</p>	
<p>OpenNet</p> <p>Received Date: _____ Queue Status: _____ Processed Date: _____</p>	
<p>OpenNet Endorsement</p> <p>Name: _____ Signature: _____ Date: _____</p>	

ANNEX 14B

TECHNICAL SPECIFICATIONS

I. CONNECTIVITY DIAGRAM



II. TYPES OF COMMUNICATION LINKS & SPECIFICATIONS

Specification	OpenNet end	NetCo QP end
Type of Links	1) Dedicated, Secured VPN link – preferably fibre optic WAN link	1) Dedicated, Secured VPN link – preferably fibre optic WAN link
	2) Secured VPN via Internet links	2) Secured VPN via Internet links
Bandwidth	10 Mbps or higher	10 Mbps or higher
Physical Connection	RJ45	
Termination Details	Connect to NetCo QP or S/P Firewall	Connect to OpenNet Firewall
Protocol Support at WAN Links	Must Support TCP/IP	Must Support TCP/IP
Security details	Must support VPNs, Support of 3DES, IPSEC , ACL	Must support VPNs, Support of 3DES, IPSEC , ACL
Application Access Control	User authentication, authorisation, access control, OpenNet will govern the web services that could be consumed by segmenting user grouping and access list	User authentication, access control, Audit trail

Table 4: Types of Communication Links and Specifications

III. LIST OF SUPPORTED FIREWALL AND VPN

This firewall supports both IPsec and Secure Socket Layer (SSL) VPN. Below are a list of firewalls which are interoperability with OpenNet's firewall.

- ZyXEL ZyWALL
- SonicWall
- WatchGuard Firebox II
- Netscreen-204
- Microsoft ISA 2004
- Checkpoint NGX
- Linksys BEFVP41
- Cisco PIX
- Juniper SSG
- YAMAHA RTX1200

NEW ANNEX 14C - APPROVED

ANNEX 14C

**OPENNET PLATFORM APIs
CHANGE MANAGEMENT REGISTER (SAMPLE)**

CHANGE REQUEST NUMBER	CHANGE REQUEST DESCRIPTION	DELIVERY RELEASE	RAISED BY
XXX001		Dec 2011	Requesting Licensee

**ANNEX 14D
CHANGE MANAGEMENT FORM**

OPENNET PLATFORM API REGISTER CHANGE PROPOSAL	
Date of Application : _____	Application Reference Number : _____
Title of Proposed Change:	
Description of Proposed Change:	
Justification/Reason for Change:	
Proposed Change Schedule (ie. requested date of implementation):	
Name : _____	Name of Requesting License : _____
Designation : _____	[Company Name]
Contact Number : _____	

Fax Number	: _____	Company Stamp: _____
Signature	: _____	
OpenNet		
<input type="checkbox"/> Not Approved	Reason for Rejection : _____	
<input type="checkbox"/> Approved	OpenNet Reference Number: _____	
OpenNet		
Sign : _____	Contact Number : _____	
Name: _____	Fax Number : _____	
OpenNet Endorsement		
Received Date : _____	Queue Status : _____	Processed Date: _____

APPENDIX 1-A NETWORK CONNECTIVITY TESTS

DIRECTED AMENDMENTS

Type of Test	Test Items	Purpose	Acceptance Criteria	Estimated Man Days
Network Connectivity (Mandatory)	Test environment connectivity test	To ensure that the server can reach each other at the assigned IP address and port number.	Network Connection between <u>Requesting Licensee</u> and <u>OpenNet</u> can be established using the ports and services assigned for use.	1 (this is part of Standard Services - Connectivity)
	Production environment connectivity test	To ensure that the server can reach each other at the assigned IP address and port number.	Network Connection between <u>Requesting Licensee</u> and <u>OpenNet</u> can be established using the ports and services assigned for use.	1 (this is part of Standard Services - Connectivity)

For clarity and consistency, IDA directs OpenNet to replace “RL” with “Requesting Licensee” and “ON” with “OpenNet” in Appendix 1-A in the manner specified above.

APPENDIX 1-B HANDSHAKE TESTING

Type of Test	Test Items	Purpose	Acceptance Criteria	Estimated Man Days
Residential End-User Connection (Mandatory) *Building MDF Room to Residential Premise Connection follows a similar suite to this	Feasibility check	To test that the Requesting Licensee is able to send and process the correct messages for: i) Home Passed ii) Home Reached iii) In Service iv) Not able to provide service	Able to send message and process response as per interface specifications.	5
	Advance Coverage check* * This API is optional	To test that the Requesting Licensee is able to send and process the correct messages for CO & Serving Cabinet Information	Able to send message and process response as per interface specifications.	
	Check Timeslot	To test the Requesting Licensee is able to send and process the correct messages for getting appointment timeslots.	Able to send message and process response as per interface specifications.	
	Create new order for Home Passed Building Types (GPON, OE, 1:1)	To test that the Requesting Licensee is able to support the flow through provisioning of a new order.	Able to send message and process response as per interface specifications.	

Create new order for Home Reached Building Types (GPON, OE, 1:1)	To test that the Requesting Licensee is able to support the flow through provisioning of a new order.	Able to send message and process response as per interface specifications.
Cancellation Order	To test that the Requesting Licensee is able to support cancellation of an open order.	Able to send message and process response as per interface specifications.
Termination Order	To test that the Requesting Licensee is able to support termination of a completed order.	Able to send message and process response as per interface specifications.
Receive Order Update	To test that the Requesting Licensee is able to receive updates from OpenNet's system for existing orders. i) Acceptance Update ii) Order Update iii) Order Completion	Able to receive message and process response as per interface specifications.
Check Order Status	To test that the Requesting Licensee is able to support checking of order status	Able to send message and process response as per interface specifications.

Non-Residential End-User Connection (Mandatory) *Building MDF Room to Non-Residential Premise Connection follows a similar suite to this	Feasibility check	To test that the Requesting Licensee is able to send and process the correct messages for: i) Building Reached ii) Not able to provide service	Able to send message and process response as per interface specifications.	5
	Advanced Coverage check* * This API is optional	To test that the Requesting Licensee is able to send and retrieve CO & Serving Cabinet Information	Able to send message and process response as per interface specifications.	
	Check Timeslot	To test that the Requesting Licensee is able to send and process the correct messages for getting appointment timeslots.	Able to send message and process response as per interface specifications.	
	Create new order for Non-Residential Building Types (GPON, OE, 1:1)	To test that the Requesting Licensee is able to support the flow through provisioning of a new order.	Able to send message and process response as per interface specifications.	
	Cancellation order	To test that the Requesting Licensee is able to support cancellation of an open order.	Able to send message and process response as per interface specifications.	
	Termination Order	To test that the Requesting Licensee is able to support termination of a completed order.	Able to send message and process response as per interface specifications.	

	Receive Order Update	To test that the Requesting Licensee is able to receive updates from OpenNet's system for existing orders i) Acceptance Update ii) Order Update iii) Order Completion	Able to receive message and process response as per interface specifications.	
	Check Order Status	To test that the Requesting Licensee is able to support checking of order status	Able to send message and process response as per interface specifications.	
NBAP Connection (Mandatory) *CO to NBAP DP Connection, NBAP DP to NBAP TP Connection follows a similar suite to this	Feasibility check	To test that the Requesting Licensee is able to send and process the correct messages for: i) Covered ii) Not able to provide service	Able to send message and process response as per interface specifications.	6
	Quotation Notification/Acceptance	To test that the Requesting Licensee is able to retrieve and accept the quotation provided by OpenNet	Able to send message and process response as per interface specifications.	

Check Timeslot	To test that the Requesting Licensee is able to send and process the correct messages for getting site survey appointments.	Able to send message and process response as per interface specifications.
Create new order (GPON, OE)	To test that the Requesting Licensee is able to support the flow through provisioning of a new order.	Able to send message and process response as per interface specifications.
Cancellation order	To test that the Requesting Licensee is able to support cancellation of an open order.	Able to send message and process response as per interface specifications.
Termination Order	To test that the Requesting Licensee is able to support termination of a completed order.	Able to send message and process response as per interface specifications.

	Receive Order Update	To test that the Requesting Licensee is able to receive updates from OpenNet's system for existing orders i) Acceptance Update ii) Order Update iii) Order Completion	Able to receive message and process response as per interface specifications.	
	Check Order Status	To test that the Requesting Licensee is able to support checking of order status	Able to send message and process response as per interface specifications.	
CO to CO Connection (Mandatory)	Check Timeslot	To test that the Requesting Licensee is able to send and process the correct messages for getting site survey appointments.	Able to send message and process response as per interface specifications.	
	Create new order	To test that the Requesting Licensee is able to support the flow through provisioning of a new order.	Able to send message and process response as per interface specifications.	
	Cancellation order	To test that the Requesting Licensee is able to support cancellation of an open order.	Able to send message and process response as per interface specifications.	

	Termination Order	To test that the Requesting Licensee is able to support termination of a completed order.	Able to send message and process response as per interface specifications.	
	Receive Order Update	To test that the Requesting Licensee is able to receive updates from OpenNet's system for existing orders i) Acceptance Update ii) Order Update iii) Order Completion	Able to receive message and process response as per interface specifications.	
	Check Order Status	To test that the Requesting Licensee is able to support checking of order status	Able to send message and process response as per interface specifications.	
CO to Building MDF Room Connection (Mandatory) *Building MDF Room to FTTB Node Connection, FTTB Node to DP Connection follows a similar suite to this	Advanced Coverage check	To test that the Requesting Licensee is able to send and retrieve CO & Serving Cabinet Information	Able to send message and process response as per interface specifications.	
	Check Timeslot	To test that the Requesting Licensee is able to send and process the correct messages for getting site survey appointments.	Able to send message and process response as per interface specifications.	
	Create new order	To test that the Requesting Licensee is able to support the flow through provisioning of a new order.	Able to send message and process response as per interface specifications.	

	Cancellation order	To test that the Requesting Licensee is able to support cancellation of an open order.	Able to send message and process response as per interface specifications.	
	Termination Order	To test that the Requesting Licensee is able to support termination of a completed order.	Able to send message and process response as per interface specifications.	
	Receive Order Update	To test that the Requesting Licensee is able to receive updates from OpenNet's system for existing orders i) Acceptance Update ii) Order Update iii) Order Completion	Able to receive message and process response as per interface specifications.	
	Check Order Status	To test that the Requesting Licensee is able to support checking of order status	Able to send message and process response as per interface specifications.	
<p>Trouble Ticket (Mandatory)</p> <p><u>DIRECTED AMENDMENTS</u></p> <p><u>IDA understands that there are three</u></p>	Update Trouble Ticket	To test that the Requesting Licensee is able to update an open Trouble ticket.	Able to send message and process response as per interface specifications.	3
	Receive Ticket Update	To test that the Requesting Licensee is able to receive updates from OpenNet's system for existing Trouble ticket.	Able to send message and process response as per interface specifications.	

<u>additional sets of test items under the “Trouble Ticket” category. For completeness, IDA directs OpenNet to amend the table in Appendix 1-B in the manner specified.</u>	Close Trouble Ticket	To test that the Requesting Licensee is able to close an open Trouble ticket.	Able to send message and process response as per interface specifications.
	Create Trouble Ticket	To test that the Requesting Licensee is able to create a new Trouble Ticket	Able to send message and process response as per interface specifications.
	<u>Trouble Ticket Query</u>	<u>To test that the Requesting Licensee is able to query for a Trouble Ticket using OpenNet’s Ticket ID</u>	<u>Able to send message and process response as per interface specifications.</u>
	<u>Trouble Ticket Search</u>	<u>To test that the Requesting Licensee is able to search for a Trouble Ticket using OpenNet’s Ticket ID or Requesting Licensee’s Ticket ID or ORI</u>	<u>Able to send message and process response as per interface specifications.</u>
	<u>Trouble Ticket Cancellation</u>	<u>To test that the Requesting Licensee is able to cancel an open Trouble Ticket</u>	<u>Able to send message and process response as per interface specifications.</u>

DIRECTED AMENDMENTS

The number of man-days required are indicative and will be discussed with the Requesting Licensee and shall be reflected in the approved project schedule or Implementation Schedule prior to actual testing. The Requesting Licensee shall only be charged for the actual number of man-days required for completion of the testing.

Please refer to IDA's directed amendments to Clause 7 in relation to a Simplified Process for Professional Service. Under the Simplified Process for Professional Service, OpenNet will be providing an Implementation Schedule instead of the Project Study. It is therefore necessary to amend this clause to take into account the above. Accordingly, IDA directs OpenNet to amend this Appendix 1-B Handshake Testing in the manner specified above.

NEW APPENDIX 1-C - DIRECTED AMENDMENTS

APPENDIX 1-C END TO END TESTING

This section details ALL the scenarios that Requesting Licensee must undertake if they wish to adopt the End to End testing as specified by OpenNet.

<u>Type of Test</u>	<u>Test Items</u>	<u>Purpose</u>	<u>Acceptance Criteria</u>	<u>Estimated Man Days</u>
<u>Residential End-User Connection (Mandatory)</u> <u>*Building MDF Room to Residential Premise Connection follows a similar suite to this</u>	<u>Creation of Order</u>	<u>To test that the Requesting Licensee is able to send an end to end testing using the following sequence of API:</u> <ul style="list-style-type: none"> • <u>Feasibility check</u> • <u>Advance Coverage check*</u> • <u>Check Timeslot</u> • <u>Create new order</u> <u>Requesting Licensee should include tests with various permutations of the following:</u> <ul style="list-style-type: none"> • <u>Address Building Types</u> • <u>Timeslots</u> • <u>Split Ratio</u> • <u>Technology</u> • <u>Redundancy Options</u> • <u>Exceptional scenarios</u> 	<u>Able to send message and process response as per interface specifications.</u> <u>Results to comply with the scenario tested</u>	<u>27</u>

	<u>* This API is optional</u>	
<u>Cancellation Order</u>	<u>To test that the Requesting Licensee is able to support cancellation of an open order.</u>	<u>Able to send message and process response as per interface specifications.</u> <u>Results to comply with the scenario tested</u>
<u>Termination Order</u>	<u>To test that the Requesting Licensee is able to support termination of a completed order.</u>	<u>Able to send message and process response as per interface specifications.</u> <u>Results to comply with the scenario tested</u>
<u>Receive Order Update</u>	<u>To test that the Requesting Licensee is able to receive updates from OpenNet's system for existing orders.</u> <u>i) Acceptance Update</u> <u>ii) Order Update</u> <u>iii) Order Completion</u>	<u>Able to receive message and process response as per interface specifications.</u> <u>Results to comply with the scenario tested</u>

	<u>Check Order Status</u>	<u>To test that the Requesting Licensee is able to support checking of order status</u>	<u>Able to send message and process response as per interface specifications.</u> <u>Results to comply with the scenario tested</u>	
<u>Non-Residential End-User Connection (Mandatory)</u> <u>*Building MDF Room to Non-Residential Premise Connection follows a similar suite to this</u>	<u>Creation of Order</u>	<u>To test that the Requesting Licensee is able to send an end to end testing using the following sequence of API:</u> <ul style="list-style-type: none"> • <u>Feasibility check</u> • <u>Advance Coverage check*</u> • <u>Check Timeslot</u> • <u>Create new order</u> <u>Requesting Licensees should include tests with various permutations of the following:</u> <ul style="list-style-type: none"> • <u>Address Building Types</u> • <u>Timeslots</u> • <u>Split Ratio</u> • <u>Technology</u> • <u>Redundancy Options</u> • <u>Exceptional scenarios</u> <u>* This API is optional</u>	<u>Able to send message and process response as per interface specifications.</u> <u>Results to comply with the scenario tested</u>	<u>27</u>

<u>Cancellation order</u>	<u>To test that the Requesting Licensee is able to support cancellation of an open order.</u>	<u>Able to send message and process response as per interface specifications.</u> <u>Results to comply with the scenario tested</u>
<u>Termination Order</u>	<u>To test that the Requesting Licensee is able to support termination of a completed order.</u>	<u>Able to send message and process response as per interface specifications.</u> <u>Results to comply with the scenario tested</u>
<u>Receive Order Update</u>	<u>To test that the Requesting Licensee is able to receive updates from OpenNet's system for existing orders</u> <u>i) Acceptance Update</u> <u>ii) Order Update</u> <u>iii) Order Completion</u>	<u>Able to receive message and process response as per interface specifications.</u> <u>Results to comply with the scenario tested</u>
<u>Check Order Status</u>	<u>To test that the Requesting Licensee is able to support checking of order status</u>	<u>Able to send message and process response as per interface specifications.</u> <u>Results to comply with the scenario tested</u>

<p><u>NBAP Connection (Mandatory)</u></p> <p><u>*CO to NBAP DP Connection, NBAP DP to NBAP TP Connection follows a similar suite to this</u></p>	<p><u>Creation of Order</u></p>	<p><u>To test that the Requesting Licensee is able to send an end to end testing using the following sequence of API:</u></p> <ul style="list-style-type: none"> • <u>Feasibility check</u> • <u>Advance Coverage check*</u> • <u>Check Timeslot</u> • <u>Create new order</u> • <u>Exceptional scenarios</u> <p><u>Requesting Licensees should include tests with various permutations of the following:</u></p> <ul style="list-style-type: none"> • <u>GPS co-ordinates</u> • <u>Timeslots</u> • <u>Technology</u> • <u>Redundancy Options</u> <p><u>* This API is optional</u></p>	<p><u>Able to send message and process response as per interface specifications.</u></p> <p><u>Results to comply with the scenario tested</u></p>
	<p><u>Cancellation order</u></p>	<p><u>To test that the Requesting Licensee is able to support cancellation of an open order.</u></p>	<p><u>Able to send message and process response as per interface specifications.</u></p> <p><u>Results to comply with the scenario tested</u></p>

	<u>Termination Order</u>	<u>To test that the Requesting Licensee is able to support termination of a completed order.</u>	<u>Able to send message and process response as per interface specifications.</u> <u>Results to comply with the scenario tested</u>	
	<u>Receive Order Update</u>	<u>To test that the Requesting Licensee is able to receive updates from OpenNet's system for existing orders</u> i) <u>Acceptance Update</u> ii) <u>Order Update</u> iii) <u>Order Completion</u>	<u>Able to receive message and process response as per interface specifications.</u> <u>Results to comply with the scenario tested</u>	
	<u>Check Order Status</u>	<u>To test that the Requesting Licensee is able to support checking of order status</u>	<u>Able to send message and process response as per interface specifications.</u> <u>Results to comply with the scenario tested</u>	
<u>CO to CO Connection (Mandatory)</u>	<u>Creation of Order</u>	<u>To test that the Requesting Licensee is able to send an end to end testing using the following sequence of API:</u> <ul style="list-style-type: none"> • <u>Check Timeslot</u> • <u>Create new order</u> 	<u>Able to send message and process response as per interface specifications.</u> <u>Results to comply with the scenario tested</u>	<u>10</u>

	<p><u>Requesting Licensees should include tests with various permutations of the following:</u></p> <ul style="list-style-type: none"> • <u>CO to CO</u> • <u>Timeslots</u> • <u>Redundancy Options</u> • <u>Exceptional scenarios</u> 	
<u>Cancellation order</u>	<u>To test that the Requesting Licensee is able to support cancellation of an open order.</u>	<p><u>Able to send message and process response as per interface specifications.</u></p> <p><u>Results to comply with the scenario tested</u></p>
<u>Termination Order</u>	<u>To test that the Requesting Licensee is able to support termination of a completed order.</u>	<p><u>Able to send message and process response as per interface specifications.</u></p> <p><u>Results to comply with the scenario tested</u></p>
<u>Receive Order Update</u>	<p><u>To test that the Requesting Licensee is able to receive updates from OpenNet's system for existing orders</u></p> <ul style="list-style-type: none"> <u>i) Acceptance Update</u> <u>ii) Order Update</u> <u>iii) Order Completion</u> 	<p><u>Able to receive message and process response as per interface specifications.</u></p> <p><u>Results to comply with</u></p>

			<u>the scenario tested</u>	
	<u>Check Order Status</u>	<u>To test that the Requesting Licensee is able to support checking of order status</u>	<u>Able to send message and process response as per interface specifications.</u> <u>Results to comply with the scenario tested</u>	
<u>CO to Building MDF Room Connection (Mandatory)</u> <u>*Building MDF Room to FTTB Node Connection, FTTB Node to DP Connection follows a similar suite to this</u>	<u>Creation of Order</u>	<u>To test that the Requesting Licensee is able to send an end to end testing using the following sequence of API:</u> <ul style="list-style-type: none"> • <u>Feasibility check</u> • <u>Advance Coverage check*</u> • <u>Check Timeslot</u> • <u>Create new order</u> • <u>Exceptional scenarios</u> <u>Requesting Licensees should include tests with various permutations of the following:</u> <ul style="list-style-type: none"> • <u>Address Building Types</u> • <u>Timeslots</u> • <u>Split Ratio</u> • <u>Technology</u> 	<u>Able to send message and process response as per interface specifications.</u> <u>Results to comply with the scenario tested</u>	<u>15</u>

	<ul style="list-style-type: none"> • <u>Redundancy Options</u> • <u>Exceptional scenarios</u> <p><u>* This API is optional</u></p>	
<u>Cancellation order</u>	<u>To test that the Requesting Licensee is able to support cancellation of an open order.</u>	<u>Able to send message and process response as per interface specifications.</u> <u>Results to comply with the scenario tested</u>
<u>Termination Order</u>	<u>To test that the Requesting Licensee is able to support termination of a completed order.</u>	<u>Able to send message and process response as per interface specifications.</u> <u>Results to comply with the scenario tested</u>
<u>Receive Order Update</u>	<u>To test that the Requesting Licensee is able to receive updates from OpenNet's system for existing orders</u> <u>i) Acceptance Update</u> <u>ii) Order Update</u> <u>iii) Order Completion</u>	<u>Able to receive message and process response as per interface specifications.</u> <u>Results to comply with the scenario tested</u>

	<u>Check Order Status</u>	<u>To test that the Requesting Licensee is able to support checking of order status</u>	<u>Able to send message and process response as per interface specifications.</u> <u>Results to comply with the scenario tested</u>	
<u>Trouble Ticketing -</u> <u>[End to End Testing]</u> <u>(Mandatory)</u>	<u>QP report a Fault</u>	<u>To test that the Requesting Licensee is able to create and use a Trouble Ticket throughout the ticket life cycle using the below API.</u> <ul style="list-style-type: none"> • <u>Trouble Ticket Creation</u> • <u>Trouble Ticket Query</u> • <u>Trouble Ticket Search</u> • <u>Trouble Ticket Cancellation</u> • <u>Trouble Ticket Update</u> • <u>Receive Ticket Update</u> • <u>Trouble Ticket Close</u> • <u>Exceptional scenarios</u> <u>Requesting Licensee should include tests with various permutations of the following:</u>	<u>Able to send message and process response as per interface specifications.</u> <u>Results to comply with the scenario tested</u>	<u>20</u>

		<ul style="list-style-type: none"> • <u>Fibre Fault-Maintenance</u> • <u>Fibre Fault-Provisioning</u> • <u>1 Hour Activation</u> • <u>OSS/BSS</u> • <u>CO-LOC Fault</u> • <u>Exceptional scenarios</u> 		
	<u>QP requesting for Joint Investigation</u>	<p><u>To test that the Requesting Licensee is able to create and use a Trouble Ticket throughout the ticket life cycle using the below API.</u></p> <ul style="list-style-type: none"> • <u>Trouble Ticket Creation (JI)</u> • <u>Trouble Ticket Query</u> • <u>Trouble Ticket Search</u> • <u>Trouble Ticket Cancellation</u> • <u>Trouble Ticket Update</u> • <u>Receive Ticket Update</u> • <u>Trouble Ticket Close</u> • <u>Exceptional scenarios</u> <p><u>Requesting Licensee should include tests with various permutations of the</u></p>	<p><u>Able to send message and process response as per interface specifications.</u></p> <p><u>Results to comply with the scenario tested</u></p>	

		<p><u>following:</u></p> <ul style="list-style-type: none"> • <u>Fibre Fault-Maintenance</u> • <u>Fibre Fault-Provisioning</u> • <u>OSS/BSS</u> • <u>CO-LOC Fault</u> • <u>Exceptional scenarios</u> 	
	<p><u>ON requesting for Fault Identification</u></p>	<p><u>To test that the Requesting Licensee is able to create and use a Trouble Ticket throughout the ticket life cycle using the below API.</u></p> <ul style="list-style-type: none"> • <u>Trouble Ticket Creation</u> • <u>Trouble Ticket Query</u> • <u>Trouble Ticket Search</u> • <u>Trouble Ticket Cancellation</u> • <u>Trouble Ticket Update</u> • <u>Receive Ticket Update (FI)</u> • <u>Trouble Ticket Close</u> <p><u>Requesting Licensee should include tests with various permutations of the following:</u></p>	<p><u>Able to send message and process response as per interface specifications.</u></p> <p><u>Results to comply with the scenario tested</u></p>

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| | | <ul style="list-style-type: none"> • <u>Fibre Fault-Maintenance</u> • <u>Fibre Fault-Provisioning</u> • <u>1 Hour Activation</u> • <u>OSS/BSS</u> • <u>CO-LOC Fault</u> • <u>Exceptional scenarios</u> | |
|--|--|--|--|

The number of man-days required is only indicative and shall be reflected in the approved project schedule or Implementation Schedule prior to actual testing after discussion with the Requesting Licensee. The Requesting Licensee shall only be charged for the actual number of man-days required for completion of the testing.

Under IDA's Directed Modifications dated 26 July 2011, IDA required OpenNet to modify Schedule 14 to include a Simplified Process for Professional Service which should take into account the requirements as highlighted in paragraphs 11 and 12 of the Explanatory Memorandum. IDA notes that OpenNet's proposed changes have failed to give full effect to IDA's required modifications, specifically to include the necessary End to End Testing in this Schedule 14. IDA has therefore separately required OpenNet to provide the list of End to End Testing items (i.e., new Appendix 1-C). On the new Appendix 1-C, IDA is of the view that the duration of estimated man-day(s) indicated maybe overly conservative (i.e., the estimated man-day(s) could be shortened). Considering that OpenNet will only charge based on the actual number of man-day(s) required and that the Requesting Licensee has the option to design their end to end testing, IDA will not pursue this issue at this stage. IDA however reserves its right to review the estimated man-day(s) indicated under Appendix 1-C. Accordingly, IDA directs OpenNet to amend Schedule 14 to incorporate the list of End to End Testing (Appendix 1-C) in the manner specified above.