

EXPLANATORY MEMORANDUM

1. This Explanatory Memorandum explains the Direction dated 11 July 2011, issued by the Info-communications Development Authority of Singapore (“**IDA**”) to OpenNet Pte Ltd (“**OpenNet**”), directing it to incorporate modifications to its proposed changes to Schedule 1 – Residential End-User Connection (“**Schedule 1**”) to its Interconnection Offer (“**ICO**”) to modify OpenNet’s obligation to test Residential End-User Connections on an end-to-end basis prior to delivering the service to the Requesting Licensees (“**RLs**”), and to make consequential changes to Schedule 2 – Non-Residential End-User Connection and Schedule 15 (Charges) to its ICO.
2. Unless the context requires otherwise, all capitalised terms used in this Explanatory Memorandum shall have the same meanings as in OpenNet’s ICO for the provision of services over the Next Generation Nationwide Broadband Network (“**Next Gen NBN**”).

Background

3. Under the existing Schedule 1 to the ICO, OpenNet is required to carry out testing of Residential End-User Connections on an end-to-end basis as part of its obligations before it delivers working Residential End-user Connections to its RLs. Specifically, OpenNet is required to test a Residential End-User Connection from OpenNet’s Fibre Distribution Frame (“**FDF**”) at its designated Central Office or the RL’s FDF at the Central Office designated by OpenNet to the First Termination Point at the Residential Premise to ensure that the Residential End-User Connection falls within the optical performance specified in the ICO.
4. In order to carry out testing of Residential End-User Connections in accordance to the ICO, where OpenNet has already installed the First Termination Point at the Residential Premise, OpenNet will need to re-enter the Residential Premise, together with the RLs, during the RLs’ installation of the Network Termination Equipment or on its own. Re-entering of Residential Premises with RLs to perform fibre testing requires co-ordination efforts between OpenNet and the RLs (e.g., both parties need to agree on a common schedule). If the common schedule is subsequently not adhered to by the parties, it will likely result in missed appointments with end-users. If OpenNet enters the Residential Premises on its own, it will require the RLs and/or retail service providers to make appointments with the end-users on its behalf, which also requires co-ordination between the parties. In considering that the majority of Residential End-User Connections are in working condition, OpenNet has proposed that, in lieu of the existing ICO fibre testing requirements, OpenNet shall arrive at Residential Premises within one (1) hour of receiving a fault report from the RL to jointly investigate the fault with the RLs and to carry out rectification.
5. To ensure that OpenNet’s proposed modifications to its obligation in Schedule 1 to the ICO to test Residential End-User Connections before delivering the

services to the RIs are appropriate and adequate to address the concerns and needs of the industry, IDA sought feedback from the industry via a public consultation which commenced on 5 May 2011. At the close of the consultation on 19 May 2011, IDA received comments from four respondents (namely, M1 Limited, Nucleus Connect Pte Ltd, Singapore Telecommunications Limited and StarHub Ltd).

Issues

Removal of Existing End-to-End Fibre Testing Obligation from Schedule 1 to the ICO

6. One respondent was concerned that OpenNet's proposal not only relieved OpenNet of its existing ICO obligation to test the Residential End-User Connection on an end-to-end basis before delivering the service to its RIs, but that OpenNet was also proposing to pass operational challenges and additional costs to its RIs. The respondent requested to clarify and address the issues it had highlighted before OpenNet's proposal was implemented. Another respondent was concerned that the proposal to remove OpenNet's existing obligation in Schedule 1 to carry out end-to-end fibre testing may cause OpenNet's quality of service to deteriorate.

7. IDA agrees that certain aspects of OpenNet's proposal need to be clarified and improved to better meet the needs of the industry and will elaborate on these changes in the paragraphs below. With regard to the concern that OpenNet's quality of service may deteriorate, IDA has separately considered a Quality of Service framework for installation-related faults on OpenNet's Residential and Non-Residential End-User Connections. IDA has issued its decision on the Quality of Service framework to be imposed on OpenNet on 5 July 2011. On balance, IDA is of the view that OpenNet's proposal to carry out a joint fault investigation within one (1) hour of receiving a fault report, in lieu of re-entering every premise to which OpenNet has already installed the First Fibre Termination Point to carry out end-to-end fibre testing, is permissible as a pragmatic approach that will minimise inconvenience to end-users.

RIs' Entitlement to Service Level Guarantees ("SLGs")

8. *SLG for Delay in Service Activation Period* - OpenNet has proposed to remove the SLG if a delay in service activation date is caused by an installation-related fault. Three of the respondents pointed out that installation-related faults which were due to OpenNet and/or OpenNet's network were within OpenNet's control, and that it was therefore unfair and unreasonable for OpenNet to be absolved from its responsibility for the faults. IDA agrees with the industry that it is fair and reasonable to expect OpenNet to provide an SLG for delays in the service activation period where the installation-related fault is caused by or is within OpenNet's reasonable control. As such, IDA will require OpenNet to retain its existing obligation to provide an SLG to its RIs where OpenNet is responsible for the delay in the service activation period.

9. *SLG for Missing the Service Level Availability and Mean Time to Recovery Standards* – One respondent claimed that OpenNet would have no incentive to repair the installation-related faults quickly if the RLS were not entitled to make a Mean Time to Recovery claim against OpenNet for the duration of the joint fault investigation. As OpenNet would have yet to successfully deliver a working Residential End-User Connection to the RL, IDA takes the view that the appropriate remedy to be provided by OpenNet to the RL is the rebate for missing the service activation period, and not the Service Level Availability and/or Mean Time to Recovery rebate. Therefore, RLS should not be entitled to claim the Service Level Availability and Mean Time to Recovery rebate against OpenNet in relation to an installation-related fault.

Prescribed List of Checks to be Conducted by RLS before Activating the Joint Fault Investigation Scheme

10. Three of the respondents commented that it was unnecessary and onerous for OpenNet to prescribe a list of tests which the RLS ought to conduct on their own networks before they could request the joint fault investigation scheme from OpenNet. One of these respondents strongly expressed that the RLS had no reason to be frivolous given that the RLS had to incur additional costs to hire more installers and/or adjust the schedules of the installers at the affected sites as they would be unable to proceed with the remaining scheduled installations for that day. The respondent further commented that the RLS would also not wish to inconvenience the end-users. Another respondent opined that OpenNet appeared to be imposing additional obligations on the RLS while removing obligations from itself. Concerns were also expressed that some of the prescribed tests were overly onerous and could not be readily conducted by the RLS. Two respondents also commented that OpenNet's proposed Onsite charge was sufficient to deter RLS from making frivolous requests for the joint fault investigation scheme.

11. IDA is of the view that it is unnecessary for OpenNet to stipulate in the ICO the list of tests that the RLS must perform on their own networks. IDA believes that RLS will have little motivation to request the joint fault investigation scheme unless they are reasonably confident that the installation-related fault lies with OpenNet and/or OpenNet's network, given that the joint fault investigation interrupts the RLS' installation schedule and may inconvenience the end-user since the installation will take longer. Even in the absence of the Onsite charge (please see paragraph 17 below on IDA's position on the proposed Onsite charge), RLS have little incentive to be frivolous for the aforementioned reasons. IDA will therefore require OpenNet to remove the list of prescribed checks from Schedule 1. OpenNet may nonetheless include the checklist of tests in OpenNet's operational procedures, to provide guidance to the RLS on the types of checks which could be conducted by RLS prior to activating the joint fault investigation scheme.

Window for Reporting an Installation-Related Fault

12. The respondents objected to the condition that the proposed joint fault investigation scheme only applied if the RL installs its equipment within two

(2) Business Days from OpenNet's handover of the First Termination Point to the RL. The respondents expressed the view that it would be challenging to schedule an appointment with end-users within the period prescribed by OpenNet and requested OpenNet to provide flexibility in the ICO to address such a practical difficulty. In addition, the respondents pointed out that RLs had a natural incentive to commence installation of equipment as soon as possible to start providing services.

13. While RLs are generally able to time the placement of orders with OpenNet so that they can meet OpenNet's prescribed timeframe, there might be instances where end-users change their appointment dates with the RLs at the eleventh hour. As such, IDA is of the view that OpenNet should provide flexibility to the RLs to accommodate the difficulty and unpredictability of scheduling appointments with end-users. However, OpenNet should not be expected to offer an unlimited window for requesting the joint fault investigation scheme since this may introduce disputes as to whether the reported fault is an installation-related fault, and may also increase the probability of exogenous factors which may affect the quality of OpenNet's fibre in the period between ON's handover of the First Termination Point to the RL and the RL's installation of its equipment. On balance, IDA believes that it is fair and reasonable for OpenNet to offer the joint fault investigation scheme for a period of up to seven (7) calendar days from the date of OpenNet's handover of its First Termination Point to the RLs. In addition, to further address the possibility of end-users not being available during the seven-day window, IDA will require OpenNet to make the joint fault investigation scheme available after business hours.

"Commercially Reasonable" Efforts to Arrive at Residential Premise within One Hour

14. IDA agrees with the respondents' concerns that OpenNet's proposal to use only "commercially reasonable efforts" to arrive at the Residential Premise within one (1) hour of a fault report, will create uncertainty for the RL and the end-user. IDA believes that it is fair to require OpenNet to provide a firmer commitment to its RL as the RL and the end-user would have committed their time to wait for OpenNet's arrival to perform fault rectification. On the other hand, IDA is of the view that it will be unreasonable to impose an absolute requirement on OpenNet to arrive on time, as factors beyond OpenNet's control may cause a delay in OpenNet's arrival. In this regard, IDA requires OpenNet to use its best endeavours to arrive at the Residential Premise within one (1) hour of receiving the fault report from the RL.

RLs to be Present during Joint Fault Investigation

15. A respondent was of the view that OpenNet should not require RLs to be present during the joint fault investigation as this arrangement was not practical and would increase the RLs' costs. The respondent commented that OpenNet should in fact compensate the RLs for any increased costs and inefficiencies since they arose from OpenNet's failure. IDA is of the view that the RLs' presence during the joint fault investigation will help to shorten the

fault resolution timeframe and reduce potential disputes between OpenNet and the RL (such as over No Fault Found cases). IDA believes that it is therefore a reasonable requirement for the RL to be present during the joint fault investigation, and it is not necessary for OpenNet to compensate the RLS as suggested by one of the respondents.

RLs to Sign-Off the Joint Fault Investigation Report

16. With regard to OpenNet's proposal to require RLS to sign-off on the joint fault investigation report, a respondent commented that OpenNet and the RLS were unlikely to be able to come to an agreement where No Fault Found cases were involved. The respondent was also of the view that OpenNet should not have the discretion to determine the outcome of a fault investigation. Another respondent commented that OpenNet's proposal would lead to another form filling requirement and was administratively inefficient. IDA is of the view that there is merit in both the RLS and OpenNet jointly signing-off on the joint fault investigation report to ensure closure to the reported fault and to avoid disputes. However, IDA recognises that OpenNet and the RLS may not be able to agree on the outcome of all fault investigations, leading to an impasse at the Residential Premise. In this regard, IDA takes the view that it will be more efficient and effective for the RLS to sign-off on the readings and the actions taken by OpenNet during the joint fault investigation instead of on the outcome of the joint fault investigation.

Onsite Charge

17. One respondent objected to OpenNet's proposal to impose an Onsite charge on the RL if the RL or the RL's network was found to be at fault during a joint fault investigation, and/or if the RL did not carry out OpenNet's proposed prescribed checks before reporting a fault under the proposed clause 6A. The respondent was of the view that RLS had no reason to report a fault frivolously as the RLS would have to adjust the installation schedules of their installers and seek the permission of their end-users to extend the installation appointment to accommodate the joint fault investigation. IDA agrees with the respondent that there is no incentive for RLS to request the joint fault investigation scheme given the need to make changes to the installation schedules of the RLS and to seek permission from end-users to extend the installation appointments. IDA therefore requires OpenNet to remove the proposed Onsite charge. However, should RLS be subsequently found to consistently behave frivolously when requesting the joint fault investigation scheme, IDA will consider allowing OpenNet to amend the ICO to impose an Onsite charge.

Delay Billing Date until Installation-Related Fault is Rectified if Fault is Due to OpenNet

18. With regard to OpenNet's proposal to delay the billing start date until an installation-related fault is rectified, one respondent proposed that for No Fault Found cases, OpenNet should similarly delay billing until the RLS' services

could be provided on the fibre connection. The respondent also expressed that the delay in billing should not absolve OpenNet from its obligation to comply with the stipulated service activation period. Another respondent opined that OpenNet ought to compensate RLS for claims against RLS from retail service providers for delays in the service activation period, where the fault was attributable to OpenNet.

19. IDA is of the view that it is fair and reasonable to require OpenNet to delay billing until an installation-related fault is rectified if the installation-related fault is not due to the RL's network as OpenNet is expected to deliver a working line to the RL. With regard to OpenNet's obligation to activate a requested service within the service activation period, IDA agrees that OpenNet's delay in billing should not be a reason for OpenNet to not allow RLS to claim against OpenNet for service activation period delays, since the two issues are separate matters. IDA disagrees that OpenNet should compensate the RLS for claims made by retail service providers against RLS for missing the service activation period as OpenNet is already required to provide to the RLS an SLG for service activation period delays.

Cancellation Charge

20. One respondent proposed that OpenNet should waive all its charges if an end-user decides to cancel the order due to OpenNet's failure to provide a working line in a timely manner. IDA considers that it may not be fair to expect OpenNet to waive the Cancellation Charge if OpenNet subsequently repairs the installation-related fault within a reasonable timeframe. However, in cases where OpenNet fails to rectify the installation-related fault within a reasonable timeframe, it will be reasonable for OpenNet to waive the Cancellation Charge. In this regard, IDA is of the view that if OpenNet fails to repair an installation-related fault within seventy-two (72) hours from the commencement of the appointment made by the RL for OpenNet to rectify the fault, it would be reasonable for OpenNet to allow the RL to cancel the faulty connection without levying a Cancellation Charge.

Scenarios Not Currently Addressed In Schedule 1 to the ICO

21. One respondent commented that it went the extra mile to provide installation of the Network Termination Equipment after business hours and that it was not clear whether RLS could request the joint fault investigation scheme after business hours. The respondent also commented that it was unclear how OpenNet would treat cases where end-users were unable to wait for OpenNet to arrive under the joint fault investigation scheme. IDA is of the view that there is merit in making clear all relevant terms and conditions of the joint fault investigation scheme in the ICO to provide clarity to RLS and reduce the potential for dispute. With regard to the availability of the scheme after business hours, as indicated in paragraph 13, it will be fair and reasonable for OpenNet to provide a scheme after business hours to provide more choice to end-users, considering that the window for requesting the scheme is a limited one, i.e. seven (7) calendar days from OpenNet's handover of the First Termination Point to the RL.

Non-Residential End-User Connection Service

22. A respondent commented that it was not sure why OpenNet had not proposed to also extend the joint fault investigation scheme to the Non-Residential End-User Connection Service and opined that it would be reasonable for OpenNet to do so. IDA is of the view that it is not necessary for OpenNet to offer the joint fault investigation scheme under the Non-Residential End-User Connection service at present. As OpenNet only installs the First Termination Point upon an order, OpenNet is able to test and verify that a Non-Residential End-User Connection is working at the point of installation, which ought to reduce most, if not all installation-related faults. While one respondent claimed that such installation-related faults had occurred, IDA believes that they were isolated cases. Nevertheless, IDA will monitor the situation and reassess its position where appropriate. In addition, IDA has separately put in place a Quality of Service framework for OpenNet's installation-related faults, which includes Non-Residential End-User Connections. However, IDA is of the view that in the event of an installation-related fault occurring inadvertently on a Non-Residential End-User Connection, OpenNet should delay billing for the service until the installation-related fault is rectified, similar to the treatment for Residential End-User Connections.

Other Comments

23. The respondents also provided several other comments on the proposed joint fault investigation scheme. One respondent suggested that OpenNet ought to test the other segments of the Residential End-User Connection to isolate the installation-related fault to shorten the fault investigation and rectification timeframe. IDA is of the view that OpenNet will be incentivised to take steps to minimise instances of installation-related faults since the joint fault investigation scheme requires OpenNet to incur resources and therefore it is unnecessary for IDA to prescribe how OpenNet manages its operational procedures during the joint fault investigation. The respondent also proposed that OpenNet should provide a commitment in the ICO to rectify the installation-related fault within one (1) hour of the fault report and compensate the RLS if the fault restoration period exceeded one (1) hour. IDA is of the view that it is not currently necessary to mandate OpenNet to rectify a fault within a stipulated timeframe in the ICO or to provide compensation to the RLS. Nevertheless, IDA will monitor the situation and reassess its position where appropriate.