

APPENDIX 13

REQUIRED MODIFICATIONS TO SCHEDULE 12

SCHEDULE 12
CO-LOCATION SERVICE

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SCHEDULE 12

CO-LOCATION SERVICE

1. GENERAL

IDA Directed Modifications: The industry has requested for a diagram depicting the key features in OpenNet's Network to be included in Schedule 12 (Co-Location Service). IDA agrees that there is merit in incorporating such a diagram, as it increases clarity in understanding OpenNet's ICO. Accordingly, IDA requires OpenNet to provide a diagram which should clearly illustrate the demarcation of responsibilities between the Parties.

1.1 This Schedule sets out the terms and conditions under which OpenNet will provide the Requesting Licensee with Co-Location Space at the Central Offices for hosting active network equipment, servers and any other interconnecting equipment (**Co-Location Equipment**) for the purpose of connecting to the OpenNet Network or other Requesting Licensee's Co-Location Equipment and the provision of services over the OpenNet Network (**Co-Location Service**).

1.2 Except as provided in this Schedule, the Requesting Licensee shall, at its own cost, provide all installation materials and manpower needed for the installation of their Co-Location Equipment. Where certain work is 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 Co-Location 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 Co-Location Space at a Central Office;
- (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 in respect of the costs incurred by OpenNet (including a breakdown of the individual cost components and justification for incurring each cost component); and

- (ii) based on the information set out in paragraph (i), 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 ~~five-ten~~ (105) 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;

IDA Directed Modifications: IDA notes that the industry has commented a five (5) Business Day validity period is too short, and instead has suggested it be replaced by a thirty (30) Business Day period.

IDA is of the view that a thirty (30) Business Day period is excessive. As explained in the Explanatory Memorandum, Co-Location Space is a scarce resource and IDA expects the Requesting Licensees to be disciplined in their requests for Co-Location Space. In this regard, a Requesting Licensee must decide as quickly as reasonably possible whether it wants the Co-Location Space being reserved for it. Otherwise, the Co-Location Space should be made available to the next applicant.

Nevertheless, IDA recognises that five (5) Business Days may be too short a period for the Requesting Licensee to make important commercial decisions regarding costs, and therefore IDA directs OpenNet to modify clause 1.2(b)(ii) to extend the validity period to ten (10) Business Days, or any timeframe as is mutually agreed between OpenNet and the Requesting Licensee.

- (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) and if the Requesting Licensee does not provide its approval within that time period, then OpenNet may suspend OpenNet's work under this clause 1.2 until the Requesting Licensee agrees; and
- (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.

1.3 The list of Central Offices as at the date of this ICO Agreement is listed in Annex 12B. OpenNet may vary the Central Offices listed in Annex 12B from time to time with the approval of the Authority.

1.4 Initially, information relating to the co-location space that is available, basic facilities at the co-location space, procedures and forms for ordering co-location service, installation and physical access and an updated list of COs, including

information on whether any of the listed COs has been earmarked for decommissioning, will be available on OpenNet's website, for access by the Requesting Licensee through secured means. The secured access to OpenNet's website will require the payment of a one-time charge for each user account created. The aforementioned information shall be made available on the OpenNet Platform in due course.

[OpenNet Comment: In order to allow Requesting Licensees access to the Mandated Services Information on OpenNet's website during the interim period (before the OpenNet Platform is ready), OpenNet will have to bring forward the implementation of certain features of the OpenNet Platform.

OpenNet therefore proposes to similarly bring forward the imposition of one-time charge for each user account created for such access. We believe this charge is reasonable, as Requesting Licensees would be paying for a service originally envisaged under the ICO (as part of the OpenNet Platform), and that it is incurred now because the RFS date for these features of the OpenNet Platform are being brought forward for the benefit of Requesting Licensees.]

~~1.3 OpenNet may vary the Central Offices listed in Annex 12B from time to time with the approval of the Authority.~~

1.5 OpenNet shall not be responsible for any damage to the Requesting Licensee's Co-Location Equipment caused by fire, water leakage, air-conditioning/mechanical ventilation failure, power fluctuation/interruption, or anything beyond OpenNet's control in the Central Office other than to the extent that it is the result of a ~~grossly~~ negligent, wilful or reckless breach of this ICO Agreement by OpenNet.

IDA Directed Modifications: As OpenNet is the Party providing the Co-Location Service, it is fair and reasonable to expect that OpenNet must take all reasonable precaution to maintain the Co-Location Space so as to prevent any damage to the Requesting Licensee's Co-Location Equipment arising from events such as fire, water leakage and air-conditioning failure. In this respect, IDA does not consider it fair or reasonable for OpenNet to exclude liability arising from its own negligent act, given that OpenNet would be expected to exercise reasonable care as the Co-Location service provider.

Accordingly, IDA directs OpenNet to modify clause 1.5 to specify a more reasonable “negligent” standard for excluding liability as opposed to “grossly negligent”.

~~1.5 This Schedule 12 only applies to Requesting Licensees who are authorized by the IDA to obtain Ancillary Mandated Service from OpenNet.~~

IDA Directed Modifications: For clarity, IDA directs OpenNet to remove clause 1.6 in its entirety. IDA does not intend to have a separate authorisation process to determine if a Requesting Licensee can obtain Ancillary Mandated Services. In this regard, IDA notes that clause 1.2 of the ICO (Part 1 on Acceptance Procedures) already states the Services that each type of NetCo QP is allowed to obtain from OpenNet.

1.6 The timeframes in this Schedule relating to provisioning work for Co-Location Service to be undertaken by OpenNet under clauses 3.4 and 3.6 (**Co-Location Requests**), 4.1 (**Project Studies**), 5.1 (**Site Preparation Work**) are subject to delays caused by events outside OpenNet’s reasonable control, in which case such failure to meet the timeframes shall not constitute a breach of this ICO Agreement and clause 1.87(a) shall not apply, provided that OpenNet must notify the Requesting Licensee as soon as practicable upon the occurrence of such event, stating the cause of the events and specifying a new date for completion of the relevant provisioning work which is extended for the period of such delays.

1.7 (a) OpenNet will provide the Service Level Guarantees in respect of provisioning of Co-Location Service as set out in Annex 12A (**Provisioning SLG**). If OpenNet fails to meet any Service Level Guarantees applicable to this Schedule and the failure to meet such Service Level Guarantees is solely and directly caused by OpenNet or its contractors and/or suppliers, OpenNet will provide a remedy to the Requesting Licensee in accordance with:

- (i) section 1 of Annex 12A and any terms and conditions contained therein in respect of Co-Location Request timeframes;
- (ii) section 2 of Annex 12A and any terms and conditions contained therein in respect of Project Study timeframes;
- (iii) section 3 of Annex 12A and any terms and conditions contained therein in respect of timeframes for Site Preparation Work; and
- (iv) section 4 of Annex 12A in respect of claims made under Annex 12A.

IDA Directed Modifications: There was general industry feedback received that OpenNet’s obligation to provide a remedy in the form of a rebate should not be limited to failures to meet the Service Level Guarantees which are “solely caused by OpenNet”.

In considering this point, IDA is of the view that it is justified for OpenNet to be made responsible also for the actions of its contractors and/or suppliers. This is because it is reasonable to expect OpenNet to have in place separate recourse or remedies against its own contractors and/or suppliers - for example, contractually negotiated provisions in the supply agreements with its contractors and/or suppliers in the event of any default by such contractors and/or suppliers.

Accordingly, IDA directs OpenNet to modify clause 1.8 to make clear that OpenNet will still be liable to pay rebates to the Requesting Licensees where the failure to meet the Service Level Guarantees is caused by any default by OpenNet’s contractors and/or suppliers.

- (b) The Requesting Licensee acknowledges that the relevant remedy provided under clause 1.8(a) is a genuine pre-estimate of the Requesting Licensee’s loss and will be the sole and exclusive remedy available to the Requesting Licensee for such failure to meet the relevant Service Level Guarantees for Co-Location Service and shall be OpenNet’s sole and exclusive liability to the Requesting Licensee for such failure.

2. AVAILABILITY AT A CENTRAL OFFICE

- 2.1 OpenNet shall offer Co-Location Space up to a maximum of 120 square metres per Central Office.

3. ORDERING AND PROVISIONING PROCEDURE

IDA Directed Modifications: IDA notes the industry’s comment that OpenNet should be required to provide information relating to OpenNet’s network rollout, its coverage in terms of premises reached, premises passed and all other relevant information that is to be provided by the OpenNet Platform. The above information must be made available to Requesting Licensees through manual processes even if the OpenNet Platform is not ready.

IDA agrees with the comment and finds it to be consistent with the provisions in the Code (see Section 2.2), which require OpenNet to make available to the Requesting

Licensees Mandated Services Information. This will include information which Requesting Licensees will need before ordering services under the ICO.

Accordingly, IDA directs OpenNet to include a provision that it will make such information available to Requesting Licensees in a manner that is easily accessible. At a minimum, such Mandated Services Information should be accessible by the Requesting Licensees on OpenNet's website during the interim period prior to implementation of the OpenNet Platform.

- 3.1 OpenNet shall process requests for Co-Location Service at a Central Office listed in Annex 12B (**Co-Location Requests**) and allocate Co-Location Space to Requesting Licensees in a non-discriminatory manner on a first-come-first-serve basis.
- 3.2 OpenNet shall process a maximum of sixteen (16) Co-Location Requests per week from all Requesting Licensees (**Co-Location Service Request Quota**). Any additional requests will be processed in the next available week where the Co-Location Service Request Quota has not been exceeded. OpenNet shall inform the Requesting Licensee of that overflow within one (1) Business Day of the date of receiving the Co-Location Request (**Request Date**).
- 3.3 The Requesting Licensee shall submit its Co-Location Request using a Co-Location Request Form in the form of Annex 12C containing but not limited to the following information:
 - (a) the Central Office listed in Annex 12B at which Co-Location Space is sought;
 - (b) confirmation that the Requesting Licensee's Co-Location Equipment to be installed at the Co-Location Space at that Central Office is for the purpose of connecting to the OpenNet Network or other Requesting Licensee's Co-Location Equipment and the provision of services over the OpenNet Network;
 - (c) the term of the licence required (either two (2) years or twenty-five (25) years);
 - (d) the type of Co-Location Equipment proposed to be installed at the Co-Location Space;
 - (e) the space and power requirements;

- (f) the floor loading of the Co-Location Equipment;
- (g) the capacity (number of fibre cores) of the Transmission Tie Cable required; and

IDA Directed Modifications: IDA notes that the 3.3(g) is inconsistent with the information that OpenNet had requested for under the category of Transmission Tie-Cable Requirements in the Co-Location Request Form (Annex 12C). Accordingly, IDA directs OpenNet to modify clause 3.3(g) to align to the information requested under the Co-location Request Form.

- (h) the Requesting Licensee's contact details.

3.4 Within three (3) Business Days of the date on which OpenNet receives the Co-Location Request (Request Date) and subject to clause 3.2, 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) whether its Request is accepted, or if rejected, for any one of the following reasons: Within one (1) Business Day of Request Date, OpenNet must notify the Requesting Licensee whether its application is in principle accepted or rejected for any one of the following reasons:

- (a) the Co-Location Request is not in the prescribed form; ~~or~~
- (b) the Co-Location Request does not contain the required information or the information provided is inaccurate or misleading;
- (c) Co-Location Space at a Central Office is not available;
- (d) the provision of Co-Location space at a Central Office will give rise to significant health, safety, technical or engineering issues;
- (e) there are security and confidentiality requirements or restrictions imposed on OpenNet by Governmental Agencies; or
- (f) OpenNet has plans or otherwise proposes to decommission the Central Office within six (6) months of the date of the Co-Location Request.

Where OpenNet rejects the Co-Location Request, OpenNet must provide reasons explaining the basis for rejection.

IDA Directed Modifications: IDA refers to the Explanatory Memorandum, in particular paragraph 57 therein. The industry has commented that clause 3.6(d) of this Schedule should be subsumed under this clause 3.4, and IDA agrees that OpenNet should be able to determine, within one (1) Business Day of the Request Date, whether the CO to which the Co-Location Request pertains to is intended to be decommissioned. Accordingly, IDA directs OpenNet to make the necessary modifications to this clause 3.4, for IDA's approval.

Further, one respondent has suggested that when OpenNet notifies the Requesting Licensee of its acceptance of the Co-Location Request, such notification should include a unique reference number to simplify identification processes. Accordingly, IDA directs OpenNet to modify clause 3.4 to incorporate this requirement.

3.5 The Requesting Licensee shall be liable for and shall pay OpenNet the Co-Location Ordering Charge for ~~the~~ processing the Co-Location Request as provided in Schedule 15 (Charges), irrespective of the outcome of the Co-Location Request, unless the Co-Location Request was wrongfully rejected by OpenNet.

IDA Directed Modifications: IDA considers that the Requesting Licensee should not be liable to pay a Co-Location Ordering Charge in the situation where OpenNet has wrongfully rejected, based on the grounds of rejection in clause 3.6, the former's Co-Location Request. As examples of "wrongful rejection", IDA would give the following illustrations:

Illustration 1:

Under clause 3.6(a), OpenNet mistakenly thinks that the requested Co-Location Space is unavailable, and therefore rejects the Co-Location Request.

Illustration 2:

Under clause 3.6(d), OpenNet has omitted to update its plans on decommissioning of COs and therefore, the Requesting Licensee has submitted a Co-Location Request for Co-Location Space in a CO that is to be decommissioned within a month of said request.

Accordingly, IDA requires OpenNet to propose, for IDA's approval, modifications to clause 3.5 to implement the above-stated position.

~~3.6 If OpenNet notifies the Requesting Licensee that OpenNet has in principle accepted the Co-Location Request, OpenNet must complete its detailed~~

~~processing and inform the Requesting Licensee within three (3) Business Days of the Request Date, whether or not it is able to provide the Co-Location Space taking into account the following:~~

- ~~(a) whether or not the Co-Location Space at a Central Office is available;~~
- ~~(b) whether the provision of Co-Location space at a Central Office will give rise to significant health, safety, technical or engineering issues;~~
- ~~(c) security and confidentiality requirements or restrictions imposed on OpenNet by Governmental Agencies; and~~
- ~~(d) whether OpenNet has plans or otherwise proposes to decommission the Central Office within six (6) months of the date of the Co-Location Request.~~

IDA Directed Modifications: IDA notes that clause 3.6 already provides for a process by which the Requesting Licensee will be informed if OpenNet can provide the necessary Co-Location Space. Although this procedure is sufficient in the present case where all service ordering is done manually, IDA considers this process can be improved upon the implementation of the OpenNet Platform in the future.

Specifically, IDA is of the view that information regarding clause 3.6(d) should be made available on the OpenNet Platform to all Requesting Licensees at the earliest instance.

In this respect, IDA foresees that OpenNet will have to make arrangements with its main contractor for COs and Co-Location Space (i.e. Singapore Telecommunications Limited), to ensure that information on decommissioning is provided at the earliest instance. In particular, IDA wishes to remind OpenNet that it does expect OpenNet to maintain a list of COs and Co-Location Spaces on the OpenNet Platform, and will promptly update that list when any COs or Co-Location Spaces are marked for decommissioning.

In the interim before the OpenNet Platform is operational, IDA directs OpenNet to propose for IDA's approval, modifications to the ICO which require OpenNet to provide information on decommissioning to all Requesting Licensees. At a minimum, the modifications must state that OpenNet will maintain a website that lists all of OpenNet's COs and Co-Location Spaces, the availability of these facilities, and in the event any COs or Co-Location Spaces are designated for decommissioning, an update to this list should be made without undue delay. In this respect, IDA also refers

OpenNet to the Explanatory Memorandum regarding closure of COs and decommissioning of Co-Location Space, in particular paragraphs 51 to 54 therein.

~~Where OpenNet informs the Requesting Licensee that it is unable to provide the Co-Location Service at the Central Office, OpenNet must provide reasons explaining the basis for its decision.~~

3.6 Where OpenNet is unable to offer the Co-Location Service due to unavailability, OpenNet shall take reasonable measures to cater for additional space where possible. The provision of such additional Co-Location Space shall not be subject to the Provisioning SLG.

3.7 The Requesting Licensee acknowledges that the Co-Location Space allocated and the actual placement of the Co-Location Equipment shall be determined by OpenNet. OpenNet is not obligated to place the same Requesting Licensee's Co-Located Equipment adjacent to each other, provided that OpenNet will use its reasonable endeavours to accommodate any reasonable request for adjacent placement made by the Requesting Licensee.

4. PROJECT STUDY

4.1 Except where OpenNet has rejected a Co-Location Request under clauses 3.4 ~~and 3.6~~, OpenNet must complete a Project Study within fifteen (15) Business Days of the Request Date. The Requesting Licensee must pay the Project Study fee specified in Schedule 15 (Charges).

(a) The Project Study normally entails a joint site survey with the Requesting Licensee to determine the space and Site Preparation Works required at the Co-Location space.

4.2 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) the estimated Charges for the Site Preparation Work (including a breakdown of the major components of the Charges) and an outline of the major elements of the Site Preparation Work to be undertaken by OpenNet; and

(b) the number of Business Days (which shall not exceed twenty five (25) Business Days as specified in clause 5.43) reasonably expected to complete the Site Preparation Work.

4.3 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 Co-Location Request after completion of the Project Study.

5. SITE PREPARATION WORK

5.1 Within ~~five (5) Business Days~~ ten (10) 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 under clause 4.2, the Requesting Licensee shall confirm in writing that it wishes to proceed with Co-Location and that it agrees to pay the estimated Charges for Site Preparation Work.

IDA Directed Modifications: IDA refers OpenNet to the directed modifications at clause 1.2(b)(ii) above. Accordingly, IDA directs OpenNet to modify clause 5.1 to extend the validity period to ten (10) Business Days, or any timeframe as is mutually agreed between OpenNet and the Requesting Licensee.

5.2 OpenNet shall use its reasonable endeavours to complete the Site Preparation Work within the estimated charges. If OpenNet's costs increase above OpenNet's estimate set out in the notice under clause 4.2(a) (as may be varied from time to time under this clause 5.2), OpenNet must as soon as possible 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 Site Preparation Work until the Requesting Licensee agrees to the revised price estimate.

~~5.3 OpenNet shall complete the Site Preparation Work within the period advised under clause 5.4. If OpenNet is unable to complete the Site Preparation Work within the advised period, OpenNet shall promptly notify the Requesting Licensee of a revised date for completion (which, in all the circumstances, shall be within a reasonable period of time). The Requesting Licensee may seek a remedy for the duration of the delay in accordance with clause 1.87(a).~~

IDA Directed Modifications: IDA is of the view that clauses 5.3 and 5.4 are repetitive in nature. Accordingly, unless OpenNet can provide IDA with satisfactory justification as

to why both clauses should be retained, IDA directs OpenNet to remove clause 5.3 from this Schedule.

5.3 OpenNet shall complete any Site Preparation Work within a period of twenty five (25) Business Days of the date on which the Requesting Licensee notifies OpenNet under clause 5.1 that it wishes to proceed with Co-Location and agrees to pay estimated charges. Subject to delays that may result from suspension of Site Preparation Work under clause 5.2, if OpenNet is not able to complete the Site Preparation Work within the timeframe under this clause 5.43, OpenNet shall inform the Requesting Licensee of when the Site Preparation Work will be completed. The Requesting Licensee may seek a remedy for any delay in completing the Site Preparation Work in accordance with clause 1.87(a).

5.4 Within one (1) Business Day after the completion of the Site Preparation Work, OpenNet will notify the Requesting Licensee and request the Requesting Licensee to attend the Central Office for a final site inspection of the Co-Location Space.

6. INSTALLATION AND MAINTENANCE OF CO-LOCATION EQUIPMENT IN CO-LOCATION SPACE

6.1 Any equipment that is co-located at the Co-Location Space leased to a Requesting Licensee within a Central Office must be used for the purpose of connecting to the OpenNet Network or other Requesting Licensee's Co-Location Equipment and the provision of services over the OpenNet Network.

6.2 The Parties agree to comply with the following procedures in connection with the installation and maintenance of Co-Location Equipment:

- (a) the Co-Location Equipment Installation and Maintenance Procedures at Annex 12D and as amended by OpenNet from time to time;
- (b) the Standard Operating Procedures at Annex 12E and as amended by OpenNet from time to time; and
- (c) the Physical Access Procedures at Annex 12F and as amended by OpenNet from time to time.

6.3 The Requesting Licensee shall:

- (a) provide all installation materials and manpower needed for the installation of its Co-Location Equipment;

- (b) provide and install FDF at its leased Co-Location Space in the Central Office for the termination of Transmission Tie Cable; and
- (c) be responsible for any cabling and patching required between its Co-Location Equipment and its FDF located at its leased Co-Location Space.

6.4 Subject to OpenNet's agreement on the requested capacity of the Transmission Tie Cable from Requesting Licensee's FDF to OpenNet's FDF, OpenNet shall provide, at its own cost:

- (a) the necessary, in OpenNet's sole opinion, Transmission Tie Cable between the Requesting Licensee's FDF and the OpenNet's FDF;

IDA Directed Modifications: IDA directs OpenNet to either remove the phrase "in OpenNet's sole opinion" or provide IDA with a satisfactory justification why it wants to retain the qualification.

As a general principle, IDA will not permit OpenNet to take any action that unnecessarily increases the cost of service provisioning by Requesting Licensees to their Customers, or results in an unnecessary delay of service to End-Users. In this regard, OpenNet should provide such Transmission Tie Cable as is necessary and required by the Requesting Licensees and not seek to over or under-provide the relevant Transmission Tie Cable.

[OpenNet Comment: OpenNet submits that IDA should retain the words – "in OpenNet's sole opinion", in clause 6.4(a). This would be to provide a degree of operational flexibility in OpenNet's determination of the network resources it could utilise.

For example, OpenNet might choose to install Transmission Tie Cable in batches of n x [X] core, which is more cost-effective and at the same time allow better control over turnaround time for service provisioning. The benefits derived from such effective management of network resources and operating costs would be passed on to Requesting Licensees and ultimately End-Users.]

- (b) installation of the Transmission Tie Cable from the OpenNet's FDF to the Requesting Licensee's FDF in the Co-Location Space; and
- (c) termination of the Transmission Tie Cable to the OpenNet's FDF.

- 6.5 OpenNet shall terminate the Transmission Tie Cable installed pursuant to clause 6.4 at the Requesting Licensee's FDF in the Co-Location Space at the Requesting Licensee's cost. The Requesting Licensee shall pay OpenNet the Fibre Splicing Charge in accordance with Schedule 15 (Charges) for such termination of the Transmission Tie Cables at the Requesting Licensee's FDF. The Requesting Licensee shall provide at its own cost the necessary equipment and facilities such as pig tails and splice trays etc. for such termination.
- 6.6 When OpenNet is required to terminate the Transmission Tie Cable installed pursuant to clause 6.4 at the Requesting Licensee's FDF in the Co-Location Space, OpenNet agrees to comply with the following procedures:
- (a) the Standard Operating Procedures at Annex 12E and as amended by OpenNet from time to time; and
 - (b) the Physical Access Procedures at Annex 12F and as amended by OpenNet from time to time.
- 6.7 Both Parties shall use standard SC/APC (Angled Polished) connectors which are tested according to Bellcore Specifications TR-TSY-000326 or equivalent standards.
- 6.8 The Requesting Licensee acknowledges that:
- (a) it will fully indemnify and hold OpenNet harmless at all times against all actions, claims, proceedings, costs (including legal costs), losses or damages or expenses for injuries or death to any person whomsoever, which may be brought against OpenNet by any person out of or in connection with any loss or damage to any property, including third party equipment, resulting from the actions or omissions of the Requesting Licensee's employees or contractors;
 - (b) it must comply with any guidelines for accessing and working in the Central Office issued by OpenNet from time to time;
 - (c) it must maintain good engineering and operational practices in its use of its equipment; and

- (d) the technical means by which OpenNet supplies the Co-Location Service, including the Transmission Tie Cable, power and earthing, is at OpenNet's sole discretion.

6.9 The Requesting Licensee shall, immediately on notice from OpenNet, remove from the Central Office any hardware, software or cabling component of the Requesting Licensee that OpenNet (in its discretion) considers may cause or is likely to cause a hazard, interference or obstruction to OpenNet's operation of the Central Office.

7. TERM OF LICENCE

7.1 The term of a Co-Location Service licence granted under this Schedule shall commence on the date of completion of the Site Preparation Work (**Commencement Date**) and continues for the term of either two (2) years or twenty-five (25) years (as the case may be), until the earlier of any of the following events:

- (a) either party terminates the Co-Location Service in accordance with clause 9 of this Schedule;
- (b) the OpenNet ICO is revoked by the Authority under clause 12.8 of the ICO Agreement; or
- (c) the Authority removes the requirement for OpenNet to provide Co-Location Service under the OpenNet ICO or exempts OpenNet from providing Co-Location Service under clause 12.9 of the ICO Agreement.

7.2 In the event that the Co-Location Service licence is for a term of two years, OpenNet shall, three (3) months before the licence expiry date, send a first reminder to the Requesting Licensee notifying it of the impending expiry of Co-Location Service licence. If the Requesting Licensee does not respond to the first reminder, OpenNet shall, two (2) months before the licence expiry date, send a second reminder to the Requesting Licensee. If the Requesting Licensee does not respond to the first and second reminders, OpenNet shall, one (1) month before the licence expiry date, send a third reminder to the Requesting Licensee. If OpenNet does not receive a response from the Requesting Licensee at least three (3) weeks before the licence expiry date, OpenNet is entitled to assume that the Requesting Licensee does not wish to extend the Co-Location Service licence. If the Requesting Licensee informs OpenNet that it wishes to extend the Co-

Location Service licence, the Co-Location Service licence shall be extended for a further term of two (2) years on the same terms and conditions as the initial term.

IDA Directed Modifications: For clarity, IDA directs OpenNet to propose for IDA's approval, modifications to this clause, to provide for a process by which a Requesting Licensee may renew the Co-Location Service after the initial two-year licence has expired. IDA would expect that OpenNet's proposed process must allow for automatic renewal after the initial term without any service disruption, and with the ability of the Requesting Licensee to give notice if it does not wish to renew after expiry.

Further, IDA also notes a typographical error in the last line of clause 7.1(c), and requires OpenNet to replace the semi-colon at the end of the clause with a full-stop.

8. SUSPENSION OF LICENCE

8.1 ~~Subject to clause 11.2 of the ICO Agreement~~ OpenNet may suspend the Requesting Licensee's Co-Location Service licence at any time until further notice to the Requesting Licensee if the Co-Location Equipment 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. If the suspension is the result of the Requesting Licensee's fault, the Requesting Licensee shall continue to pay the Monthly Recurring Charge during the period of suspension.

IDA Directed Modifications: IDA is of the view that the service provisioning and suspension process will become unduly cumbersome and tedious if its prior approval has to be sought for every instance of suspension of a licence for Co-Location Service. Accordingly, IDA directs OpenNet to remove the phrase "Subject to clause 11.2 of the ICO Agreement" from this clause 8.1.

8.2 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 Co-Location Space under this clause 8.

9. TERMINATION OF LICENCE

9.1 OpenNet may terminate the licence of Co-Location Service at any time with immediate effect by giving notice to the Requesting Licensee if the Requesting

Licensee fails to complete the installation of its Co-Location Equipment within thirty (30) Business Days under Annex 12D. If the Requesting Licensee's failure to complete installation is attributable to circumstances beyond the Requesting Licensee's reasonable control, OpenNet will grant a reasonable extension of time for installation to the Requesting Licensee at the Requesting Licensee's request. A 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 must respond to the Requesting Licensee's request under this clause 9.1 within two (2) Business Days from the date of receipt of such request.

9.2 ~~Subject to clause 12.3 of the ICO Agreement, e~~Either Party (**Terminating Party**) may terminate the licence of Co-Location 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).

IDA Directed Modifications: IDA notes that in all other similar clauses found in other Schedules, clause 9.2(b) includes the phrase, "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)."

As examples, clauses similar to clause 9.2 herein are clauses 16.5(b) of Schedule 1 (Residential End-User Connection), Schedule 2 (Non-Residential End-User Connection) and clause 16.4(b) of Schedule 4 (CO to CO Connection).

Therefore, for consistency, IDA directs OpenNet to include the same phrase into clause 9.2(b) of this Schedule, unless OpenNet can provide a reasonable justification why this should not be the case for this Schedule.

Further, IDA is of the view that the service provisioning and termination process will become unduly cumbersome and tedious if its prior approval has to be sought for every instance of termination of a licence for Co-Location service. Accordingly, IDA directs OpenNet to remove the phrase “Subject to clause 12.3 of the ICO Agreement” from clauses 9.2, 9.3 and 9.4.

9.3 ~~Subject to clause 12.3 of the ICO Agreement,~~ OpenNet may immediately terminate a licence of Co-Location Service if:

- (a) in OpenNet’s reasonable opinion, the Requesting Licensee is using the Co-Location Space in contravention of an 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;
- (b) the Requesting Licensee’s Co-Location Service licence has been suspended pursuant to clause 8.1 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; use of the Co-Location Space causes or is likely to cause physical or technical harm to the OpenNet Network or Central Office, including but not limited to causing damage, interfering with or causing deterioration in the operation of the OpenNet Network;

IDA Directed Modifications: Unless OpenNet can provide IDA with a satisfactory justification for retaining clause 9.3(b) above, IDA requires clause 9.3(b) to be deleted. This is because IDA considers the remedy of suspension in clause 8.1 of this Schedule to be adequate and more appropriate, as any termination of the Co-Location Service licence will likely result in material adverse impact on the Requesting Licensee’s operations. Instead, OpenNet should suspend the Co-Location Service until such reasonable time when the Party who has caused the physical or technical harm has resolved the harm. In this regard, IDA considers a period of sixty (60) Calendar Days to be a reasonable period for resolving the harm resulting in the suspension. Failing such resolution within the permitted period, either Party can terminate the Co-Location Service licence. Accordingly, IDA directs OpenNet to propose for IDA’s approval, modifications to clauses 9.2 and 9.3, to provide a process incorporating the above requirements.

Further, IDA refers to its directed modification at clause 9.2 and accordingly directs OpenNet to remove the phrase “Subject to clause 12.3 of the ICO Agreement” from this clause 9.3.

- (c) the Co-Location Equipment is used for a purpose other than for connecting to the ~~the~~ OpenNet Network or other Requesting Licensee's Co-Location Equipment and providing services over the OpenNet Network;

IDA Directed Modifications: IDA notes there is a typographical error in the second line of clause 9.3(c) and accordingly directs OpenNet to remove the extra "the" in the second line of the clause.

- (d) the Co-Location Space has become unsafe for its purpose;
- (e) the Central Office has become unfit for its purpose; or
- ~~(f) OpenNet's right to own, maintain or operate the Central Office is revoked or terminates or expires; or~~
- (f) OpenNet's right to own, maintain or operate the Central Office is revoked or terminates or expires ~~the Requesting Licensee is no longer authorized by the IDA to obtain Ancillary Mandated Service from OpenNet.~~

IDA Directed Modifications: IDA refers OpenNet to the directed modification at clause 1.6 above and for the same reasons, IDA directs OpenNet to remove clause 9.3(g) accordingly.

- 9.4 ~~Subject to clause 12.3 of the ICO Agreement,~~ OpenNet may terminate the licence of Co-Location Service on ten (10) Business Days prior written notice, if the Requesting Licensee removes or abandons its Co-Location Equipment and the Requesting Licensee did not dispute such written notice by OpenNet.

IDA Directed Modifications: IDA refers to its directed modification at clause 9.2 and accordingly directs OpenNet to remove the phrase "Subject to clause 12.3 of the ICO Agreement" from this clause 9.4.

- 9.5 If at any time during the term that the licence of a Co-Location Service is to be terminated because of the closure of that Central Office, OpenNet must give the Requesting Licensee prior written notice at least eighteen (18) months before the scheduled closure of that Central Office ~~within three (3) Business Days upon receipt of the Authority's approval to amend this Schedule to effect the closure of the Central Office.~~ In the event of a closure of a Central Office, OpenNet must

take reasonable measures to minimise disruptions to the Requesting Licensee in the provision of its services to End Users. The Requesting Licensee shall bear its own cost associated with the closure of a Central Office. 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 Co-Location Space 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 are necessary to continue to provide its Customers with services. Nothing in this clause shall prevent OpenNet from terminating the licence of a Co-Location Service prior to or at the expiry of the notice period provided by OpenNet under this clause provided that OpenNet has complied with this clause 9.5.

IDA Directed Modifications: IDA refers OpenNet to the Explanatory Memorandum regarding IDA's position on closures of COs and decommissioning of Co-Location Spaces, in particular paragraphs 51 to 56 therein. In this respect, IDA directs OpenNet to propose, for IDA's approval, the necessary modifications to align this clause with IDA's position.

[OpenNet Comment: OpenNet has proposed additional changes to clause 9.5 in view that the notice period has been extended to 18 months (prior to the scheduled closure of the Central Office). The changes are intended to provide for circumstances whereby OpenNet and the Requesting Licensee would have to vacate the Co-location Space before the scheduled closure of the Central Office. We believe the probability of this (i.e. OpenNet and Requesting Licensees having to vacate the Central Office before the scheduled closure date) happening is not low.]

9.6 The Requesting Licensee may terminate the Co-Location Service licence by giving OpenNet at least one (1) month prior notice.

9.7 Upon expiry or termination of the licence of Co-Location Service:

- (a) the Requesting Licensee must discontinue the use of its Co-Location Equipment and remove its Co-Location Equipment from the Co-Location Space without undue delay~~immediately~~;

IDA Directed Modifications: IDA is of the view that it is unrealistic and impractical to expect the Requesting Licensee to be able to remove its equipment "immediately" upon expiry or termination of the licence. Hence, IDA considers a more reasonable

position is to require the Requesting Licensee to remove its equipment “without undue delay”. Accordingly, IDA directs OpenNet to modify clause 9.7(a) to incorporate the requirements set out above.

- (b) OpenNet shall reinstate the Co-Location Space and recover/reinstate all cables/supports/opening and recover the reasonable cost of such reinstatement (other than the cost of removing the Transmission Tie Cable) from the Requesting Licensee, other than in circumstances where the Requesting Licensee’s discontinuation of the use of the Co-Location Equipment is a direct result of OpenNet’s decommissioning of the Central Office under this Schedule 12, or where the termination occurs as a result of OpenNet’s fault; and

IDA Directed Modifications: IDA refers OpenNet to the Explanatory Memorandum, in particular paragraph 39 therein. Accordingly, IDA directs OpenNet to propose, for IDA’s approval, the necessary modifications to clause 9.7(b), to reflect that the Requesting Licensee is not liable to pay the costs of reinstatement, if such termination is the result of OpenNet’s fault.

Where, for example, termination has occurred because OpenNet’s right to operate the CO has been revoked due to its own default, it would be unfair to require the Requesting Licensee to pay charges to reinstate the Co-Location Space at that CO. Therefore, IDA is of the view that it is justified and reasonable to modify clause 9.7(b) as aforementioned.

In addition, IDA directs OpenNet to propose, for IDA’s approval, a modification to clause 9.7(b) to clarify that the costs of removing the Transmission Tie Cable should not be placed upon the Requesting Licensee because, in any event, it is OpenNet’s responsibility to remove the Transmission Tie Cable.

- (c) the Requesting Licensee shall pay OpenNet the charges for the lease of the Co-Location Space for the remainder of the term of the Co-Location Service licence if the termination is the result of the Requesting Licensee’s fault, except where termination is pursuant to clauses 7.1(b), 7.1(c), 9.3(d), 9.3(e), 9.3(f), 9.5 or where the termination is initiated by the Requesting Licensee pursuant to clause 9.2(a).

IDA Directed Modifications: IDA refers OpenNet to the Explanatory Memorandum, in particular paragraph 40 therein. Accordingly, IDA directs OpenNet to propose, for IDA’s approval, the necessary modifications to clause 9.7(c), to reflect that the Requesting Licensee will not be liable to pay the charges for the lease of the Co-Location Space for

the remainder of the term of the Co-Location Service licence, unless such termination is the result of the Requesting Licensee's fault.

IDA considers this position to be reasonable because it is unfair to expect the Requesting Licensee to continue to pay such charges when its Co-Location Service licence has been terminated, through no fault of its own. In light of the above, IDA is of the view that it is justified and reasonable to require OpenNet to modify clause 9.7(c) as directed above.

9.8 If the Requesting Licensee fails to discontinue the use of its Co-Location Equipment and remove its Co-Location Equipment under clause 9.7(a), OpenNet may at its sole discretion remove and/or dispose of the Requesting Licensee's Co-Location Equipment and reinstate the Co-Location Space 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 Co-Location Equipment. In such event, the Requesting Licensee shall have no claim whatsoever against OpenNet related to or in connection with the work undertaken by OpenNet.

9.9 Upon termination of the licence of Co-Location Service, the Requesting Licensee shall have physical access to the Central Office for a period to be decided by OpenNet in its sole discretion, solely for the purposes of fulfilling its obligation under clause 9.7(a) to remove its Co-Location Equipment, after which any physical access granted to the Central Office shall also be terminated. The Requesting Licensee shall comply with all associated procedures for such physical access, and physical access charges shall apply.

IDA Directed Modifications: IDA does not consider it reasonable or practical to expect the Requesting Licensee to be able to remove its Co-Location Equipment if OpenNet withdraws the former's ability to access the Central Office upon termination of the Co-Location Service licence. In fairness, IDA directs OpenNet to amend clause 9.9, to allow the Requesting Licensee reasonable time after termination of the Co-Location Service licence, to have access to the Central Office so as to fulfil its obligation under clause 9.7(a) to remove its equipment.

10. ADDITIONAL CO-LOCATION SPACE, CO-LOCATION EQUIPMENT AND/OR TRANSMISSION TIE CABLE

10.1 If the Requesting Licensee wishes to replace, modify or rearrange existing Co-Location Equipment in the Co-Location Space, install additional Co-Location Equipment in the Co-Location Space or install additional Transmission Tie Cable

between the Requesting Licensee's FDF and OpenNet's FDF (**Co-Location Equipment Modification**), the Requesting Licensee must submit a separate Co-Location Request and the process of ordering and provisioning in this Schedule 12 shall apply unless otherwise stated in this clause 10.

10.2 The request in respect of the Co-Location Equipment Modification must contain the following information (where applicable):

- (a) purpose of replacement, modification or rearrangement;
- (b) date, time and duration of replacement, modification or rearrangement;
- (c) detailed description of works and process to be carried out in the Co-Location Space;
- (d) the Co-Location Equipment to be installed, replaced, modified or rearranged;
- (e) any assistance required from OpenNet (subject to approval and charges);
- (f) a description of the precautions on how the Requesting Licensee would ensure that the replacement, modification, rearrangement or addition would not affect any OpenNet plant or equipment; and
- (g) any other information which the Requesting Licensee believes would be useful to OpenNet in assessing the Requesting Licensee's request.

10.3 Save for a wrongful rejection of a Co-Location Equipment Modification request by OpenNet. The Requesting Licensee shall be liable for all costs incurred by OpenNet in processing a request for Co-Location Equipment Modification under clause 10.1.

IDA Directed Modifications: IDA considers that the Requesting Licensee should not be liable for OpenNet's costs to process the Co-Location Equipment Modification request, in the situation where OpenNet has wrongfully rejected this request. According to clause 10.5 below, OpenNet may reject the request if, for example, it reasonably believes that the replacement may affect the operation of OpenNet's equipment. For illustrative purposes, a "wrongful rejection" would then occur if, without giving the request due consideration in light of prevailing circumstances, OpenNet unreasonably rejected the request.

Accordingly, IDA directs OpenNet to propose, for IDA's approval, modifications to clause 10.3 to implement the above-stated position.

- 10.4 The Requesting Licensee shall not add, modify, alter or change any Co-Location Equipment within its leased Co-Location Space without the prior written approval of OpenNet.

- 10.5 OpenNet may reject the request in respect of the Co-Location Equipment Modification if OpenNet reasonably believes that the replacement, modification and rearrangement under the request for Co-Location Equipment Modification may affect the operation of OpenNet's or any Third Party's equipment or plant.

ANNEX 12A

SERVICE LEVEL GUARANTEES

1. REBATES FOR CO-LOCATION REQUEST TIMEFRAMES

OpenNet shall provide Service Level Guarantees in respect of the response to a request for Co-Location Service within 3 Business Days from the date of the request.

Missed notification timeframe as to response to Co-Location Request following detailed processing (clause 3.6) by:	Rebate
1-30 Calendar Days	Number of days of delay x weekly recurring Charge
More than 30 Calendar Days	30 x weekly recurring Charge

2. REBATES FOR PROJECT STUDY TIMEFRAMES

OpenNet shall provide Service Level Guarantees in respect of the completion of Project Study within 15 Business Days from the date of the request.

Missed timeframe for completion of Project Study (clause 4.1) by:	Rebate
1-30 Calendar Days	Number of days of delay x weekly recurring Charge
More than 30 Calendar Days	30 x weekly recurring Charge

3. REBATES FOR SITE PREPARATION WORK

OpenNet shall provide Service Level Guarantees in respect of the completion of the Site Preparation Work within 25 Business Days from the date of the Requesting Licensee's agreement to proceed with Site Preparation Work.

Missed timeframe for completion of Site Preparation Work (clause 5.1) by:	Rebate
1-30 Calendar Days	Number of days of delay

	x weekly recurring Charge
More than 30 Calendar Days	30 x weekly recurring Charge

4. CLAIM PROCEDURES

- (a) A claim by the Requesting Licensee shall be made in writing within ~~fourteen~~ thirty (1430) Calendar Days of the completion of the relevant Calendar Month on which the Service Level Guarantees are measured. The amount in respect of any claim shall be paid to the Requesting Licensee in the form of a rebate. The Requesting Licensee acknowledges that a failure to make a claim within the specified timeframes under this paragraph means that the Requesting Licensee waives any entitlement to the Service Level Guarantee payment in respect of that claim.

IDA Directed Modifications: The industry has commented that the fourteen (14) Calendar Day period for making claims is too short and should be extended to thirty (30) Calendar Days.

As IDA understands, in order for a Requesting Licensee to submit a claim for rebates for a failure by OpenNet to meet the Service Level Guarantees, such Requesting Licensee may need to refer to past information on Service Level Availability and other relevant fault details.

Moreover, given the fact that all Requesting Licensees who fail to meet the specified timeframe are automatically disentitled from rebates, even where there was a clear failure in meeting the Service Level Guarantees which would otherwise entitle them to those rebates, IDA considers it reasonable to extend the fourteen (14) Calendar Day claim period to thirty (30) Calendar Days. A period of thirty (30) Calendar Days will give Requesting Licensees reasonable time to make a claim and is unlikely to cause any material prejudice to OpenNet.

Accordingly, IDA directs OpenNet to modify clause 4(a) herein to allow up to thirty (30) Calendar Days for a claim to be made.

- (b) If the Requesting Licensee is entitled to a rebate pursuant to the claim made hereunder, then the amount of the rebate will be credited into the Requesting Licensee's account after it has been processed by OpenNet and will be reflected in OpenNet's bill to the Requesting Licensee in accordance with OpenNet's billing cycle.

- (c) The guarantee and rebates provided by OpenNet under this Annex 12A are:
- (i) of an ex-gratia nature and personal to the Requesting Licensee and are non-transferable; and
 - (ii) subject to this Schedule.
- (d) Despite anything to the contrary in this section, if the Requesting Licensee qualifies for any claim under this Annex 12A, OpenNet shall honour its obligations in respect of that claim but in the event of a dispute as to whether the Requesting Licensee qualifies for a claim or as to the quantum of the claim payable to the Requesting Licensee, the dispute shall be resolved in accordance with the Dispute Resolution Procedures in Schedule 17 of the ICO Agreement, or in the case of a Billing Dispute, in accordance with Schedule 16 of the ICO Agreement.

ANNEX 12B

LIST OF CENTRAL OFFICES

Serial Number	Description of Central Office
1	Tuas Telephone Exchange
2	Jurong West Telephone Exchange
3	Bukit Panjang Telephone Exchange
4	Ayer Rajah Telephone Exchange
5	Ang Mo Kio Telephone Exchange
6	Orchard Telephone Exchange
7	East Exchange
8	Bedok Telephone Exchange
9	Tampines Telephone Exchange

ANNEX 12C

CO-LOCATION REQUEST FORM

REQUEST FOR CO-LOCATION SERVICE

Date of Application : _____ Application Reference Number : _____

Request for Physical Co-Location is sought for the purpose of :

Address of Co-Location space : [Address / Building Name]

Term of Licence required : [2 years / 25 years] [please strike out one]

Type of Equipment to be installed : [Description / Manufacturer / Dimensions]

Co-Location Space Required : [Dimensions and floor area to be occupied]

Power Requirements / Heat Load : [Power Consumption & Heat Load]

Floor Loading of Equipment : [Weight of Equipment Fully Installed]

Transmission Tie-Cable Requirements (where applicable)

Number of fibre cores _____ [Number] _____

Sign : _____ Name of Requesting Licensee: _____

Name : _____ [Company Name]

Designation : _____

Contact Number : _____ Company Stamp : _____

Fax Number : _____

Application returned – incomplete/illegible

Not Approved Reason for Rejection _____

Approved OpenNet Approval Code _____

Sign : _____ Contact Number : _____

Name : _____ Fax Number : _____

Received Date : _____ Queue Status : _____ Processed Date : _____

ANNEX 12D

CO-LOCATION EQUIPMENT INSTALLATION AND MAINTENANCE PROCEDURES

1. INSTALLATION OF EQUIPMENT AT CO-LOCATION SPACE

1.1 Installation of Co-Location Equipment

1.1.1 Prior to commencing installation of its Co-Location Equipment, the Requesting Licensee must submit detailed installation plans and installation timetable no less than ten (10) Business Days before commencement of works for OpenNet's approval. The Requesting Licensee shall not commence installation of its Co-Location Equipment until it has received OpenNet's approval.

1.1.2 The Requesting Licensee shall house only the following rack types in the Co-Location Space:

- (a) 600mm by 600mm by 42U racks, these are industry standard 19 inch racks; and/or
- (b) 800 mm by 1000mm by 42U racks, these are based on industry-standard 19-inch but incorporates space for cabling and airflow.

1.1.3 The Requesting Licensee must ensure that the floor loading of its Co-Located Equipment shall be limited to a maximum 5 kN per sqm or otherwise as specified by OpenNet, provided that the maximum 5 kN per sqm specification (or any other floor loading specification) stipulated by OpenNet shall be due to structural weight limitations. The Requesting Licensee acknowledges that the floor loading will be determined in respect of each Central Office based on its individual configuration. OpenNet shall notify the Requesting Licensee of the applicable floor loading during the joint site survey. The Requesting Licensee shall engage a Professional Structural Engineer licensed in the Republic of Singapore to compute the actual floor loading to certify that the floor loading limit is not exceeded prior to ~~the any~~ installation of ~~its~~ Co-Location Equipment. The Requesting Licensee shall not commence any installation of ~~its~~ Co-Location Equipment until it has provided OpenNet, with five (5) Business Days advance notice, of a copy of the certification of compliance issued by the licensed Professional Structural Engineer. If the Requesting Licensee wishes to provide an alternative form of certification to demonstrate that it will not exceed the applicable floor loading

limit, the Requesting Licensee must send a written request to OpenNet at least fifteen (15) Business Days prior to the proposed date of installation of the Co-Location Equipment. Any alternative form of certification (to demonstrate that floor loading limit will not be exceeded) will only be accepted in-lieu-of a certification of compliance issued by a licensed Professional Structural Engineer if OpenNet is, in its sole discretion, satisfied with the alternative form of certification provided by the Requesting Licensee.

IDA Directed Modifications: One respondent has commented that any floor loading threshold lower than 5 kN would mean that less equipment can be installed per square metre, resulting in a higher cost for the Requesting Licensee.

In this respect, IDA recognises that any deviation from the 5 kN threshold needs to be due to a valid reason, for instance, where there are any structural weight limitations to the floor loading in the premises.

Accordingly, IDA directs OpenNet to propose, for IDA's approval, modifications to paragraph 1.1.3 of Annex 12D, to specify that the floor loading of the Requesting Licensee's Co-Location Equipment shall be limited to a maximum of 5 kN per sqm or otherwise specified by OpenNet, provided that the 5 kN per sqm specification (or any other specification) stipulated by OpenNet shall be due to structural weight limitations.

The industry has also commented that a Professional Structural Engineer is unnecessary. IDA is of the view it may be too onerous to require the Requesting Licensee to engage a Professional Structural Engineer every time it wishes to install Co-Location Equipment. Therefore, IDA considers it more reasonable and practical if such a requirement is imposed on the Requesting Licensee only when OpenNet has reason to believe that the 5 kN per sqm specification (or any other specification) limit is likely to be exceeded. In such a case, OpenNet will notify the Requesting Licensee that it must engage a Professional Structural Engineer, and the Requesting Licensee must comply with this notification. Accordingly, IDA directs OpenNet to propose, for IDA's approval, modifications to this clause to reflect the above-stated position.

[OpenNet Comment: OpenNet has discussed extensively with relevant parties (including the owner of the Central Offices) the feasibility and implications of the second part of this directive. We believe an independent certification by a Professional Structural Engineer would be the only way for the owner, OpenNet or the Requesting Licensee to ascertain that the planned installation by the latter is indeed compliant with the floor loading requirement of the Central Office, and therefore will not adversely impact the structural safety of the building. It is therefore important that Requesting

Licensees engage Professional Structural Engineers to compute actual floor loading of their planned installations, to certify that they are complying with floor loading limits. This independent verification (and certification) by a qualified third party is critical, particularly on matters that impact on building structures and safety.

OpenNet further understands that the Reference Interconnection Offer by Singapore Telecommunications Limited, which set out the installation procedure for co-location equipment at these same Central Offices, has a similar requirement for independent floor loading certification by a Professional Structural Engineer.

Nevertheless, OpenNet has proposed modifications to clause 1.1.3 that would address the latter part of IDA's directive.]

1.2 The Requesting Licensee must install its Co-Location Equipment in the Co-Location Space within thirty (30) Business Days after the final site inspection. If the Requesting Licensee's failure to complete installation is attributable to circumstances beyond the Requesting Licensee's reasonable control, OpenNet will grant a reasonable extension of time for installation to the Requesting Licensee at the Requesting Licensee's request. A 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 Day period. OpenNet must respond to the Requesting Licensee's request under this clause 1.2 within two (2) Business Days from the date of receipt of such request.

1.3 The Requesting Licensee must not locate equipment other than Co-Location Equipment in the Co-Location Space.

1.4 **Transmission Tie Cables**

1.4.1 OpenNet shall install and terminate Transmission Tie Cables from the Requesting Licensee's FDF at the Co-Location Space to OpenNet's FDF.

1.4.2 The Requesting Licensee shall be responsible for any cabling and patching required between its Co-Location Equipment and its FDF located at its leased Co-Location Space.

1.5 **Power, Earth and Heat Load**

1.5.1 OpenNet shall designate and provide the communication earth and Power Distribution Point for the Requesting Licensee's Co-Location Equipment. OpenNet shall endeavour to provide an earthing standard of 1 ohm. The Requesting Licensee shall pay OpenNet the Charges for the provision of the communication earth and power installation and termination in accordance with Schedule 15 (Charges).

1.5.2 OpenNet shall provide power of:

(a) a minimum of twenty (20) fused Amps and multiples thereof where the Requesting Licensee requires direct current;

(b) a minimum of thirteen (13) fused Amps and multiples thereof where the Requesting Licensee requires alternating current,

up to a maximum of two hundred (200) fused Amps per Co-Location Space.

1.5.3 The Requesting Licensee shall ensure that its Co-Location Equipment at the Co-Location Space does not exceed a heat load limit of 250 watts per square metre.

1.6 **Interference**

1.6.1 Each Party shall ensure that its Co-Location Equipment does not cause any interference to the other Party's equipment, plant, Facilities, Networks and the equipment of other occupying Requesting Licensees in the Co-Location Space, including when installing equipment. In the event of any interference, the Parties shall take in good faith, reasonable measures to resolve the problem promptly. Where the Requesting Licensee's equipment is causing interference to existing equipment and the interference cannot be resolved, the Requesting Licensee shall remove the source of interference immediately.

1.6.2 If OpenNet determines that any interference from the Requesting Licensee's Co-Location Equipment poses an immediate risk of personal injury or significant property damage, it may, withdraw physical access and at the Requesting Licensee's cost, take measures necessary to prevent such injury or damage. Otherwise, OpenNet may provide the Requesting Licensee with five (5) Business Days notice to rectify the interference. After such time, if the interference continues, OpenNet may withdraw physical access and at the Requesting Licensee's cost, take measures to prevent the interference.

1.7 **Standard Operating Procedures and Safety**

- 1.7.1 In relation to the installation, operation and maintenance of its Co-Located Equipment located in the Co-Location Space, the Requesting Licensee must comply with the Standard Operating Procedures for Co-Location Space in Annex 12E of this Schedule as amended from time to time, and any reasonable written instructions which are provided to the Requesting Licensee by OpenNet.
- 1.7.2 In relation to physical access to the Co-Location Space, the Requesting Licensee shall comply with the Physical Access Procedures in Annex 12F as amended from time to time and any reasonable written instructions which are provided to the Requesting Licensee by OpenNet.
- 1.7.3 Any rubbish/debris created in the course of installation or maintenance shall be removed daily by the Requesting Licensee.
- 1.7.4 OpenNet may attend the Co-Location Space to which access has been approved for the installation, modification, replacement or addition of the equipment to verify that the Requesting Licensee is undertaking the installation, modification, maintenance, operation, replacement or addition of the equipment in accordance with the approved request, the installation plans, the Standard Operating Procedures in Annex 12E and such other reasonable written instructions provided to the Requesting Licensee. ~~The costs of such attendance shall be borne by the Requesting Licensee~~

IDA Directed Modifications: IDA does not consider it reasonable for Requesting Licensees to bear the costs of OpenNet's attendance at the Co-Location Space, when such attendance was not at the Requesting Licensee's request. Unless OpenNet can provide satisfactory justification why such attendance is necessary and the incurred costs should be imposed on the Requesting Licensee, IDA directs OpenNet to remove the last line of this clause 1.7.4 of Annex 12D.

- 1.7.5 Where, as a result of an attendance under clause 1.7.4, OpenNet notifies the Requesting Licensee that its installation is not in accordance with the approved request, the installation plans, the Standard Operating Procedures in Annex 12E of this Schedule or such other reasonable written instructions provided to the Requesting Licensee, the Requesting Licensee must take appropriate corrective action within five (5) Business Days of notice. If the Requesting Licensee fails to do so, OpenNet may withdraw physical access or undertake the appropriate corrective action and recover the reasonable cost from the Requesting Licensee accordingly.

- 1.7.6 The Requesting Licensee shall consult with and obtain the consent of OpenNet before carrying out any hacking or drilling work on the floor, wall and ceiling slabs.
- 1.7.7 No Hot Works shall be carried out by the Requesting Licensee without prior approval from OpenNet and any such works must be performed in accordance with OpenNet's safety procedures. Hot Works means any work involving riveting, welding, flame cutting, burning, gouging or any other work involving the use of heat for producing sparks.
- 1.7.8 No work shall be performed by the Requesting Licensee on any of OpenNet's equipment, Facilities, plant or Networks including, but not limited to earth bars and Power Distribution Points/boards.
- 1.7.9 No flammable or hazardous materials shall be used by the Requesting Licensee, whether on a permanent or temporary basis, during and after the installation period. No smoking is allowed. No food or drinks are allowed in the Co-Location Space.
- 1.7.10 All connection of the Requesting Licensee's Co-Location Equipment to OpenNet's earth bars and Power Distribution Points/boards shall be carried out by OpenNet's staff. Charges for the work shall be borne by the Requesting Licensee as set out in the Site Preparation Work.
- 1.7.11 Where, during the course of installation, operation, maintenance, replacement or repair of its Co-Located Equipment the Requesting Licensee causes any damage to OpenNet's Central Office, plant, Network, equipment or Facilities, the Requesting Licensee must report the damage immediately to OpenNet. OpenNet shall rectify any damage in any way it deems fit. Any cost and expense incurred by OpenNet in this regard shall be reasonable, and reasonably incurred, and such ~~the~~ cost and expense in connection with the damage including for the repair thereof shall be borne by the Requesting Licensee.

IDA Directed Modifications: IDA directs OpenNet to propose, for IDA's approval, a modification to this clause so as to reflect that any cost and expense incurred by OpenNet in this regard must be reasonable, and reasonably incurred.

As currently drafted, OpenNet may rectify any damage caused by the Requesting Licensee to OpenNet's CO, plant, Network, and Facilities "in any way it deems fit". The cost and expense of such rectification/repair will be borne by the Requesting Licensee.

To prevent situations where the Requesting Licensee could be liable to pay excessive costs which are incurred “in connection with” the repair, including costs of upgrading OpenNet’s damaged equipment, IDA considers it justified and reasonable to make the abovementioned modification.

1.7.12 The Requesting Licensee shall report immediately any incident, injury, harm, fatal or otherwise that occurs at the Central Office to OpenNet. For fatal or serious accidents, the accident site shall be left undisturbed to facilitate the relevant authority to investigate the circumstance leading to the accident. The Requesting Licensee shall report immediately to the Ministry of Manpower, police and insurance company of any fatal accident having occurred at the Central Office. The Requesting Licensee shall be liable for and shall indemnify and keep indemnified OpenNet against all losses, claims, proceedings, damages, liabilities, costs and expenses for injuries or death to any person whomsoever or any loss or damage to any property whatsoever which arise out of or in consequence of any act or omission of the Requesting Licensee’s employees and contracts in relation to the Central Office and against all claims, demands, proceedings, damages, costs, charges and expenses whatsoever in respect thereof.

1.8 Final Inspection

1.8.1 Upon completion of the installation of the Co-Location Equipment in the Co-Location Space, the Requesting Licensee shall advise OpenNet and request OpenNet to conduct a final inspection and confirm that the installation conforms with the approved detailed installation plans.

1.8.2 Where the final inspection reveals that the installation does not materially conform with the approved detailed installation plans, OpenNet shall notify the Requesting Licensee. The Requesting Licensee must reinstall or take other appropriate corrective action within ten (10) Business Days of notification, or such other time as is otherwise agreed. The Requesting Licensee shall bear the reasonable costs that OpenNet incurs for the inspection of the reinstallation or other appropriate corrective action. OpenNet may still inform and require the Requesting Licensee to make adjustments to its installation where the installation does not conform with the installation plan in a non-material way, but this notification will not delay the approval process under this Schedule.

1.8.3 If the Requesting Licensee fails to reinstall or take the appropriate corrective action referred to in clause 1.8.2, OpenNet may take appropriate corrective action including removal of the Requesting Licensee’s Co-Location Equipment. The

reasonable costs for the corrective action shall be borne by the Requesting Licensee.

2. MAINTENANCE OF CO-LOCATION EQUIPMENT IN CO-LOCATION SPACE

2.1 The Requesting Licensee shall be responsible for the operation and maintenance of its Co-Location Equipment.

2.2 In the operation and maintenance of the Co-Location Equipment, the Requesting Licensee must:

- (a) take such other action as a reasonably prudent Requesting Licensee would; ~~and~~
- (b) keep the Co-Location Space in a tidy and safe condition at all times; and
- (c) ensure that flammable or toxic material is not left in or around the Co-Location Space following maintenance or other operations.

IDA Directed Modifications: For clarity and ease of reading, IDA directs OpenNet to remove the word "and" at the end of clause 2.2(a).

2.3 If a fault, defect or problem with the Co-Location Equipment of the Requesting Licensee causes or may cause damage to the Co-Location Space or OpenNet's Facilities, the Requesting Licensee must:

- (a) notify OpenNet as soon as practicable; and
- (b) repair the fault, defect or problem or take other appropriate corrective action immediately.

2.4 Where OpenNet determines that the Requesting Licensee's Co-Location Equipment pose an immediate risk of personal injury or significant property damage, it may, at the Requesting Licensee's cost, take interim measures necessary to prevent such injury or damage, pending attendance by the Requesting Licensee to perform corrective work.

2.5 The Co-Location Equipment must only be used by the Requesting Licensee for the purpose of connecting to the OpenNet Network or other Requesting Licensee's Co-Location Equipment and the provision of services over the OpenNet Network.-

IDA Directed Modifications: IDA is of the view that this clause should be aligned with clause 6.1 of Schedule 12, and accordingly directs OpenNet to insert the phrase “or other Requesting Licensee’s Co-Location Equipment” after “connecting to the OpenNet Network”.

Further, IDA notes there is a typographical error in the last line of clause 2.5 of Annex 12D and accordingly directs OpenNet to remove the extra full stop at the end of the clause.

2.6 If the Requesting Licensee detects a fault, defect or problem in a Co-Location Space, it must notify OpenNet as soon as possible.

2.7 **Compliance**

2.7.1 The Requesting Licensee must ensure that its employees, agents and approved subcontractors comply with the provisions of this Schedule including all reasonable procedures and directions of OpenNet as notified to the Requesting Licensee from time to time.

2.7.2 The Requesting Licensee must comply with all laws, codes, standards, authorisations and licences when performing works under this Schedule.

2.7.3 The Requesting Licensee must ensure that it has all necessary permits, approvals and licences from any person, governmental, regulatory or relevant authority in order to perform works under this Schedule. Where requested to do so, OpenNet will reasonably assist the Requesting Licensee to obtain any such necessary permit, approval or licence.

2.7.4 Nothing in this Schedule vests in the Requesting Licensee any right, title or proprietary interest in the Central Office.

2.8 **Marking of Equipment**

2.8.1 The Co-Location Equipment must be marked by the Requesting Licensee to clearly indicate that it is owned by the Requesting Licensee and in such manner as OpenNet may reasonably direct from time to time.

ANNEX 12E

STANDARD OPERATING PROCEDURES FOR CO-LOCATION SPACE

1. ROLES AND DUTIES

1.1 Supervisor

- 1.1.1 The Supervisor shall provide guidance and advice to his workers on the general safety requirements and any other particular safety measures required at a specific site and/or project.
- 1.1.2 The Supervisor must ensure that compliance with safety requirements is strictly observed.
- 1.1.3 The Supervisor must be familiar with all safety practices and procedures.
- 1.1.4 Proper personal protective equipment such as safety helmets, safety belts, etc. must be issued when necessary for use.
- 1.1.5 Every accident/injury should be reported immediately to OpenNet Site Supervisor
- 1.1.6 For minor injuries, ensure that the injured receives first aid attention, even for the smallest wound.
- 1.1.7 For serious injuries, identify and isolate the cause of accident immediately, and render first aid treatment by a trained first aider. Notify the ~~Singapore Telecom~~ OpenNet Site Supervisor immediately for the necessary follow-up action.

IDA Directed Modifications: IDA notes that there is a typographical error in the reference to “Singapore Telecom”, and directs OpenNet to replace this reference with the word “OpenNet”.

2. INSTRUCTIONS TO BE STRICTLY ADHERED TO

- 2.1 Personnel working at the hoist area, especially the contractor’s worker-in-charge of securing equipment must wear safety belt (to be supplied by their own contractor).

- 2.2 During lunch break, no contract workers shall remain on top of the frame on the cable trough and there will be no hoisting but the contractor's workers are free to carry out other work eg. packing in the work area.
- 2.3 All contract workers shall adhere to strict instructions from the staff of OpenNet.
- 2.4 No materials are to be temporarily stored at the hoist area and passage ways.
- 2.5 All debris must be removed daily.

3. GENERAL CENTRAL OFFICE REGULATION

- 3.1 Every worker is expected to:-
- (a) comply with instructions, both verbal and written; and
 - (b) follow safety, housekeeping and other rules.
- 3.2 Every worker is strictly prohibited from, and shall not:-
- (a) listen into or interfere with telephone conversations or tamper with circuitry or any other equipment in the Central Office;
 - (b) disclose official documents or information;
 - (c) remove property belonging to OpenNet, any other Requesting Licensee or any Third Party without proper authorisation;
 - (d) smoke within prohibited areas;
 - (e) gamble, sleep or be engaged in any other unauthorised activity in the Central Office;
 - (f) commit any act of vandalism;
 - (g) be within Central Office premises and prohibited areas (eg. Power Room, MDF Room) after duty hours;
 - (h) be within Central Office premises and prohibited areas (eg. MDF Room) when not required to go there to work;

- (i) consume food and drinks within prohibited areas; or
- (j) bring any unauthorised receivers, transmitters and tape recorders into Central Office or any prohibited areas.

4. GENERAL SAFETY WORK PROCEDURES

4.1 Housekeeping

- 4.1.1 All workers must clean up their work place at the end of each day.

4.2 Proper Attire

- 4.2.1 Female workers are advised to refrain from wearing loose clothing, for example skirts or baju kurong, etc.

4.3 Personal Protective Equipment

- 4.3.1 Wear safety helmets during the recovery of ironworks, racks, cutting of cables and hoisting work.
- 4.3.2 Wear gloves when handling rough or sharp materials.

4.4 Working with Ladder

- 4.4.1 Ladders shall be securely fixed or placed on level ground so as to prevent slipping or falling.
- 4.4.2 Do not stand on the top two steps of a ladder exceeding 3m height (standing on top of a ladder is dangerous).
- 4.4.3 Do not leave tools on the ladder. Use tool bags or pockets where appropriate.
- 4.4.4 Do not overreach from a ladder or lean too far out. Move the ladder close to the work.
- 4.4.5 Do not repair damage or worn-out ladders. Any such ladders should be returned to store for replacement.
- 4.4.6 Do not place boxes on top of ladders and/or platforms for doing work.

- 4.4.7 Ensure that travelling ladders are securely locked before stepping onto the ladder steps.
- 4.4.8 Do not jam the locking device of the travelling ladder with wedges.
- 4.4.9 Always face a ladder when climbing or descending.
- 4.4.10 In positioning the ladder, make sure that electric power lines are not in the way.
- 4.4.11 When working atop a ladder placed in front of the door, ensure that it is locked.
- 4.4.12 Refrain from working under ladders.

4.5 **Handling of Equipment and Tools**

- 4.5.1 Be thoroughly familiar with the operational procedures of electrical appliances before use.
- 4.5.2 Inspect tools before you use them – broken, cracked or worn out tools are unsafe.
- 4.5.3 Use the correct tool intended for a particular job.
- 4.5.4 After the usage of any tool, it must be returned to the tool box in its original position.
- 4.5.5 Inspect all electrical tools/equipment for damaged insulation, loose wires and proper connections before use.
- 4.5.6 Electrical supply to the electrical tools/equipment must be switched off and the plugs disconnected when not in use.
- 4.5.7 If any work is to be carried out on live electrical parts, disconnect the power supply.
- 4.5.8 Never throw tools from one person to another especially when working at heights.
- 4.5.9 Do not run or leave electrical wire/cable across passageways, wet surfaces and on sharp edges.

5. DOS AND DON'TS FOR FIRE PREVENTION

5.1 DOS

- 5.1.1 DO familiarise yourself with the location of fire alarm buttons, fire extinguishers and hose reels in your work area and the operation of the extinguishing system eg. halon gas.
- 5.1.2 DO familiarise yourself with the Fire Evacuation Routes in your work area.
- 5.1.3 DO ensure that all electrical appliances and equipment are in good working condition and are maintained by authorised personnel.
- 5.1.4 DO mop spilt oil, solvent, varnish or flux off the floor.
- 5.1.5 DO dispose waste into the dust bins or other receptacles provided and empty them regularly.
- 5.1.6 DO remove combustibles away from the work areas when they are not in use.
- 5.1.7 DO attack the fire from the windward side with the fire fighting aid. By so doing, the wind will carry the flame with smoke and fumes away from the fire fighters and at the same time, carry the extinguishing agent into the fire.
- 5.1.8 DO familiarise yourself with the use of safety breathing apparatus.

5.2 DON'TS

- 5.2.1 DON'T smoke in any Central Office/workshop areas and any other areas designated "No Smoking".
- 5.2.2 DON'T empty the waste from an ash tray into any receptacle containing combustible materials.
- 5.2.3 DON'T overload any power point with electrical appliances or equipment.
- 5.2.4 DON'T replace any blown fuse with one of more than the specified rating.

- 5.2.5 DON'T store any flammable material/liquid (varnish or solvent) below or near any main electrical switch box or heat source.
- 5.2.6 DON'T accumulate waste and packing materials at the work areas.
- 5.2.7 DON'T leave solvent, varnish, flux, alcohol or other flammable liquids in the open without any lid on the container.
- 5.2.8 DON'T open or break windows or doors when an area is filled with smoke due to combustion except to avoid suffocation.
- 5.2.9 DON'T walk upright in a room filled with smoke due to combustion. Crawl out of the affected area through the nearest exit.
- 5.2.10 DON'T use water or any soda acid extinguisher to put out electrical, oil or liquid fires as these will not put out the fire but help to spread the fire and pose electrocution risks.
- 5.2.11 DON'T discard solvent, thinner or alcohol into the waste bin. Use proper containers with lids for its disposal.
- 5.2.12 DON'T leave unattended any hot soldering iron or other 'live' electrical appliances.
- 5.2.13 DON'T obstruct the passage ways, walk ways, corridors and fire exit door, and fire fighting and fire detection equipment/installation.

ANNEX 12F

PHYSICAL ACCESS PROCEDURES

1. GENERAL

1.1 The Requesting Licensee will provide and update regularly a list of the person(s) authorised by the Requesting Licensee to:

- (a) access the Requesting Licensee's leased co-location space; and
- (b) supply instructions to OpenNet relating to the Service.

1.2 OpenNet shall permit the Requesting Licensee's authorized staff and/or authorized agents to access the Requesting Licensee's leased co-location space within the Central Office on a seven (7) days-a-week, twenty-four (24) hours-a-day basis, subject to escort service provided by OpenNet at the stipulated charges to the Requesting Licensee. The escorted access shall be available to the Requesting Licensee on the following basis:

- (a) for service-affecting emergencies; within 1 hour of notification;
- (b) for non-service affecting emergencies, within 4 hours of notification; and
- (c) in all other cases, within 24 hours of notification.

1.3 If OpenNet, acting reasonably, has any doubt as to the identity or authorisation of any person seeking to gain entry into the Central Office or to supply instructions to OpenNet, then OpenNet reserves the right to refuse access to the Central Office to that person, or not to accept that person's instructions, without any liability to the Requesting Licensee or that person.

1.4 The Requesting Licensee shall provide to OpenNet a master list of persons nominated by it to have physical access to the Co-Location Space in accordance with the prescribed form in Annex 12G. The master list shall contain, without limitation, for each person, the following details:

- (a) Full name;
- (b) Company name/Requesting Licensee's Contractor name;

- (c) NRIC/Passport no.;
 - (d) Contact no.; and
 - (e) Fax no.
- 1.5 The master list provided under clause 1.4 shall be maintained and updated by the Requesting Licensee and a new master list provided to OpenNet whenever any amendments are made to the master list. OpenNet may charge an administrative Charge under Schedule 15 (Charges) for processing and updating its master list.
- 1.6 The Requesting Licensee shall ensure that its workmen listed in the master list are either Singaporeans or holders of valid work permits.
- 1.7 No person will be permitted physical access to the Central Office without being nominated on the master list under clause 1.4 and without a current valid Letter of Authorisation as in Annex 12I.
- 1.8 **Physical Access Request**
- 1.8.1 Subject to clause 1.9, where the Requesting Licensee wishes to obtain physical access to the Co-Location Space, it must submit a request in writing in accordance with the prescribed form in Annex 12H to the designated contact points of the Co-Location Space, not less than twenty four (24) hours before the requested physical access date. The request must contain, without limitation:
- (a) the purpose for which physical access is requested;
 - (b) the identity of the senior person who will be present and who will be responsible for the persons who will be physically accessing the facility;
 - (c) a complete list of the persons (limited to a maximum of eight (8)) who may be physically accessing the facility on the relevant date of access, from which list a maximum of four (4) persons will be confirmed as being the persons who will be undertaking the physical access in accordance with clause 1.8.2; and
 - (d) an estimate of the time during which, physical access is requested.
- 1.8.2 No later than the day on which physical access to the Co-Location Space has been granted but prior to physical access actually being granted, the Requesting Licensee must notify OpenNet the names of up to four (4) person(s) from the list

in the request made under clause 1.8.1(c) who will actually be physically accessing the Co-Location Space.

- 1.8.3 OpenNet shall, upon receipt of the request under clause 1.8.1, advise the Requesting Licensee of whether the request for physical access has been approved in accordance with the prescribed form in Annex 12H. The approval shall be the Letter of Authorisation as in Annex 12I, sent by facsimile. The Requesting Licensee shall be liable for the Charge specified in Schedule 15 (Charges) for OpenNet to process a request under clause 1.8.1.
- 1.8.4 Upon approval under clause 1.8.3, OpenNet shall provide escort service to the Requesting Licensee to physically access the Co-Location Space ~~within twenty-four (24) hours~~. The Requesting Licensee shall pay to OpenNet the Charges for escort service as provided in Schedule 15 (Charges).

IDA Directed Modifications: For certainty, IDA directs OpenNet to propose, for IDA's approval, modifications to clarify clauses 1.8.1 and 1.8.4. Based on the present drafting, it is unclear whether the reference to "within twenty-four (24) hours" in clause 1.8.4 is in addition to the required notice under clause 1.8.1.

- 1.8.5 Where OpenNet approves a request for physical access, the Requesting Licensee will comply with the terms and conditions set out in clause 1.11.
- 1.8.6 The Requesting Licensee will be liable for escort Charges commencing at the time of approved access and ceasing when the Requesting Licensee's personnel leaves the Central Office. Where the Requesting Licensee's personnel leaves the Central Office within two (2) hours of the time of approved access, the Requesting Licensee will be liable for escort Charges for a minimum of two (2) hours.
- 1.8.7 The Requesting Licensee must notify OpenNet as soon as possible (but in any event, within six (6) hours of the time approved for physical access) of any change or cancellation to time of the request for physical access.
- 1.8.8 Subject to clause 1.8.7, where the Requesting Licensee's personnel is not present at the approved date and time of physical access, OpenNet shall be entitled to recover the full escort Charges for the approved duration of access. Where the Requesting Licensee's personnel was scheduled to leave the Central Office within two (2) hours of the approved time of physical access, the Requesting Licensee shall be liable for escort Charges for a minimum of two (2) hours.

1.9 **Emergency Physical Access Request**

1.9.1 The Requesting Licensee shall submit to OpenNet for approval, a list of designated senior personnel contained on the master list who are authorised to request emergency physical access.

1.9.2 In the event of an emergency where physical access is required by the Requesting Licensee to address the emergency situation, the Requesting Licensee must first obtain OpenNet's consent for access by telephone using the designated telephone number of the contact point of the Co-Location Space. If OpenNet grants the Requesting Licensee with emergency access, the Requesting Licensee must provide OpenNet, via facsimile, a confirmation of emergency access in writing by the Business Day that follows the granting of such access.

1.9.3 The verbal and written emergency physical access request and confirmatory fax under clause 1.9.2 must specify, without limitation:

- (a) the full name of the requesting party; ~~and~~
- (b) NRIC/Passport number; ~~and~~
- (c) contact number; ~~and~~
- (d) details of the emergency situation (whether it is service affecting or non-service affecting); ~~and~~
- (e) the identity of the senior person who will be present and who will be responsible for the persons who will be accessing the Co-Location Space; ~~and~~
- (f) a complete list of the persons (limited to a maximum of four (4)) who will be accessing the Co-Location Space on the relevant occasion of emergency access; and
- (g) an estimate of the time during which, physical access is requested.

IDA Directed Modifications: For clarity and ease of reading, IDA directs OpenNet to remove the word "and" at the end of clauses 1.9.3(a) to (e).

1.9.4 OpenNet shall upon receipt of the request advise the Requesting Licensee of whether the request for physical access has been approved. The Requesting

Licensee shall be liable for the Charge specified in Schedule 15 (Charges) for OpenNet to process an application for physical access.

1.9.5 Upon approval under clause 1.9.4, OpenNet shall provide escort service to physically access the Co-Location Space within one (1) hour for a service affecting emergency or within four (4) hours for a non-service affecting emergency. This access shall be permitted on an interim basis only. Physical access shall be for a maximum period of eight (8) hours unless the Requesting Licensee requests a reasonable extension of time for access and OpenNet accepts that request. OpenNet shall not unreasonably reject the Requesting Licensee's request. The Requesting Licensee shall pay to OpenNet the Charges for escort service as provided in Schedule 15 (Charges).

1.9.6 Where OpenNet approves a request for physical access, the Requesting Licensee will comply with the terms and conditions set out in clause 1.11.

1.9.7 Where, in an emergency situation, both OpenNet and the Requesting Licensee require physical access to undertake corrective action, OpenNet shall have priority.

1.10 Rejection Of Physical Access Request

1.10.1 OpenNet may reject a request for physical access other than a bona fide emergency physical access request under clause 1.9, or revoke an approval for physical access where:

- (a) the request is not in the prescribed form and does not contain all the required information; ~~or~~
- (b) the persons listed on the request do not appear on the master list or OpenNet has advised that the person(s) listed have been barred either by OpenNet or the relevant authorities; ~~or~~
- (c) OpenNet has scheduled work for the time specified by the Requesting Licensee in the request; ~~or~~
- (d) OpenNet determines that the physical access or work to be performed by the Requesting Licensee as specified in the request may breach clause 1.11.2 of this Schedule; ~~or~~

- (e) OpenNet determines that the physical access may jeopardise or interfere with the integrity of OpenNet's Network, Facilities, equipment or plant or create a security risk; ~~or~~
- (f) OpenNet determines that the area is unsafe; or
- (g) the Requesting Licensee is in breach of this Schedule and such breach continues and remains unremedied at the time of the request for physical access.

IDA Directed Modifications: For clarity and ease of reading, IDA directs OpenNet to remove the word "or" at the end of clauses 1.10.1(a) to (e).

1.10.2 If OpenNet rejects a request for physical access under clause 1.10.1, OpenNet shall provide the Requesting Licensee with its reasons for rejection.

1.11 Conditions Of Physical Access

1.11.1 OpenNet may refuse any person physical access to, or require that person to be removed from a Central Office where:

- (a) that person cannot, upon request, produce a current valid Letter of Authorisation and any identification card which is issued by OpenNet; ~~or~~
- (b) OpenNet has previously notified the Requesting Licensee of problems with that person (e.g. the person has breached safety requirements or Standard Operating Procedures); ~~or~~
- (c) the person has been barred under clause 1.11.7; ~~or~~
- (d) where in the opinion of OpenNet, the person's action may cause damage to OpenNet's properties or may compromise or threaten safety; or
- (e) the person loiters around OpenNet's premises other than the Co-Location Space for which physical access is granted for permitted works to be carried out.

IDA Directed Modifications: For clarity and ease of reading, IDA directs OpenNet to remove the word "or" at the end of clauses 1.11.1(a) to (c).

1.11.2 The Requesting Licensee must not do or omit to do anything in connection with gaining physical access to the Central Office which may:

- (a) threaten the safety of OpenNet's employees, customers or third persons; ~~or~~
- (b) interfere physically or electrically with the delivery of telecommunication services supplied or to be supplied by OpenNet; ~~or~~
- (c) jeopardise the integrity or confidentiality of communications within OpenNet's Network; ~~or~~
- (d) threaten the security of the Central Office; or
- (e) cause damage to the Central Office.

IDA Directed Modifications: For clarity and ease of reading, IDA directs OpenNet to remove the word "or" at the end of clauses 1.11.2(a) to (c).

1.11.3 The Requesting Licensee must ensure that:

- (a) physical access is gained through the specified entry; ~~and~~
- (b) only persons with a current and valid Letter of Authorisation can gain physical access; ~~and~~
- (c) physical access is gained only to the Central Office or part thereof for which approval has been granted; ~~and~~
- (d) each person gaining physical access shall comply with all the check-in procedures such as exchanging their identity cards or work permits for the "V" or "C" identification cards or such as may be implemented by OpenNet from time to time and signing a log book at the security post in which is recorded the full name of the person, IC/Passport no., contact no., date and time of entry and departure from the facility; ~~and~~
- (e) the applicable Standard Operating Procedures and any written instructions are followed; ~~and~~
- (f) the Co-Location Space is left in a safe and tidy condition; and

- (g) the Requesting Licensee's senior person informs OpenNet when work has been completed and all Requesting Licensee personnel have left the facility.

IDA Directed Modifications: For clarity and ease of reading, IDA directs OpenNet to remove the word "and" at the end of clauses 1.11.3(a) to (e).

~~1.11.4 A representative of OpenNet may attend and specify an entry to the Co-Location Space and verify that the Requesting Licensee complies with the conditions of physical access. The cost of such attendance shall be borne by the Requesting Licensee.~~

IDA Directed Modifications: IDA does not consider it reasonable for Requesting Licensees to bear the costs of OpenNet's attendance at the Co-Location Space, when such attendance is more for OpenNet's comfort than at the Requesting Licensee's request or for its benefit. Practically, IDA also does not consider it necessary for OpenNet to inspect and specify entry to the Co-Location Space, or attend such entry to ensure compliance with conditions of physical access. Unless OpenNet can provide satisfactory justification why such attendance is necessary and the costs should be imposed on the Requesting Licensee, IDA directs OpenNet to remove this clause 1.11.4 in its entirety.

1.11.4 No still, motion or digital cameras, film, negatives, tape or digital recorders, explosives, inflammables, cigarettes, lighters and equipment with electromagnetic emissions or radiation are allowed in the Central Office.

1.11.5 Where, for whatever reason, the Requesting Licensee decides that a person nominated by it under clause 1.4 should no longer be permitted physical access it must immediately notify OpenNet and provide an updated master list.

1.11.6 Without prejudice to any other rights OpenNet may have (whether under contract, at law, or in equity), where the Requesting Licensee:

- (a) gains unauthorised entry to the Central Office or part thereof; or
- (b) uses, or attempts to use, the Letter of Authorisation for any purpose other than the purpose for which approval was granted,

physical access may be immediately terminated and the person(s) will henceforth be barred from entering any Facilities of OpenNet.

1.11.7 The Requesting Licensee must not grant a third person physical access to the Central Office.

1.11.8 The Requesting Licensee shall report to the police and OpenNet for any loss of identification card and bear the cost and expense for the replacement of the card.

ANNEX 12G

MASTER LIST FOR PHYSICAL ACCESS TO CO-LOCATION SPACE

S/n	Name	Company Name / Requesting Licensee A's Contractor Name	NRIC / Passport No.	Contact Tel No.	Fax No.
1	Richard Tan	Requesting Licensee A	1234567C	68888999	62899848
2	Yeh Sing Ping	Pipe Construction Pte Ltd	3333444A	67777788	62885678
	Two examples for reference.				

ANNEX 12H

REQUEST FOR PHYSICAL ACCESS TO CO-LOCATION SPACE

REQUEST FOR PHYSICAL ACCESS TO CO-LOCATION SPACE	
<p>Date of Application : _____ Application Reference Number : _____ Approval for Physical Access is sought for the purpose of : _____ [Emergency [Service Affecting / Non-Service Affecting] Normal Access]</p> <p>Address of Co-Location Space : _____ Requested Date / Time of Access : _____ Estimated Duration of Access : _____</p> <p>Name of Person(s) for which Physical Access is requested. (Please attach separate sheet if space is insufficient).</p> <ol style="list-style-type: none">1. _____ [Name of Senior Person & NRIC No / Passport No]2. _____ [Name & NRIC No / Passport No]3. _____ [Name & NRIC No / Passport No]4. _____ [Name & NRIC No / Passport No]	
Sign : _____	Name of Requesting Licensee: _____
Name : _____	[Company Name]
Designation : _____	
Department : _____	
Contact Number : _____	Company Stamp : _____
Fax Number : _____	
III.	Reason for Rejection : _____
IV.	OpenNet Approval Code : _____
Sign : _____	Contact Number : _____
Name : _____	Fax Number : _____
Date : _____	
Received Date : _____	Queue Status : _____ Processed Date : _____

ANNEX 12I

LETTER OF AUTHORISATION FOR PHYSICAL ACCESS TO CO-LOCATION

LETTER OF AUTHORISATION FOR PHYSICAL ACCESS TO CO-LOCATION SPACE

This Letter of Authorisation is issued in conjunction with the final approval given to the request application via reference _____ date _____

It must be carried in the possession of the senior person at all time during the duration of access granted to the Co-Location Space as indicated below.

Location of Co-Location Space granted for access :

Name of Person(s) granted to access :

1. _____ [Name of Senior Person & NRIC No / Passport No]
2. _____ [Name & NRIC No / Passport No]
3. _____ [Name & NRIC No / Passport No]
4. _____ [Name & NRIC No / Passport No]

Approved Date of Access : _____

Approved Time of Access : _____

Approved Duration of Access : _____

Sign : _____ Contact Number : _____

Name : _____ Fax Number : _____

Date : _____