REVIEW OF SINGAPORE TELECOMMUNCATION LIMITED'S REFERENCE INTERCONNECTION OFFER (RIO)

Submission by the StarHub Group to the Info-communications Development Authority of Singapore

5 May 2005

Contact Details :	StarHub Ltd 51 Cuppage Road #07-00 StarHub Centre Singapore 229469 Phone +65 6825 5000 Fax +65 6721 5004 Tim Goodchild Email timothy@starhub.com

Contents

A. Executive Summary

StarHub welcomes the opportunity to provide our comments on SingTel's RIO and to facilitate IDA's review of the RIO.

As IDA has correctly pointed out, Dominant Licensees do not have the economic incentives necessary to enter voluntarily into Interconnect Agreements in a timely manner. To this end, the RIO has greatly facilitated competitive entry into the telecoms market in Singapore.

We applaud IDA for its initiative in requiring SingTel to streamline the processes on the RIO and to make the RIO tariffs publicly available. However, we believe that further improvements can be made to the RIO.

Based on our experience, although the RIO is meant to enable Requesting Licensees ("RL") to achieve seamless interconnection with SingTel's network, it still affords SingTel with much discretion which SingTel has used to delay and deny services to RLs. StarHub believes that SingTel's ability to act in this manner should be further curbed. We note, however, that SingTel has introduced new clauses in the proposed RIO that gives it wider discretion and therefore greater ability to delay and deny services.

StarHub also notes that SingTel has failed to mark-up the changes it has made to the RIO. This increases the risk that parties may fail to provide IDA with its views because it has not spotted the amendments made by SingTel. IDA may therefore not receive input that is representative of the views of all respondents. *StarHub therefore requests that IDA conduct a second round of public consultation using a marked up copy of the RIO.*

StarHub is pleased to provide a summary of our views of certain key areas. Our detailed comments to each Schedule can be found in Section C.

StarHub has also provided a confidential Attachment A which should not be published without StarHub's prior permission.

a) Past Usage of IRS

SingTel has, in various schedules of the RIO, stated that there has been a low demand for various IRS. SingTel is using this as the basis for reducing the amount of resources it commits to processing requests/applications.

However, StarHub submits that the demand for services under the existing RIO cannot be used as an indication or future demand.

The terms and conditions in the existing RIO has made it difficult for many licensees to access and utilize the various IRS. For example, SingTel was never obliged to assist RLs by providing information related to their local loop/sub loop which has created much uncertainty for RLs. This in turn discouraged RLs from applying for the IRS which resulted in the low demand for services.

StarHub submits that with improved terms and conditions, demand for IRS will increase and therefore SingTel should not be allowed to limit the number of requests it will process and therefore use this limit to delay services to RLs. This can potentially be used to restrict competition.

b) Removal of Notification of Approval/Acknowledgement

StarHub notes that in many areas of the RIO, SingTel has, in streamlining its procedures, removed the obligation to notify RLs in situations where SingTel approves their requests/applications. SingTel will therefore only notify the RLs when it rejects a request/application. While StarHub welcomes, in principle, this initiative, we would also like to highlight that in order for this to work, SingTel must be required to adhere strictly to its timelines. SingTel should not be allowed to subsequently reject any request/application once these timelines have passed.

Further, SingTel remains the only supplier of services offered in the RIO. Therefore RLs are fully reliant on SingTel for the provision of the requested services. This is not a situation where RLs can switch service provider should SingTel fail to deliver the services as obligated. For example, even though the RIO has been modified such that a fax transmission report is taken as proof of submission of a request, there is really little that RLs can do if SingTel subsequently claims that it did not receive the request. This is clearly not a situation where RLs can simply cancel their request (even then it would have to incur cancellation fees) and switch to another service provider (as there are none).

StarHub therefore submits that SingTel must compensate RLs for any failure to meet its obligations. After all, if RLs fail to meet the timeframes it commits to its own Customers, it will be liable to its Customers.

It is also not clear how situations where SingTel claims not to have received faxed requests are to be handled. For example, under the scenario where a RL faxes to SingTel a request (supported by a "successful" fax transmission report) and yet SingTel later claims not to have received the fax, SingTel must still be obligated to provide the services by the requested date. SingTel must not be allowed to extend deadlines accordingly due to its alleged non-receipt of the request. If this obligation is not imposed on SingTel, it will only create a loophole which SingTel can use to delay services to RLs.

In addition, SingTel must be required to compensate RLs if it fails to meet any timeframes under such circumstances. The compensation amount should take into account any damages that RLs suffer as a result of the non-performance by SingTel.

StarHub submits that in order to prevent unnecessary delays and misunderstanding, SingTel should be required to provide a manned contact phone number which RLs can call to confirm receipt of faxed requests/applications. SingTel must be required to ensure that this phone line is manned at all times.

Finally, IDA must require SingTel to adhere strictly to such timeframes (especially since SingTel itself expects RLs to adhere strictly to these timeframes). IDA must also be prepared to intervene swiftly should SingTel fail to adhere to the timeframes. Failing which, such procedures, although intended to make the process more efficient, can instead be exploited by SingTel to further delay services to RLs.

c) Notification of Planned Outages

SingTel has proposed in various Schedules of the RIO that where there are planned outages (for maintenance purposes etc) that last no longer than 3 hours, they will not need to inform RLs. This is not acceptable. RLs have an obligation to keep their Customers informed of any service outages and therefore must be informed of any disruptions by SingTel. Further, as this is a planned outage, there is no reason why SingTel is not able to provide prior notice to RLs. SingTel should therefore provide sufficient notification such that RLs have sufficient time to notify their affected customers as well and such notification should be no less than fourteen (14) Calendar Days.

StarHub also notes that Schedule 7 of the RIO requires SingTel to provide fourteen (14) Calendar Days' notice for such outages. StarHub proposes that the relevant Schedules in the RIO be aligned with Schedule 7 accordingly.

d) Timeframes

Many of the timeframes used by SingTel are based on Business Days. However, it is not clear how SingTel implements such timeframes. StarHub believes that it is important for SingTel to clarify how the timeframes are imposed. This will prevent any confusion over the implementation of the timeframes stipulated in the RIO and therefore avoid situations where RLs miss deadlines imposed by SingTel due to different interpretations. Such clarity will also allow the parties to better manage their resources and their own Customer's expectations.

For example, in the current Schedule 7 of the RIO, SingTel is required to notify RLs of its acceptance or rejection of the RLs FLARs within ten (10) Business Days from the date of the RLs submission of the FLAR. However, it has been StarHub's experience that SingTel's responses have been received typically 1 day late (compared with the timelines stipulated in the RIO). For example, if a request is submitted to SingTel on 1 April 2005, SingTel will only respond to the RL on 18 April 2005, which is the 11th Business Day from submission of the FLAR. If parties are to adhere strictly to the RIO timeframes, then SingTel should provide its response no later than 15 April 2005 (i.e. the 10th Business Day from date of submission).

An understanding of how timeframes are implemented is especially important in circumstances where RLs have to respond to SingTel within a certain timeframe. Without such clarity, RLs could potentially miss the deadlines stipulated in the RIO and therefore risk having their application/request cancelled by SingTel.

StarHub therefore proposes that for clarity, the date of submission of a request/application be treated as Day Zero. Therefore the following Business Day will be counted as Day One and so on. The date of submission of request should also be used as the standard reference point for all timeframes.

e) Business Hours

Further to our comment above, StarHub requests for clarification on how SingTel will treat applications/requests that are submitted to SingTel after office hours on a Business Day. Specifically, StarHub requests confirmation that SingTel will still treat such requests as having been received on that Business Day and not the following Business Day.

If such is not the understanding, then StarHub would propose that the RIO be clarified accordingly and SingTel be required to specify its Business Hours.

f) Schedule 8 – Co-location at SingTel's Exchanges

StarHub notes that RLs can request for co-location space at SingTel's Exchanges under Schedule 8A (for interconnection) and 8B (for local loop, sub loop and local leased circuits).

StarHub submits that there should only be one Schedule to govern co-location at SingTel's Exchanges catering to both types of services (i.e. for interconnection and for access). This will ensure that RLs do not need to not acquire unnecessary additional co-location space in the same SingTel Exchange simply because it wants to use the space for interconnection as well as for access. Such a requirement is inefficient, drives up

costs for RLs unnecessarily and results in non-optimal use of scarce space within SingTel's Exchanges.

Alternatively, SingTel should be required to ensure that where a RL has unused capacity within its co-location space, the RL will be allowed to use the same space for both interconnection and access and will not be required to acquire separate co-location space. This understanding must be reflected in both Schedules 8A and 8B.

g) Schedule 9

StarHub notes that SingTel has, in various Schedules, reduced the overall number of applications/requests it will process per day/week. In consideration of this, StarHub submits that the relevant charges imposed on RLs (as specified in Schedule 9) must correspondingly be reduced since the amount of manpower deployed by SingTel for such tasks will have been reduced. To allow the charges to be maintained would only suggest that the RLs have been over charged for the Services incurred since the inception of RIO.

h) Charges

SingTel has sought to include various charges in the RIO which it claims to be for cost recovery purposes. While StarHub accepts that some of the costs incurred cannot be pre-determined (eg where costs are subject to site conditions), we submit all other charges which can be pre-determined, such as processing charges, must be pre-approved by IDA and included in Schedule 9 of the RIO.

In respect of the charges that cannot be pre-determined, StarHub submits that they should be subject to specific and prior approval by IDA. Such a requirement will prevent SingTel from imposing unreasonable charges for works to be carried out thereby forcing RLs to cancel their requests. Such a "loophole" can provide SingTel the opportunity to deny or delay service. Further, SingTel should be obliged to carry out such works while waiting for IDA's approval of the charges if such arrangement is agreeable to the RLs. This will ensure that works are not delayed while IDA's approval is being sought.

In addition, RLs should not be required to bear application or other charges where its requests are rejected for reasons that are not within their control. For example, where a RL's request for local loop is rejected because SingTel has reserved the "capacity" for its anticipated use, the RL should not be penalized by having to pay an application fee or processing fee as the RL will not have such information. Further, allowing SingTel to charge for such rejections will provide incentives for SingTel to deny service. Also, in situations where SingTel rejects an order after the stipulated deadline, RLs should not be required to pay SingTel any fees (application fees etc). This will ensure that SingTel is not tardy in its processing of requests.

i) SingTel Priority

When there is damage to any plant, SingTel requires that it be given priority to carry out restoration/rectification works. This is not feasible as it gives rise to a situation where a RL's personnel may be the first on-site and could have already started rectification works before SingTel's personnel arrive. Stopping work halfway just to give priority to SingTel's work will be disruptive and inefficient.

StarHub submits that both parties could be required to co-operate on-site and where one party can prove that there is a justifiable reason why it should be given priority at the site, then the other party should allow the other party to proceed.

Giving SingTel blanket priority is not always feasible in such circumstances especially where end user services are disrupted.

j) Reciprocity

It is not always reasonable and appropriate to insist that RLs provide SingTel reciprocal terms and conditions when they supply services to SingTel. Given that RLs lack economies of scales, they may not always be able to provide those same terms and conditions as SingTel. Moreover, RLs may also be subject to higher costs. They should therefore not be expected to offer reciprocal charges (similar to those in Schedule 9) to SingTel. RLs must be allowed to recover their costs of providing Services to SingTel based on their actual costs incurred, and cannot be expected to subsidize SingTel for obtaining those Services from RLs.

StarHub therefore submits that the RIO be clarified such that, save for O/T/T charges, the Schedule 9 charges should apply in general for both payments by and payments to SingTel. However, where a RL seeks to impose charges that differ from those specified in Schedule 9, IDA can have the right to audit the RL's proposed charges in accordance with the principles set out in Appendix 1 of the TCC.

A number of Schedules to the RIO are intended to have reciprocal application i.e. RLs supply services to SingTel. Given this intended reciprocal application, the way the RIO is currently drafted are only intended for SingTel to be the supplier and cannot be applied when the RL act as the supplier. Furthermore, not all RLs would have the capability to provide SingTel the same terms and conditions when acting as supplier to SingTel. Accordingly, the reciprocal application of the RIO should be amended to allow RLs to provide reciprocal terms and conditions, only where possible, when RLs act as the supplier to SingTel.

k) Treatment of Internet Dial-up Traffic

SingTel has proposed to treat Internet dial-up traffic as transit traffic instead of the terminating traffic. This is not consistent with IDA's decision in its "Review of Interconnection Charging Model for Internet Dial-up Calls". IDA had then decided that such calls should be treated as Terminating Interconnect Calls.

StarHub objects to SingTel's unilateral attempt to change the interconnect regime for such calls and submits that IDA must reject SingTel's amendments in relation to this matter.

l) Cost-Based Prices for FLLCs/TLLCs (Schedule 7)

The prices for FLLCs (Non-CBD) and TLLCs, ordered under Schedule 7 of the RIO, will expire in April and October 2006 depending on whether they are within the CBD. Thereafter, cost-based prices will apply. To date, it is not clear what these cost-based prices be.

StarHub submits that it is important for these cost-based prices to be made known as soon a possible so as to encourage take up and use of FLLCs/TLLCs.

This is especially so in the case of TLLC services, where RLs will be required to build out their trunk circuits to SingTel's Exchanges. This involves substantial investments by RLs. It is therefore important to ensure that RLs have full visibility of the long term prices of TLLCs in order to make such investment decisions.

Further, IDA should ensure that the cost-based prices are based on the cost structure of an efficient operator. In order to establish this, IDA should invite input from various FBOs.

StarHub therefore requests that IDA immediately commence the process of establishing cost-based prices for the Mandated Wholesale Leased Circuit service and that IDA conduct a public consultation to solicit input from interested parties on the various cost components that will be included in the prices.

B. Statement of Interest

1.1 StarHub Ltd is a Facilities Based Operator ("FBO") in Singapore, having been awarded a licence to provide public basic telecommunication services ("PBTS") by the Telecommunications Authority of Singapore ("TAS") (the predecessor to IDA) on 5 May 1998.

1.2 StarHub Mobile Pte Ltd is a wholly-owned subsidiary of StarHub Ltd. StarHub Mobile Pte Ltd was issued a licence to provide public cellular mobile telephone services ("PCMTS") by the TAS on 5 May 1998. StarHub launched its commercial PBTS and PCMTS services on 1 April 2000.

1.3 StarHub Ltd acquired CyberWay (now StarHub Internet Pte Ltd) for the provision of Public Internet Access Services in Singapore on 21 January 1999. In July 2002, StarHub Ltd completed a merger with Singapore Cable Vision to form StarHub Cable Vision Ltd ("SCV"). SCV holds a FBO licence and offers broadband and cable TV services.

1.4 This submission represents the views of the StarHub group of companies, namely, StarHub Ltd, StarHub Mobile Pte Ltd, StarHub Internet Pte Ltd and StarHub Cable Vision Ltd (collectively "StarHub").

C. Detailed Comments

MAIN BODY

PART 1 – ACCEPTANCE PROCEDURES

a) Clause 1.6 – Notification of Acceptance of RIO

StarHub believes that the reference to Section 4.3.2 of the Telecom Competition Code ("TCC") is incorrect. We believe that the correct reference should be to Section 6.4.1.7. The Clause should therefore be amended accordingly.

b) Clause 2.1 (b) – Assessment of Notification of Acceptance of RIO

SingTel has a statutory obligation to ensure that its current RIO incorporates *all* IRS as required by the Competition Code. Accordingly, StarHub submits that the words "*as defined by SingTel's then current RIO*" should be deleted. This wording is inconsistent with the Competition Code as it suggests SingTel has a residual discretion to reject applications for IRS based on SingTel's own definitions in the RIO. In fact, the Competition Code clearly provides that SingTel must provide all IRS under the RIO, with IRS defined in the Competition Code.

c) Clause 2.1 (d) – Assessment of Notification of Acceptance of RIO

As presently drafted, SingTel could potentially reject notifications of acceptance even if they contain immaterial and typographical errors. The RL would then need to resubmit all documentation. StarHub submits that in such circumstances, SingTel should be obliged to notify the RL within five (5) Business Days and allow the RL to rectify the non-conformity. In this manner the RL could quickly address immaterial issues, thereby avoiding the RL submitting all documentation all over again.

d) Clause 2.1 (e) – Assessment of Notification of Acceptance of RIO

StarHub submits that this clause should be deleted. Existing interconnection agreements do not necessarily permit, and may in fact prohibit, termination by the RL in the manner contemplated by the clause. Accordingly, clause 2.1(e) has the indirect potential effect of contractually preventing RLs from accepting a RIO. This is contrary to the objectives of the TCC. StarHub submits that SingTel should contractually agree in Part 1 of the RIO that the RL has the right to terminate the whole or any relevant part of any existing interconnection agreements with SingTel, without any liability, once the RL accepts the RIO.

Similarly, the RL may wish to continue to receive certain existing interconnection related services under existing customized commercial agreements but acquire new interconnection-related services under the standardized RIO. For example, the RL may wish to retain existing co-location arrangements for a specific site, but acquire new co-location arrangements under the RIO for another site. Such flexibility is important in preserving commercial arrangements between SingTel and the RL that have been tailored to each RL's unique circumstances. The RIO should not be drafted as an "all or nothing" agreement that overrides all existing commercial arrangements, and thereby interferes with existing negotiated customized solutions. Rather, the RIO should provide a means for RLs to adopt standardized commercial terms for issues not yet agreed.

e) Clause 2.1 (f) – Assessment of Notification of Acceptance of RIO

Consistent with Section 1.5.6 of the TCC, all exemptions given to SingTel, by the Authority, affecting the RIO should be made publicly available to all RLs. Otherwise, RLs will have no means of knowing current RIO coverage.

f) Clause 2.2 – Assessment of Notification of Acceptance of RIO

StarHub submits that IDA should not permit SingTel to make detrimental amendments to the RIO (including removal of services and schedules) without IDA first engaging in formal industry consultation with RLs. This is consistent with the requirements in Sections 1.5.6 and 6.3.6 of the TCC. Such a consultation requirement is crucial to natural justice and the effective operation of the RIO, particularly as RLs are uniquely dependent upon IDA to protect their commercial interests. Without a formal industry consultation, it is highly unlikely that the IDA will receive a balanced assessment of the impact of SingTel's proposed exemption. StarHub submits that IDA should always seek to ensure that submissions from SingTel are balanced by submissions received from the industry so that IDA has visibility of both sides of the issue.

Similarly, SingTel should be required to provide the industry with at least 1 month's notice before seeking exemptions from IDA. This will give the industry sufficient time to prepare submissions to IDA identifying any adverse consequences if such an exemption were to be granted. In this manner, IDA could make its decision with the benefit of receiving informed views from all parties affected by an exemption. Again, this is an important safeguard against submissions by SingTel which do not necessarily convey the full picture or identify the consequences for downstream competition in Singapore markets.

g) Clause 2.3 – Assessment of Notification of Acceptance of RIO

IDA should not allow the suspension of the Acceptance Procedures pending consideration of a SingTel exemption application. Clearly, any exemptions granted should take effect from the date of grant. SingTel should not be permitted to use an IDA review as an excuse to discontinue providing service in the absence of an IDA decision mandating this and therefore delay and deny services to RLs.

Similarly, where IDA makes a decision to include new services in the RIO, SingTel should have an express obligation to make such services available immediately from the date IDA makes its decision. SingTel should not be permitted to use delays in drafting service schedules as an excuse to deny provision of service. If SingTel is allowed to delay the provision of services until after the relevant schedules have been drafted, this would provide incentives to delay the drafting of those schedules.

h) Clause 2.4 – Assessment of Notification of Acceptance of RIO

As currently drafted, the clause provides considerable discretion to SingTel which could potentially be exercised in an unreasonable manner contrary to the objectives of the TCC. Consistent with the offer-acceptance mechanism contemplated by the TCC, SingTel's ability to reject an acceptance of the RIO should be extremely limited. SingTel is making a legally binding "offer" to the industry and should not have the ability to exercise any discretion to prevent reasonable acceptances of that offer. Such discretion is not contemplated by the TCC. The words "*, acting reasonably,*" should therefore be added after the word "SingTel".

i) Clause 2.4 (a) – Assessment of Notification of Acceptance of RIO

StarHub submits that the word "promptly" is too ambiguous and a time frame of five (5) Business Days should be specified. Certainty of time frames is critical to such issues as migration of services and the provision of satisfactory supply arrangements to downstream customers.

StarHub also refers to its comment in relation to clause 2.1(d) above. A rejection should only be permitted by SingTel if the RL does not rectify within five (5) Business Days of notification by SingTel that the RL's acceptance is non-conforming. If SingTel does not notify the RL that the acceptance is non-conforming within five (5) Business Days, SingTel should be deemed to have accepted the Notification. Such a mechanism is important in preventing SingTel from delaying interconnection by stalling processing of any acceptance of the RIO.

j) Clause 2.5 – Assessment of Notification of Acceptance of RIO

As drafted, this clause is inconsistent with clause 6.1. The TCC expressly directed that RLs should be permitted to obtain services on an interim basis under the RIO pending the adoption of an Individualized Agreement. Clarification is required that if a RIO is executed on an interim basis, the RL may terminate the RIO *without incurring any liability* once the Individualized Agreement has been executed. StarHub submits that the following words should therefore be added at the end of clause 6.1:

"*If the Requesting Licensee is executing the RIO on an interim basis under clause 6.1, it shall be an express term of the RIO Agreement that the Requesting Licence may terminate the RIO by written notice without incurring any liability upon the execution of the Individualized Agreement and that any services supplied under the RIO at that time will be deemed to be supplied under the terms and conditions of the Individualized Agreement without any further cost, charge or expense*".

StarHub submits that clause 2.5 should also be redrafted so that the parties are automatically deemed to have executed a RIO once the RL submits a conforming acceptance. This will prevent further potential for delay. This is entirely consistent with the "offer-acceptance" mechanism contemplated by the TCC and will prevent delays associated with SingTel not executing documents in a timely manner

k) Clause 3.2 – Representations and Warranties

The RIO should be valid, binding and enforceable against SingTel in the same manner that it is valid, binding and enforceable against the RL. SingTel should therefore be subject to a reciprocal warranty in clause 3.2 which is the inverse of the warranty in clause 3.1(c). There is no logical reason for SingTel to be excluded from an obligation to warrant that its obligations under the RIO are valid and binding and are enforceable against it in accordance with its terms.

l) Clause 3.4 – Representations and Warranties

Similarly, the RL should benefit from a reciprocal indemnity to the indemnity set out in clause 3.4. A reciprocal indemnity is necessary to give proper contractual effect to the warranties by SingTel in clause 3.1. If SingTel fails to maintain all necessary authorizations, for example, the RL should have the benefit of an indemnity to protect the RL against SingTel's failure. Again, it would appear to be directly contrary to the intent of the TCC that the RIO should be valid, binding and enforceable against RLs, but not necessarily against SingTel.

m) Clause 5 – Effect of Variation of SingTel's RIO

The *model* RIO is an "offer" on standardized terms. The individual RIO Agreements are formal contracts entered into as a result of the acceptance of that offer. While the model RIO should be viewed as a document which evolves over time by way of intervention by IDA alone, the RIO Agreements should be treated differently. This is because the RIO Agreements constitute binding bilateral contracts between SingTel and the RL. Accordingly, the consent of the RL should be required before any amendments to RIO Agreements are made.

Rather, all amendments to the *model* RIO should constitute automatic offers made by SingTel to RLs to vary the terms of each existing RIO Agreement. RLs should then have a discretion whether or not they accept that offer to vary. Such a requirement is critical to contractual certainty in Singapore interconnection arrangements. RLs cannot be expected to enter into contractual arrangements which are subject to amendment at any time and over which they have no control. Such a situation does not provide sufficient contractual certainty to RLs and increases business risk to the detriment of investment decisions.

If RL does not accept an offer to vary the terms of a RIO Agreement, such that the pre-existing RIO Agreement differs from the model RIO, then the RIO Agreement should automatically become an "Individualized Agreement". This would create greater contractual certainty for RLs while more effectively promoting the operation of the TCC.

In addition, if amendments or withdrawals are made to the model RIO, the industry should be provided with at least thirty (30) Calendar Days' notice. In this manner, RLs can assess any impact on their respective RIO Agreements. RLs cannot be expected to contract under interconnection agreements which are subject to amendment without notice at any time, given the very considerable business risk that this entails.

n) Clause 6 – Acceptance of RIO Pending Adoption of Individualized Agreement

As identified in relation to clause 2.5 above, further drafting is required to give proper legal effect to the interim acceptance procedure. RLs need an ability to terminate a RIO if they have entered into the RIO on an interim basis pending the conclusion of an Individualized Agreement. At present, notwithstanding that a RIO may have been entered into on an "interim basis", there is no apparent right to terminate the "interim" arrangement.

PART 2 – REFERENCE INTERCONNECTION OFFER AGREEMENT

a) Recital C – Recitals

StarHub submits that Recital C should identify that SingTel is subject to relevant legal obligations under the terms of its FBO Licence and the Telecommunications Act as well as under the TCC. These legal obligations in aggregate govern the terms and conditions of the RIO.

b) Clause 3.3 – Supply of Service

Please refer to our comments to Clause 19 below.

c) Clause 3.4 – Supply of Service

StarHub proposes that the words "or any other arrangement agreed between the parties" be added to the end of the Clause. This is to clarify that Parties are not expected to change present arrangements as a result of the revised RIO Agreement.

d) Clause 3.5 – Supply of Service

StarHub proposes that the following sentence be added at the end of the Clause :

"For *avoidance of doubt, Parties are not required to change any existing arrangements between the Parties* in regard to Third Party traffic."

e) Clause 4.1 – Commencement, Duration and Review

StarHub submits that the phrase "*as soon as practicable*" is too ambiguous and a timeframe of three (3) Business Days should be specified. Any ambiguity in timing set out in the RIO can result in delays to the detriment of competition. We believe that to avoid delays, all timeframes in the RIO should be expressed precisely in terms of the number of business days, thereby avoiding potential for delay.

f) Clause 4.2 – Commencement, Duration and Review

Given that it is more than 3 years since a number of RLs first entered into the RIO Agreements with SingTel, an important current concern for RLs involves what will happen when their respective RIO Agreements expire. StarHub submits that the RIO should be amended to include an automatic right of renewal, exercisable at the RL's discretion, for a further 3 years to ensure continuity of supply. If such a provision is not included, the RIO will terminate upon its expiry resulting in consequential service disruptions while a new RIO Agreement is entered into between the parties. Similarly, upon the expiry of the RIO Agreement a number of provisions of the RIO are triggered, including expiry of licences under various Schedules and SingTel's ability to exercise its "put option" to force Licensees to acquire certain infrastructure.

StarHub submits that RIO Agreements should continue indefinitely, on a 3 year rolling basis at the discretion of the RL, for such time as SingTel is required to offer a RIO under the provisions of the TCC, or unless the RL enters into an Individualized Agreement or unless the IDA or the relevant RL agrees otherwise. In this manner, the RIO will provide the basis for continuity of supply (and thus competition) on a sustainable long-term basis without the risk of service interruptions.

SingTel's proposed deadline of 28 September 2006 should therefore be deleted. The TCC clearly states that the RIO must be offered for a period of 3 years with the commencement date to be specified by notice in the Government Gazette.

A related issue arises under the various Schedules to the RIO where each provide that a licence to use a particular service is only available for various periods. Likewise, on the expiry of particular Schedules of the RIO, SingTel should not have the ability to immediately discontinue supply. Rather, supply should continue on the same terms and conditions until such time as new arrangements have been agreed between SingTel and the RL. StarHub also refers to its comment in relation to clause 13.7 below.

g) Clause 4.3 – Commencement, Duration and Review

Consistent with the comments in relation to clause 3.2 of Part 1, SingTel should not have the ability to unilaterally amend RIO Agreements once they have been executed with

RLs. All amendments to the model RIO approved or authorized by IDA should be automatically offered by SingTel to the RL. If the RL does not accept the amendments offered by SingTel, the particular RIO with that RL should not be amended but should rather become an "Individualized Agreement". This procedure is critical to contractual certainty of interconnection agreements in Singapore.

In addition, before SingTel seeks IDA's approval for amendments to the RIO, SingTel should notify the industry of the amendments sought. StarHub submits that IDA should engage in a formal consultation process with the industry in relation to such amendments.

h) Clause 5.1 – Charges

StarHub disagrees that the IRS charges which RLs charge SingTel should be reciprocated for services other than O/T/T. Since RLs may be subject to costs that are not related to their level of efficiency or within their control, it is not fair to prevent RLs from recovering such costs as a result of having to provide IRS to SingTel. RLs would, in effect, be forced to subsidize SingTel.

Alternatively, StarHub proposes that where RLs propose to impose charges on SingTel that deviate from RIO charges, such Charges be subject to an IDA audit and that such audit be carried out in accordance with the principles set out in Appendix 1 of the TCC.

This Clause should be modified accordingly.

i) Clause 5.2 – Charges

Notwithstanding the need for IDA approval, the existence of this clause creates very considerable contractual uncertainty for RLs. It is critical to the contractual certainty of Singapore interconnection agreements that all charges should be known in advance. RLs will make investment and contracting decisions on the basis of such charges. Once charges have been authorized by IDA, they should apply for the period of authorization.

j) Clause 5.3 – Charges

StarHub submits that the expiry of the Charges should be aligned with the expiry of the RIO.

k) Clause 5.6 – Charges

StarHub submits that the phrase "*as soon as practicable*" is too ambiguous and a timeframe of five (5) Business Days should be specified. SingTel has every incentive to immediately implement price adjustments in its favour, but to delay implementing price adjustments that favour RLs.

l) Clause 5 – Charges

SingTel has drafted the RIO (via clause 19) in such a manner that it also forces RLs to supply certain services to SingTel on the same terms and conditions. SingTel will therefore be potentially making payment to RL for services received. As potential suppliers under the RIO, RLs should therefore be entitled to the benefit of the same provisions as SingTel relating to amendments to charges. Clauses 5.2 and 5.6 should therefore be drafted to have reciprocal application between the parties in the same manner as the other provisions of the RIO (rather than assuming SingTel is always the supplier).

m) Clause 6.8 – Payment

StarHub submits that the words "*under this RIO Agreement*" should be inserted immediately after the words "*made available to the Requesting Licensee*" at the end of clause 6.8. As currently drafted, the clause extends beyond the scope of the RIO.

SingTel should be required to return the security deposit to the RL within fourteen (14) Calendar Days after the date of termination of the RIO.

n) Clause 6.9 – Payment

StarHub submits that the words "under this RIO Agreement" should be inserted immediately after the words "*owed to SingTel by the Requesting Licensee*" at the end of Clause 6.9. As currently drafted, the clause extends beyond the scope of the RIO.

SingTel should also be required to give reasonable notice in the form of a "default notice" to RLs before SingTel exercises its right under Clause 6.9. This will give RLs an opportunity to rectify unintended payment errors. Clause 6.9 should also only apply to charges under the RIO. SingTel should not be entitled to immediately claim on the security over a matter of liability which is contested by the RL, particularly where the RL has no reciprocal ability to claim on security in the event the RL suffers damage due to SingTel's conduct.

o) Clause 6 – Payment

SingTel has drafted the RIO (via Clause 19) in such a manner that it also forces RLs to supply certain services to SingTel on the same terms and conditions. SingTel will therefore be potentially making payment to RL for services received. RLs will therefore have a credit exposure to SingTel. RLs should be entitled to security from SingTel in order to protect against such credit exposure in the same manner that SingTel is entitled to security in order to protect against its credit exposure to RLs. Clauses 6.6, 6.7, 6.8 and 6.9 of the RIO should therefore be supplemented with an additional clause to reinforce the reciprocal relationship between the parties, and clearly impose reciprocal obligations (rather than assuming SingTel is always the supplier).

p) Clause 11.1 – Quality of Service

The word "manner" in clause 11.1(b) does not appear to address timeframes, which are critical to fault repair given that faults result in service outages of a particular duration. Accordingly, StarHub submits that the words "and the same timeframe" should be inserted after the word "manner" to ensure the provision of IRS on a non-discriminatory basis in accordance with section 6.3.3.1 of the TCC.

q) Clause 11.2 – Quality of Service

This clause has the apparent effect of removing all SingTel liability for a failure to provide timely services, but rather confining any remedy to that specified in a service schedule. Accordingly, it operates in a manner inconsistent with the non-discrimination obligation in section 6.3.3.1 of the TCC. StarHub submits that the clause should be redrafted so that the words "*but only to the extent specified*" are deleted and the clause is qualified so that it is expressly "*without prejudice to any other remedies that the Requesting Licensee may have under this Agreement or at law*".

r) Clause 11.3 – Quality of Service

This Clause should be further clarified to make it clear that SingTel is still liable to pay the various penalties for failure to meet the SLAs specified in the various Schedules.

s) Clause 12.1 (e) – Suspension

StarHub submits that the suspension right for this particular suspension event should be slightly modified so that the Suspending Party must give at least seven (7) Business Days' cure notice of the contravention before it can exercise its right of suspension. It may be that the particular contravention could be immediately addressed by the other party.

t) Clause 12.1 (j) - Suspension

This cannot be accepted as a reason for suspension. Not all IRS requires interconnection with SingTel as described in Schedule 1. One example of this is the Mandated Wholesale Leased Circuits service (Schedule 7), where RLs can use for the provision of services to their own Customers without the need to be interconnected with SingTel (as contemplated in Schedule 1). Using Schedule 1 as a criteria to maintain the RIO Agreement between SingTel and the RLs is therefore not acceptable.

Allowing this Clause to be added will result in SingTel denying services to RLs who wish to acquire IRS from SingTel but have no need for physical and/or virtual interconnection. This Clause should be deleted.

As a consequential amendment, Clause 12.7 should also be deleted.

u) Clause 12.4 – Suspension

RLs should only be required to pay such reconnection and reinstatement costs where the suspension is due to its own fault (and not SingTel's). Such charges should also be subject to prior approval by IDA. Where suspension occurs through SingTel's wrongful exercise of its rights, SingTel should compensate the RLs for damage that it occurs as RLs will be liable to their own Customers.

v) Clause 12.6 – Suspension

SingTel should only be allowed to stop processing or providing services in respect of the particular Schedule that it is seeking to terminate. Unless the suspension involves the entire RIO Agreement, SingTel must continue to provide services for the unaffected Schedules.

w) Clause 13.1 (c) – Termination

Please see StarHub's comments to Clause 12.1(j). This Clause should be deleted.

x) Clause 13.1 (g) – Termination

As with clause 12.1(e), the termination right for this particular termination event should be slightly modified so that the Terminating Party must give at least seven (7) Business Days' cure notice of the contravention before it can exercise its right of termination. It may be that the particular contravention could be immediately addressed by the other party.

y) Clause 13.4 – Termination

Please refer to StarHub's comments to Clause 12.6.

z) Clause 13.8 – Termination

The continued existence of a particular RIO Agreement should not depend on the continued existence of the model RIO. Such contingency undermines sanctity of contracts as it means that every interconnection agreement entered into under the RIO offer mechanism would automatically and immediately cease to exist merely because the IDA considered that a model RIO was no longer necessary.

The existence of such a clause has the effect that IDA could never remove the requirement for a model RIO from Singapore's telecommunications regime as, in doing so, all interconnection agreements entered into under the RIO offer mechanism would immediately terminate. Rather, as noted above in relation to clauses 6.1 and 6.2 of Part 1, each RIO Agreement should be viewed as having a contractual existence entirely separate from the model RIO. The model RIO should only be viewed as an "offer" to contract on standardized terms and conditions of interconnection. Once the offer is accepted, those standardized terms and conditions are immediately crystallized into a bilateral contract which then continues until the expiry of the term of the RIO, regardless of the status of the model RIO, unless the RL agrees to amendments.

aa) Clause 13.9 – Termination

Similarly, the continued existence of a service schedule in the RIO Agreement should not depend on the continued existence of that service schedule in the model RIO. If SingTel wishes to withdraw a service, such withdrawal should be agreed with RLs. RLs will be dependent upon that service and will have entered into their own contractual agreements with their own customers depending on that service. As currently drafted, clause 13.9 exposes RLs to unacceptable levels of business risk.

bb) Clause 15.4 – Limitation of Liability

StarHub submits that the words "*arising from this Agreement*" should be inserted immediately after the words "*course of business, or otherwise*". The current drafting could inadvertently be interpreted as applying to any liability between the parties, beyond the RIO alone.

cc) Clause 15.9 – Limitation of Liability

StarHub submits that the words "*, provided that such delay or failure is not occasioned by the willful misconduct, negligence or willful breach of this RIO Agreement by that Party*" should be inserted immediately after the words "*at the prescribed time*". It defeats the purpose of the RIO if SingTel could refuse to provide services, yet have no liability for doing so. The whole purpose of the RIO is to require SingTel to provide services, such requirement reinforced by contractual liability in the event of non-compliance.

dd) Clause 19 – Requesting Licensee's Duty to Provide IRS Necessary to Allow Physical Interconnection

The current drafting of this clause raises very considerable problems:

i) First, Clause 19.1 is contrary to the intent of the RIO as set out in the TCC. A RIO is supposed to be an arrangement for the supply of services *by the dominant*

licensee to RLs. However, Clause 19.1 forces *RLs* to supply services to the dominant licensee, even if these RLs are non-dominant.

ii) Second, such supply by RLs is required to be on the same terms and conditions as set out in the RIO. This is not always appropriate. The terms and conditions of the RIO have been drafted by SingTel for SingTel and have been heavily customized for SingTel's own network arrangements. They are not necessarily appropriate for the network arrangements of RLs as suppliers to SingTel. An example is set out in **Attachment A** to this submission.

(iii) Third, this means that if the model RIO is amended by IDA in relation to the terms and conditions of supply by SingTel, then the terms and conditions of supply by the RL (as supplier) are automatically amended. RLs therefore have little control over their own terms and conditions of supply. IDA also has not to date viewed RLs as potential suppliers under the RIO, so has not consulted with RLs from a supplier perspective in relation to amendments to the RIO.

To address these issues, StarHub proposes that RL should be required to provide the access to SingTel to facilitate interconnection with the RLs network. In addition, RLs will only be required to provide the necessary IRS where practical and on terms and conditions *broadly consistent* with those in the RIO. Where the RL wishes to supply of terms and conditions differing from those in the RIO, the RL should be permitted to notify IDA of the differing terms and conditions. On approval from IDA, SingTel should be required to execute a side letter to the RIO confirming the application of the different terms and conditions. All other terms and conditions would be the same as those in the RIO.

ee) Clause 21.1 (a) and Attachment D - Insurance

StarHub notes that SingTel has "pro-rated" the amount of insurance required for each service, with a maximum insurance liability of $20m. StarHub submits that IDA should undertake a careful review of the quantum of insurance with regard to all claims made under all RIO in place over the past years. We believe that the quantum of those claims is negligible. StarHub therefore submits that the $20 million of insurance cover required by SingTel is unreasonable, unjustifiable and excessive. It is out of all proportion to services obtained and acts as a barrier to entry, particularly for smaller industry participants. StarHub has been attempting to optimize its own insurance cover over the past couple of years, but has been contractually prevented from doing so given the existence of the $20 million requirement. StarHub submits that the appropriate maximum amount is $10 million if *all* services are acquired under the RIO. However, if not all services are acquired, the insurance cover should be reduced by pro-rating accordingly as proposed by SingTel in Attachment D.

ff) Clause 21 – Insurance

As noted above, various clauses in the RIO are drafted as though SingTel is the only supplier of services under the RIO. However, as drafted, Clause 19 forces RLs to supply certain services to SingTel on the same terms and conditions. As suppliers, RLs are entitled to the same insurance protection that SingTel is also entitled to as supplier. Clause 21 should be drafted to apply reciprocally to cover situations where the RL is the supplier and SingTel is acquirer, consistent with the remainder of the RIO.

gg) Clause 22 – Credit Management and Security Requirements

Following from StarHub's comments to Clause 21 above, as suppliers, RLs are entitled to the same security protection that SingTel is also entitled to as supplier. StarHub submits

that Clause 22 should be drafted to apply reciprocally to cover situations where the RL is the supplier and SingTel is acquirer, consistent with the remainder of the RIO.

hh) Clause 22.3 - Credit Management and Security Requirements

StarHub submits that there is no need for the RL to provide creditworthiness information in circumstances where the RL has provided a banker's guarantee to the level of 2.5 times monthly charges. Necessarily, a banker's guarantee provides adequate protection to SingTel. The nature of the information sought by SingTel may be highly commercially sensitive and detrimental to the competitive position of the RL. If creditworthiness information is to be provided, it should be provided to an independent third party subject to confidentiality undertakings with that third party then producing a creditworthiness report for SingTel.

ii) Clause 24.3 – Customer Relationship

The current drafting assumes that RLs do not supply services under the RIO. However, SingTel has drafted the RIO (via Clause 19) in such a manner that it also forces RLs to supply certain services to SingTel on the same terms and conditions. Clearly, RLs should be entitled to the same rights and obligations as suppliers, as SingTel has given itself as supplier. Clause 24.3 should be drafted to have reciprocal application in the same manner as the other provisions of the SingTel RIO.

jj) Clause 25.3 – Requesting Licensee's Representations and Communications

Please see our comments to Clause 24.3 above.

kk) Clause 26.2 – Assignment

Clause 26.2 should be modified such that SingTel must first obtain IDA's prior written consent before it can assign and/or transfer the RIO Agreement to any party.

ll) Clause 36.1 – Amendments

Consistent with the comments in relation to clause 5.2 of Part 1, SingTel should not have the ability to unilaterally amend RIO Agreements. All amendments to the model RIO approved or authorized by IDA should be automatically *offered* by SingTel to the RL. If the RL does not accept the amendments offered by SingTel, the particular RIO with that RL should not be amended but should rather become an "Individualized Agreement". This procedure is critical to contractual certainty of interconnection agreements in Singapore.

SCHEDULE 1A - PHYSICAL AND/OR VIRTUAL (DISTANT) INTERCONNECTION FOR FBOS

a) Clause 2.9 – Interconnect Configuration

There is no reason why SingTel should be the Party that assigns the Circuit Identification Code ("CIC"). StarHub therefore submits that the sentence "SingTel shall assign the Circuit Identification Code" be deleted.

Alternatively, it should be clarified that SingTel will only assign the CIC for the interconnect links owned by SingTel, while the RL assigns the CIC for the interconnect links owned by the RL, or that the assignment be mutually agreed by the Parties.

b) Clause 3.5 – Point of Interconnection

StarHub submits that there is no necessity for this Clause. Modifications are an operational necessity to ensure continued efficiency and optimal utilization.

However, if IDA allows SingTel to add this Clause, then StarHub submits that this Clause must be expanded to include detailed procedures to be adopted for modification of interconnect links. Further, charges to be imposed by SingTel must be approved by IDA and included in Schedule 9.

c) Clause 4.1 – Alternative Interconnect Configuration and Points of Interconnection

As a dominant licensee, all charges that SingTel intends to impose should be audited and approved by IDA. Therefore, StarHub proposes that the word "reasonable" be added after "is liable for any" and also that the charges be made subject to IDA's approval..

d) Clause 6.2 – Virtual (Distant) Interconnection

StarHub submits that as currently drafted, this clause prevents RLs from exercising their freedom of choice and to choose to obtain Local Leased Circuits from competing service providers, who may be able to provide a higher quality of service or better pricing, or even building the leased circuits themselves. SingTel should not be permitted to force RLs to acquire additional services from SingTel in this manner.

IDA will note that Schedule 1B of the RIO has been amended to enable SBOs to procure leased circuits from any service provider. It is therefore inconsistent that FBOs, who are most likely to have the ability to self-provide leased circuits, are not accorded the same benefit.

Accordingly the words "*shall acquire Local Leased Circuits from Sing*Tel" should be deleted and replaced by the words "*operate or procure transmission capacity*" or the Clauses in Schedules 1A and 1B be aligned so as to be consistent.

e) Clause 8 – Forecasting and Provisioning of Interconnect Capacity

A number of mechanisms are required to prevent call congestion. The procedures for forecasting and provisioning of interconnect capacity should include a methodology whereby once overall utilization (measured as an average over all interconnect links) reaches a certain threshold level, the affected party must upgrade its capacity within a specified timeframe in order to meet "grade of service" requirements. Prior to such upgrade, the affected party must borrow capacity from the other party at a pre-determined price to alleviate the congestion. Criteria establishing the threshold level at which upgrades should occur should be clearly identified. Penalties should be included to

address circumstances in which congestion occurs and there is a failure by a party to rectify that congestion.

StarHub proposes the following conceptual outline for that drafting. StarHub would be happy to propose specific drafting for the benefit of IDA to review if this would assist IDA:

(i) Traffic utilization measurement parameters are adopted consistent with those used to measure forecasting utilization. The methods of measurement are clearly stated. Both parties agree to use these traffic statistics to identify future traffic utilization and as a basis for notification to the other party whenever utilization reaches a level which is too high and thus causes concern to the notifying Party. StarHub proposes an 85% utilization level (averaged across all interconnect links) as a trigger for notification.

(ii) Upon receiving such notification, the receiving Party must acknowledge and inform the notifying Party within three (3) Business Days if its own statistics confirm the 85% utilization level. If the receiving Party's statistics show a utilization of less than 85%, both parties will exchange their respective traffic reports within five (5) Business Days and seek to identify whose statistics is accurate. If the differences cannot be resolved within three (3) Business Days, both parties will exchange the traffic statistics for another seven (7) Business Day period. In the event that the results still do not match and one parties' statistics shows that the traffic utilization has been breached, the higher value of the two will be taken to be the final utilization report.

(iii) If the receiving Party's statistics also show a utilization of more than 85%, or the parties otherwise agree that utilization is more than 85%, or if the higher value is taken as above, then the parties will work out possible solutions to alleviate the high utilization. Both parties will meet within a week to discuss possible solutions and to agree procedures for implementation. If the parties cannot agree a solution, the party with the congested capacity must borrow from the other party capacities to alleviate the congestion. StarHub submits that the rates applicable for such loan capacity should be:

- where the RL loans capacity from SingTel, SingTel's mandated wholesale LLC rates (as specified in Schedule 9 of the RIO); and
- where SingTel loans capacity from RL, the RL's standard wholesale rates.

(iv) Penalties should apply in the event that the receiving Party does not upgrade its interconnect links, or adopt an alternative agreed solution, to meet the grade of service requirements once congestion is identified.

f) Clause 8.14 – Virtual (Distant) Interconnection

StarHub refers to its comment in relation to clause 6.2 above. The RL should be responsible for providing sufficient transmission capacity, not necessarily by ordering Local Leased Circuits from SingTel.

g) Annex B – Operational Procedures

Clause 2 - Fault Handling Procedures

Annex B should contain a clarifying clause that each Party is responsible for identifying and rectifying faults on its own side of the POI. This provision should complement the

obligation in clause 2.1.1 of Annex B. At present, the demarcation of responsibility is not clearly specified.

SCHEDULE 2A – CALL ORIGINATION SERVICE

a) Clause 3.6 – Call Types

StarHub submits that there should only be one charge related to activating a call type and this charge should include processing and implementation charges. As drafted, the Clause seems to imply that RLs are liable for additional charges over and above those already specified in Schedule 9. This should not be the case.

b) Clause 3.8 – Call Types

As drafted, there is no committed date by which SingTel will cease the supply of the Call Origination Service in respect of a Call Type. This affords SingTel with much opportunity for delay.

StarHub submits that as a Call Type will likely relate to a cessation of service by a RL, the RL should specify to SingTel the date of cessation of the Call Origination Service by giving SingTel at least five (5) Business Days' notice.

Further, any charges to be imposed by SingTel should be approved by IDA and included in Schedule 9.

SCHEDULE 2B – CALL TERMINATION SERVICE

a) Clause 1.6 – General

StarHub strongly opposes the inclusion of this clause which excludes Calls to access dial-up Internet services from the definition of Terminating Interconnected Calls. IDA had in year 2002, conducted a "Review of Interconnection Charging Model for Internet Dial-Up Traffic" and had concluded that such calls be treated as Terminating Interconnected Calls.

StarHub therefore objects to SingTel's unilateral attempt to change the charging regime and treatment of such calls. Further, StarHub submits that, for reasons already submitted to IDA as part of the IDA's review, such calls are more appropriately treated as Terminating Interconnected Calls rather than Transit Interconnected Calls.

StarHub also rejects SingTel's reasons for wanting to treat such calls as Transit Interconnected Calls and submits that SingTel is already adequately compensated for such calls under the Terminated Interconnected Calls scenario.

b) Clause 2 – Call Types

Please refer to StarHub comments on Schedule 2A, Clause 3 above.

SCHEDULE 2C – CALL TRANSIT SERVICE

a) Clause 1.6 – General

StarHub requests for clarification in Schedule 2C that the Acquirer will only be responsible to provide and maintain Interconnection Links for conveyance of calls between the Acquirer's network and SingTel's network and not to the Third Party's Network.

b) Clause 3 – Call Types

Please refer to StarHub's comments to similar Clauses in Schedule 2A, Clause 3.

c) Clause 3.1(b) – Call Types

Consistent with StarHub's comments on Schedule 2B, Clause 1.6, StarHub submits that the phrase "including but not limited to an internet service provider" be deleted.

d) Annex 2C – 6 – List of Call Types for Transit Call Service

Please refer to StarHub's comments to Schedule 2B Clause1.6 above. StarHub rejects SingTel's proposal and submits that this Annex be deleted.

SCHEDULE 3A – LICENSING OF LOCAL LOOP/SUB-LOOP

a) General Comments

Many of the proposed drafting amendments identified below apply equally to other Schedules of the RIO, including Schedules 3B, 3D and 3E. For the sake of brevity, StarHub has avoided duplicating comments in relation to other Schedules of the RIO. Rather, StarHub notes that where other schedules of the RIO adopt the same formulation of drafting, the same comments should apply. StarHub would request that IDA take this into account when reviewing other Schedules of the RIO.

b) Clause 1 – Scope

Clause 1 should contain a provision that if SingTel fails to meet any timeframes in Schedule 3A relating to ordering/assessment or requests/access, and such failure is caused by SingTel, SingTel should provide compensation to the RL. StarHub is concerned at the potential for SingTel to breach the specified timeframes without any liability. If no penalty is imposed on SingTel in relation to a failure to meet specified timeframes, then SingTel will have little incentive to comply with those timeframes notwithstanding that they are specified in the contract. Rights of termination, for example, are of no use to RLs given that SingTel remains the only supplier in most circumstances and RLs have no other alternative. SingTel's compliance with the specified timeframes is critically important to the quality of service provided to End Users.

c) Clause 2.2 and 5.4 – Availability of Local Loop or Sub Loop

StarHub submits that the availability of Sub Loop or Local Loop is currently very subjective. SingTel has considerable discretion to deny availability with little accountability in circumstances where SingTel has denied availability. The drafting of clause 2.2 should be tightened so that the specified matters are the only matters to which SingTel may have regard. In particular:

(i) SingTel must be required to justify why Local Loop or Sub Loop is not available, as further identified in relation to clause 5.4 below.

(ii) Clause 2.2(a) and (b) should be modified so that availability is assessed as at the time of application by the RL and the one (1) year reservation period is reduced to 6 months. StarHub submits that SingTel is unable to forecast its own requirements twelve (12) months into the future.

(iii) Clause 2(d) should be deleted. It is clear that any Governmental Agency or Customers, such a foreign embassies will not request for services from RLs that it feels is a security threat. Therefore, the fact that such Agencies and/or Customers request for services from a RL is sufficient proof that there is no issue of security, confidentiality or restrictions. SingTel should therefore not be allowed to play "gatekeeper" and use this as a reason for rejection.

(iv) Clause 2.(e) should be modified so that SingTel can only reject a request for Local Loop or Sub-loop which has been earmarked for decommissioning if such decommissioning will occur within 6 months from the date of the request. There may be a considerable period of time before decommissioning occurs during which the Local Loop or Sub Loop could be utilized by the RL.

(v) IDA should have the right to audit the justification for any SingTel refusal to provide local loops/sub loops.

d) Clause 3.3 – SingTel Local Loop Related Information

Allowing SingTel up to fifteen (15) Business Days (i.e. 3 weeks) to provide information that is readily available to it is unreasonable. Further, although the clause states that SingTel may provide the requested information progressively, there is no assurance that SingTel will do so and may well only provide such information at the end of the 15-day period. StarHub would note that SingTel does not impose a 3-week waiting time on information provided to its retail customers on service availability.

StarHub therefore proposes that SingTel be required to provide all requested information within five (5) Business Days.

In addition, as SingTel requires RLs to specify the MDF Number when applying to use SingTel's Local Loops and/or Sub Loops, StarHub submits that SingTel must be required to also provide such information upon request since MDF Numbers are specified by SingTel. StarHub therefore proposes that where RLs provide SingTel with a Building Address, SingTel should be required to provide the MDF Number to the RLs.

e) Clause 3.6 - SingTel Local Loop Related Information

SingTel must be required to provide a guarantee that the information it provides is accurate for a certain period. Without such guarantee, there is no assurance that SingTel will ensure that the information provided is accurate in the first place as by the next day, SingTel can claim that the information has changed.

StarHub therefore proposes that SingTel guarantee that the information provided is accurate for thirty (30) Business Days and also be required to update the RL on any changes within this thirty (30) day period.

Further, RLs should not be liable to pay SingTel for any charges resulting in rejections in application arising from inaccurate information provided by SingTel.

Clause 3.7 should be amended accordingly.

f) Clause 5.2 – Response Time

StarHub submits that the maximum number of applications that SingTel will process per Business Day (30) is too low. While this number may be feasible for corporate customers, this limit is clearly too low when retail customers are involved.

As with StarHub's previous submissions to IDA on matters related to SingTel's RIO, we believe that past experience on the take-up rate cannot be used as a gauge for future take up rates. Many of the terms and conditions of various Schedules in the existing RIO are operationally unfeasible and therefore take up rates have been low.

StarHub submits that a more feasible limit is one hundred (100) applications per Business Day. SingTel should also be required to put in place procedures to cater to situations where there are surges in the number of applications so as not to create a situation where there is a huge backlog of unprocessed applications resulting from the maximum number of applications that SingTel will only process per Business Day.

g) Clause 5.4 - Response Time

Where SingTel rejects an application, it must provide the reason for rejection.

SingTel should also be required to notify RLs of the rejection within three (3) Business Days so that RLs can similarly inform their own Customers. We believe that SingTel will have in place the necessary systems to allow rejections to be made within these timeframes.

StarHub submits that Clause 5.4(d) should be deleted. If RLs obtain Local Loop Related Information from SingTel, SingTel should already make known to the RL whether the related Local Loops are available/unavailable in accordance with Clause 2. Therefore, unless the Local Loop Related Information has not been obtained from SingTel beforehand, SingTel should not be allowed to reject applications on this basis.

Further, SingTel has added a new Clause 5.4(j) that gives SingTel a reason to reject an application if the RL has not obtained all necessary permissions or rights of access from the Customer or owner of the premises. StarHub submit that this clause should be deleted as there is no requirement (nor should there be any requirement) for RLs to proof to SingTel that is has obtained such right/permission. SingTel is therefore not in the position to verify the situation. In addition, it is in the RLs interest to ensure that it has obtained all necessary rights/permissions to facilitate work to be carried out by SingTel. This clause is therefore unnecessary.

h) Clause 5.5 - Response Time

The RL should not be required to pay an application fee to SingTel if its Request is unsuccessful. Such an application fee creates incentives for SingTel to err on the side of rejection, thereby benefiting from further application fees when the same Request is later resubmitted.

The clause should clarify that RLs need not pay any fees if the rejection of the application is due to any inaccurate information provided by SingTel or due to circumstances beyond the RL's control (e.g., rejection under clauses 5.4(d) and 5.4(e)).

i) Clause 6 - Delivery

StarHub submits that SingTel should be required to provide a test report or result to confirm the local loops and sub-loops have been properly tested prior to delivery. The outcome of the testing report should be notified to the RL at the same time that SingTel notifies the completion of provisioning of the Local Loop or Sub-loop. Again, this will ensure that SingTel's accountability in provisioning services is increased and that services are provisioned to an objective service quality standard.

j) Clause 6.1 – Delivery

The clause should be amended so that SingTel is required to inform the RL of its inability to meet the provisioning date within two (2) Business Days of becoming aware of the delay. Further, SingTel must in the same notification inform the RL of the new provisioning date. This is important so that RLs can in turn inform their Customers of the situation and make new arrangements for access etc if required.

StarHub also submits that the timeframe from delivery of the Local Loop or Sub Loop should be shortened to five (5) Business Days.

k) Clause 9.10 – Standard Terms and Conditions

StarHub submits that, to ensure that the equipment used by all service providers are compatible and meet the standards of the Spectral Compatibility of xDSL Systems Plan ("Plan"), this Plan should be developed in consultation with all services providers offering

this service under the RIO Agreement. This is to ensure that SingTel, as a Dominant Licensee, is not able to develop the Plan such a way as to disadvantage its competitors.

l) Clause 11.6 – Fault Reporting and Clearing

StarHub submits that the three (3) Business Day time frame for SingTel to respond to a fault via a "First Appointment" is totally unreasonable. Faults should be addressed and rectified very quickly, within the space of 1 to 2 hours (e.g., maximum 2 hours). Consumers will typically suffer considerable service disruption during the period of a fault so a rapid response time should be required to ensure a high quality of service. IDA should take the opportunity to require SingTel to improve the quality of service that SingTel provides, given the impact that service disruption can have on Customers, especially business customers.

Similarly, there needs to be a specified commitment period for the restoration of faults in the Local Loop and Sub Loop. For example, the First Appointment should occur within 2 hours, the fault diagnostics should be completed within another 2 hours, restoration of the service and correction of the fault should occur within 1 hour of diagnosis. SingTel should pay damages to the RL if the fault cannot be restored within that time frame.

m) Clauses 11.10 and 11.11 – Fault Reporting and Clearing

There is a need to define "interfering Party". StarHub would note that if interference is caused, it could be due to a variety of faults including the joint impact of SingTel's and the RL's services.

n) Clause 11.14 – Fault Reporting and Clearing

This clause is not acceptable. The amendment removes from SingTel any obligation to notify the RL for service disruptions of up to 3 hours in duration. SingTel cannot be allowed to only provide reasonable notice especially in the event that the work carried out by it will cause service disruptions.

It must be borne in mind that RLs have a duty to inform their Customers of any service downtimes. Without such notice, RLs will be inundated with calls from Customers to enquire about the service disruptions and will eventually need to contact SingTel for the answers anyway.

Further, since the works to be carried out by SingTel are planned, there is no reason why SingTel cannot provide advance notice to RLs. Consistent with Clause 12.2 of Schedule 7A, SingTel should be required to provide fourteen (14) Calendar Days advance notice to RLs for any planned outages. For avoidance of doubt, such notice shall be required for all planned outages and not limited to those that exceed 3 hours.

Also, SingTel should not be allowed to absolve itself of any responsibility for losses resulting from the repairs or upgrades. This will not incentivise SingTel to ensure that it discharges its duties with care and diligence. Clearly, where any fault occurs due to negligence on SingTel's part, SingTel should be liable for such consequential losses.

o) Clause 13.1 – Licence Term

The term of the licence should coincide with the term of the RIO. This will provide certainty to RLs who in turn need to provide certainty to Customers they serve.

p) Clause 13.4 – Licence Term

SingTel should not be allowed to terminate the licence by giving the RLs six (6) months notice. This clause provides RLs with little certainty and makes it difficult for RLs to run a commercial business. The requirement for SingTel to offer such a service is mandated by IDA and should therefore only terminate when IDA determines that SingTel is no longer required to provide such service. Further, should SingTel wish to terminate the licence for any Local Loop and/or Sub Loop, it must provide a reason for its intention and also seek prior approval from IDA.

This will ensure that SingTel does not engage in anti-competitive behaviour and terminate the licence simply to prevent RLs from serving their Customers.

q) Clause 14 – Suspension

SingTel's rights of suspension of the RL's licence in relation to the Local Loop or Sub Loop should be subject to the qualifications on suspension as set out in clause 12 of the main body of the RIO. Clause 12 of the main body of the RIO provides that where the relevant schedule provides that Clause 12 applies to the licence, the IDA must give prior written approval for any suspension. As currently drafted, Clause 14 of Schedule 3A gives considerable discretion to SingTel which could be used to SingTel's competitive advantage. It is important that the IDA can ensure that such discretion is exercised reasonably by SingTel.

Furthermore, SingTel should also provide for a form of remedy to the RL where the harm arises through the fault of SingTel and thus necessitates suspension. Clause 14 should be modified accordingly.

Further, where SingTel wrongly suspends the RL's licence, it should be liable to the RL for damages and such suspension will place the RL in breach of its contract with its own Customer.

r) Clause 15 – Termination of Licence

As with clause 14 above, Clause 15 of Schedule 3A should contain a requirement that Clause 13 of the Main Body of the RIO applies to SingTel's exercise of any termination rights under Schedule 3A, including all termination rights under Clause 15. StarHub refers to its comments in relation to Clause 14 above.

s) Clause 15.1 – Termination of Licence

Various provisions of clause 15.1 should be subject to a requirement that SingTel give a seven (7) Business Day "cure notice" prior to exercising a right of termination. This will ensure that the RL is provided with time to correct any breaches. The provisions of Clause 15.1 which should be subject to a "cure notice" include clauses 15.1(b), 15.1(c) and 15.1(e).

t) Clause 15.2 – Termination of Licence

SingTel should only be permitted to exercise a right of termination in relation to a *material* breach. The right of termination is a draconian right which should only be exercised in the worst case scenario, particularly given the severe consequences of termination identified above. SingTel should not be permitted to exercise a right of termination for any breach, no matter how technical or minor.

u) Service/Network Diagram of Building Blocks

At present, it is unclear to RLs which components need to be acquired from SingTel in order that the RL can provide a full service to its customers. This creates significant problems for RLs. StarHub submits that IDA should require SingTel to identify in the RIO, by way of a diagram, all the components and schedules that are required in order that the RL can provide an end service to Singapore consumers. This should include, for example:

(i) a diagram explaining the building blocks for delivery of an xDSL service using sub loop and local loop;

(ii) a diagram explaining the building blocks for delivery of an xDSL service using sub loop only; and

(iii) a diagram explaining the building blocks for delivery of an xDSL service using line sharing.

This will also assist RLs' understanding of the various terms used by SingTel in the RIO and will ensure better clarity and transparency.

IDA should also carefully assess the aggregate time frame under the RIO for the provisioning of all network elements by SingTel in the context of the RL acquiring a full package of unbundled services.

v) Annex 3A.1, Clause 2.9 – General Conditions of Physical Access

Clause 2.9 should be modified so that the RL is not required to indemnify SingTel for loss or damage if the loss/damage is due to the fault, negligence or willful conduct of SingTel.

SCHEDULE 3B – LINE SHARING

a) General Comments

Comments made in relation to particular clauses in Schedule 3A above apply equally to Schedule 3B where the same drafting formulation has been adopted in the RIO. StarHub has avoided repeating comments for the sake of brevity and to avoid repetition.

b) Clause 2.2 (f) – Availability of Line Sharing

SingTel has added a new Clause 2.2(f) which allows SingTel to make line sharing unavailable due to restrictions it imposes on access to its own buildings. This Clause is not acceptable.

There is no reason why Customers located in SingTel's buildings are not allowed to exercise their freedom of choice of a telecom service provider. This restriction goes against IDA's and the Government's objectives for liberalization of the telecom industry, and allows SingTel to retain its monopoly position as the only service provider to these Customers. This position would allow SingTel to act as "gatekeeper", denying choice to customers simply because of these customers' locations. StarHub submits that this is a breach of Section 8.4.1 of the TCC.

Should there be legitimate reasons for restricting access to such Customers, SingTel must make such reasons public and IDA should determine the legitimacy of such restrictions.

c) Clause 4.2 – Response Time

Please see comments to the relevant Clause in Schedule 3A above.

d) Clause 4.4 – Response Time

Clause 4.4 (f)

Please refer to our relevant comments to Schedule 3A above. RLs should not be required to pay SingTel any application fee where rejections occurs under circumstances beyond their control. It is clear that RLs will not be able to tell if the line is capable of Line Sharing since such information rests solely with SingTel.

Clause 4.4 (l)

StarHub submits that SingTel should provide the RL with a list of prohibited equipment and services once the RL opts into Schedule 3B. SingTel should also provide the RL with an updated list on a quarterly basis or otherwise on request. If the equipment or service does not fall within the list (or updated list), it is only fair that SingTel should not be permitted to reject a request; otherwise, the right of rejection could be exercised arbitrarily. RL's also need sufficient certainty that they can plan which equipment they will use to provide xDSL services in advance of requesting Line Sharing. Clause 4.4(l) therefore ought to be modified accordingly.

e) Clause 7.7 – Unauthorized Access to Shared Line

Where SingTel directs a RL, pursuant to Clause 7.1(c), to submit a Request for Line Sharing, SingTel should already ensure that such Request, when submitted, will be approved. It is unreasonable to direct a RL to submit a request and subsequently reject such request. Clause 7.7 should therefore be amended such that SingTel will not unreasonable withhold its approval of such requests as long as RLs adhere to the Ordering and Provisioning procedures.

f) Clause 10 – Fault Reporting and Clearing

Consistent with previous comments in relation to Schedule 3A, SingTel should be required to commit to improved fault response and restoration timeframes. If Singapore residential and business consumers are using broadband services for e-commerce and e-applications they will not usually be able to accept significant periods of service disruption. IDA has set a minimum guideline of 99% availability for xDSL/Broadband service that translates into 7.2 hrs of unavailability per month. The market is asking for 99.9% which is approximately 0.72 hr per months. SingTel must give a commitment to clearing faults in less than 1 hr (if not less).

g) Clause 10.8 & 10.9 – Fault Reporting and Clearing

Please refer to StarHub's relevant comments in Schedule 3A. As RLs are liable to their own Customers, SingTel must be required to notify RLs of any planned outages. StarHub proposes that these clauses be aligned with Clause 12 of Schedule 7A.

SCHEDULE 3C – SALE OF INTERNAL WIRING

General Comment

StarHub's comments in relation to the Schedule 3A and 3B should equally be applied to this Schedule where the same drafting formulation is used.

SCHEDULE 3D – LICENSING OF BUILDING MDF DISTRIBUTION FRAME

a) General Comments

i) Comments made in relation to particular clauses in Schedule 3A above apply equally to Schedule 3D where the same drafting formulation has been adopted in the RIO. StarHub has avoided repeating comments for the sake of brevity and to avoid repetition.

ii) StarHub submits that RLs should not be restricted under the RIO from self-building their own MDF Distribution Frames. Self-build enables RLs to have more flexibility and better control of its network and costs. Such a move also facilitates infrastructure-based competition. Self-build enables RLs to have more direct communications with their end customers.

b) Clause 6.1 – Installation of Subscriber Tie Cable ad Tie Termination Block

StarHub submits that it is impracticable to require the RL to provide the detailed information as requested in Clause 6.1(b). The RL does not have any information about SingTel's existing MDF equipment. Rather, it is SingTel that should have the obligation to provide RLs the requisite information. Clause 6.1(b) should be modified accordingly.

c) Clause 6.2 - Installation of Subscriber Tie Cable ad Tie Termination Block

Consistent with the comments and reasons above, SingTel should be required to revert with its acceptance or rejection of the plans, timetable and work method statement within three (3) Business Days. Clause 6.2 should be modified accordingly.

d) Clause 9.11 – SingTel Build

Clause 9.11 should be modified so that the RL is only required to pay SingTel's *reasonable* costs arising from the Construction Order up to the time of cancellation. StarHub submits that the word "reasonable" should be inserted before the word "costs".

e) Clause 10.1 – Replacement or Addition of Subscriber Tie Cable or Tie Termination Block

SingTel should only be allowed to recover any reasonable costs incurred in processing the request. Such costs should be should be approved by IDA and specified in Schedule 9.

f) Clause 16.4 – Termination of Licence

Where SingTel exercises its right to terminate which is not due to any breach or action on the part of the RL, SingTel should then bear the full cost associated with the termination. Clause 16.4 should therefore be modified accordingly.

(Note : This principle should be applied to every relevant clause in the RIO to similar effect.)

g) Clause 16.6 – Termination of Licence

Clause 16.6 should be modified so that the RL has no claim whatsoever against SingTel "*in connection with the removal of the Requesting Licensee's equipment".* As currently drafted, clause 16.6 could potentially apply to any claim.

SCHEDULE 3E – LICENSING OF OUTDOOR CABINET DISTRIBUTION FRAME

a) General Comments

Comments made in relation to particular clauses in Schedule 3A, 3B and 3D above apply equally to Schedule 3E where the same drafting formulation has been adopted in the RIO. StarHub has avoided repeating comments for the sake of brevity and to avoid repetition.

SCHEDULE 4A – EMERGENCY CALL SERVICE

a) General Comments

Comments made in relation to particular clauses in Schedule 2 above apply equally to Schedule 4A where the same drafting formulation has been adopted in the RIO. StarHub has avoided repeating comments for the sake of brevity and to avoid repetition.

b) Clause 1.5 – General

There is no reason why RLs should be required to assign dedicated interconnect links for the conveyance of Emergency Calls. Such additional requirement is not efficient and only serves to drive up the cost of services of RLs as they translate to excess capacity which will be under-utilized.

This Clause should be amended such that RLs are only required to provide and maintain sufficient Dedicated Emergency Call Interconnection Circuits for the conveyance of Emergency Calls.

c) Clause 2 – Call Types

Please refer to StarHub's comments on the relevant Clauses to Schedule 2A.

d) Clause 2.8 – Call Types

SingTel should only be allowed to recover any *reasonable* costs it incurs as a result of such activity. Further, such costs should be audited and approved by IDA and specified in Schedule 9.

SCHEDULE 4B – SUBMARINE CABLE CONNECTION SERVICE

a) General Comments

i) Comments made in relation to particular clauses in Schedule 3 above apply equally to Schedule 4B where the same drafting formulation has been adopted in the RIO. StarHub has avoided repeating comments for the sake of brevity and to avoid repetition.

ii) In addition, StarHub submits that Schedule 4B should be an independent Schedule and not "tied to" Schedule 8D. As IDA is aware, the close linkage of the two Schedules have allowed SingTel to exercise a wide discretion to delay and deny services to RLs. For example, in the past SingTel had refused to provide Connection services under Schedule 4B on the basis that there is a need to proof that RLs had either acquired IRUs on a cable or are cable owners although such restriction only occurs in Schedule 8B. StarHub would note that Clause 6.3.3.2(iii) of the TCC states that the RIO must "be modular, allowing a Requesting Licensee to purchase only those IRS and Mandated Wholesale Services that it wants to obtain".

iii) Finally, there should be a Clause added to clarify that RLs will be able to use their existing equipment to provide connection to different cable systems. This will ensure that equipment are efficiently utilized and that RLs are not forced to incur unnecessary additional cost that will reduce their competitiveness.

b) Clause 2.2 – New Cable Systems

As currently drafted, the requirement for SingTel to only submit to the Authority for approval to incorporate the New Cable System in the RIO within fourteen (14) Calendar Days affords SingTel with too much competitive advantage. This means that by the time RLs secure the required co-location space and acquire connection services, SingTel would already have upwards of 4 months' lead time to market its own services on that new Cable System. As is characteristic of new cable systems, the initial period when the cable first becomes commercially available is crucial and most capacity/IRU owners will want to access their capacity as soon as possible. With the current process, SingTel will be the monopoly provider of backhaul services for the initial 4 – 5 months. Further, it is typical for backhaul contracts to have a long duration meaning that SingTel may have cornered the market, benefiting from an unfair advantage, for this period of time. StarHub believes that this does not support the objective of introducing competition in the telecommunications market.

StarHub therefore submits that the New Cable System should be incorporated in the RIO Agreement by the time of the Ready for Purchaser Acceptance ("RFPA") date. This is the date when owners can commence testing and acceptance of the cable and it is a widely known practice that even at this time, many owners start using the cable to carry traffic. Therefore, this is an appropriate date to ensure that the New Cable System is incorporated into the RIO Agreement as RLs must be able to provide competitive backhaul services to such cable/capacity owners. The RFPA date is at least one (1) month before the RFS date.

To work out the start date (before RFPA date) when SingTel must commence seeking IDA's approval for incorporation of the New Cable System, IDA must take into account the timeframe needed to establish co-location (approximately 4 months) and to acquire connection services (at least 20 Business Days).

c) Clause 4 – Link and Capacity Activation Request

StarHub submits that SingTel should be required to activate the connection services outside of office hours. This is to minimize service disruption where live capacity is being activated (eg switching from one backhaul provider to another). Further Licensees should be able to specify the time of activation so as to be able to co-ordinate such time with their Customers.

d) Clause 4.1 – Link and Capacity Activation Request

StarHub submits that the LCAR form should be provided to SingTel no less than five (5) Business Days prior to the requested date of activation, rather than the current requirement of twenty (20) Business Days. StarHub submits that twenty (20) Business Days (being four weeks), is totally unreasonable for such "last-inch" interconnection between SingTel's DDF / ODF and the cable systems' DDF / ODF. In any case, SingTel would have already laid sufficient cable capacities between SingTel's DDF / ODF and the cable systems' DDF / ODF. SingTel would not need to install additional capacity on per request basis. We believe that the current twenty (20) Business Days is seriously limiting the ability of Licensees to access international cable systems, and that it is appropriate for Clause 4.1 to be amended to five (5) Business Days.

e) Clause 4.2 – Link and Capacity Activation Request

StarHub submits that the LCAR form should be processed by SingTel within two (2) Business Days, rather than five (5) Business Days. Business certainty is crucial to the provision of service by RLs to their customers. Reduced lead-times are necessary for

RLs to be able to provide such certainty to their customers. We do not believe that the works involved in processing LCAR forms warrants a five (5) Business Day timeframe.

f) Clause 6.2 – Deactivation

Consistent with StarHub's comments on Clause 4.2 above, StarHub submits that the timeframe for SingTel to notify RL's of its acceptance or rejection of requests for deactivation should be shortened to two (2) Business Days.

g) Clause 7.2(a) – Standard Terms and Conditions

StarHub submits that the requirement for SingTel to maintain and operate the Connection Service "*in accordance with international industry standards*" is too ambiguous.

StarHub proposes that clause 7.2(a) should be supplemented by the following service levels and rebates based on the industry standard. (SingTel's service level guarantees on its IPLCs can be obtained from its website.)

Circuit Provisioning	
Delay	**Rebate**
1 working day	10% of the Activation Charge
2 working days	20% of the Activation Charge
3 working days	50% of the Activation Charge
4 or more working days	100% of the Activation Charge

Monthly Service Availability (Based on 99.9% availability)	
Unavailability	**Rebate**
44 – 173 mins of unavailability	10% of Monthly Charge (which is the respective Annual Charge in Schedule 9 / 12 months)
174 – 259 mins of unavailability	20% of Monthly Charge
260 – 345 mins of unavailability	30% of Monthly Charge
346 – 432 mins of unavailability	40% of Monthly Charge
More than 432 mins of unavailability	50% of Monthly Charge

In relation to service performance, the service must also meet the following three criteria:

- Bit Error Rate (BER) < 1 x 10E-7
- % Error Free Seconds (EFS) > 99.9%
- Severely Errored Seconds (SES) < 5 seconds

StarHub proposes that if the service falls below these performance criteria, SingTel must report the failure to the RL immediately. After the RL receives SingTel's report, the RL will test the circuit for the segment in which the fault had been detected in blocks of 15 minutes to determine whether it meets the above performance criteria. Upon verification that the segment meets the above performance criteria, the RL will notify SingTel for the hand-over and acceptance of the Service.

StarHub proposes that the period during which the Service falls below the above performance criteria is known as "Unavailable Time". Provided that the RL has confirmed that the Service has failed to meet above the performance criteria, Unavailable Time will be calculated from the time the RL receives SingTel's report and SingTel return the relevant circuits to the RL for testing to the time the RL confirms that the Service is restored. Unavailable Time excludes periods during which the Service has been restored using other cables or medium of transmission.

StarHub proposes that the compensation would be paid in the form of cheque to the RL or deducted off from the RL's next bill.

h) Clause 9.2 – Planned Maintenance

The industry standard for notification of planned maintenance is fourteen (14) Calendar Days, rather than five (5) Business Days. Greater notification of planned maintenance by SingTel is required to enable RLs to provide sufficient time for their customers to make alternative arrangements. This is consistent with Clause 12 of Schedule 7A.

SCHEDULE 5A – LICENSING OF LEAD-IN DUCT AND ITS ASSOCIATED LEAD-IN MANHOLES

a) General Comments

Comments made in relation to particular clauses in Schedule 3 above apply equally to Schedule 4B where the same drafting formulation has been adopted in the RIO. StarHub has avoided repeating comments for the sake of brevity and to avoid repetition.

b) Clause 1.4 – Scope

If SingTel is delayed in relation to provisioning work due to events outside of its reasonable control, SingTel should be required to notify the RL within two (2) Business Days of becoming aware of such delay. SingTel should also be required to evidence that the delay is in fact caused by matters outside SingTel's reasonable control. In the event that a delay can be redressed if the RL were to intervene, such intervention should be permitted (e.g., submissions by RL to assist with approval by authorities). All extensions to timeframes sought by SingTel as a result of matters beyond SingTel's control should be agreed with the RL and should then become subject to the remedy provisions in clause 1.5.

c) Clause 2 – Availability of Building Lead-in Duct/Lead-in Manhole

StarHub seeks IDA's clarification that RLs can request for access to a building via multiple alternative lead-in ducts (where available). This is required for diversity purposes, and is an important issue for some customers.

d) Clause 2.2 – Availability of Building Lead-in Duct/Lead-in Manhole

SingTel should be required to provide reasonable alternative solutions to the RL where the requested Duct and its associated Manhole is not available. Particularly, as each request must identify the location and required Duct and Manhole under clause 3.2(c), SingTel should automatically provide alternative solutions based on the RL's request. The RL should have the discretion to accept or decline the proposed alternatives. Where the RL declines the proposed alternative, SingTel should re-propose another reasonable solution for RL's consideration.

If such a procedure is not in place, the RL would be required to re-submit another request and the whole process would be significantly delayed.

The same additional issues arise as with availability as identified in relation to clause 2.2 and 5.4(d) of Schedule 3A above. In particular, "unavailability" should not include maintenance pipe bore.

e) Clause 3.1 – Ordering and Provisioning

The current drafting is ambiguous as to the meaning of Duct and Manholes that are "*currently not being used for any other purpose*". As the clause is not cross-referenced to the concept of availability under clause 2.2, it appears to create a separate and very wide discretion for SingTel to argue that certain Ducts and Manholes are not capable to being subjected to the ordering and provisioning procedure. The breadth of the discretion could be exercised in an uncompetitive manner and should be limited accordingly. StarHub submits that the words "*currently not being used for any other purpose*" should be deleted and replaced with "*available as defined under clause 2.2*".

f) Clause 3.5 – Ordering and Provisioning

StarHub submits that the cap on processing of requests to one (1) per week is much too low. As a minimum, SingTel must be required to process at least "*one (1) per Business Day".*

With only one request processed per day, any backlog can be delayed up to seven (7) Calendar Days. This is not acceptable.

Further, SingTel should be required to develop procedures for handling situations where there is a surge in requests. SingTel should be prepared to deploy more resources to handle such situations to ensure that RLs are not delayed in their ability to provide services to their customers.

g) Clause 4.2 – Studies

The term "Processing Date" is not defined. Although there is such definition in Schedule 12, the definition refers to Number Portability and does not refer to Schedule 5A at all.

Further, StarHub proposes that the timeframe for In-Principle Approval or rejection be limited to ten (10) Business days from date of request. There will then be no need to define or stipulate a "Processing Date", and this term can be deleted from the text.

h) Clause 4.3(b) & (c) – Studies

SingTel must not be allowed to reject requests for minor errors. Allowing SingTel such discretion will potential permit SingTel to cause unnecessary delay. Therefore SingTel should only be allowed to reject requests where any omission or error is material.

Where there is an omission of information, SingTel should be required to notify the RL and require the RL to submit such information within three (3) Business Days, failing which the request can then be rejected. The relevant timeframes will be extended by the same extent of time required by the RL to submit the missing information.

i) Clause 4.3(d) – Studies

Please refer to StarHub's comments to Clause 2.2 above.

j) Clause 4.5 – Studies

StarHub notes that SingTel will now conduct a Project Study automatically without first seeking the agreement of RLs. StarHub submits that this renders the desk study redundant. StarHub proposes that once a request is submitted to SingTel, SingTel should immediately conduct a Project Study (to be completed within ten (10) Business Days) and notify the RL of the result upon completion.

With the removal of the desk study, the timeframe can be shortened by at least ten (10) Business Days.

k) Clause 5.2 – Delivery

The current drafting does not specify the timeframe between the completion of the Project Study under clause 5.2 and notification of Final Approval in clause 5.3. StarHub submits that SingTel should be required to notify the RL within a specified time frame whether the Request has received Final Approval. Accordingly, the words "*within two (2)*

Business Days of the completion of Project Study" should be inserted after the words "*If the Building Lead-in Duct and its associated Lead-in Manhole is available,".*

l) Clause 5.5 – Delivery

The current drafting of clause 5.5 allows SingTel to unilaterally extend the timeframe in relation to the construction of Connection Ducts. Limitations should be placed on SingTel to ensure that the discretion is not exercised to delay construction and provisioning. SingTel should not be permitted to extend the provisioning time without the RL's consent. If SingTel does not meet the construction timeframe, SingTel should be required to provide compensation under clause 1.5 of Schedule 5A.

In addition, there should be no requirement for the RL to acquire Connection Ducts from SingTel for the purposes of enabling the RL to connect to the Manhole. Rather, the RL should be permitted to directly construct its connection duct to the Manhole without the need to acquire a Connection Duct from SingTel. Therefore, upon receipt of the Final Approval, the RL should be permitted to proceed with the necessary physical access procedures for construction of the connection to SingTel's Manhole. StarHub has made submissions on the issue of connecting lead-in pipes through the walls of SingTel manholes in **Attachment A** to this submission.

m) Clause 5.6 – Delivery

SingTel is provided with substantial discretion to issue revised cost estimates without any limitations as to the degree of variance between original estimate and the revised estimates. Further, SingTel is also provided with the right to suspend construction if the RL does not agree to these revised estimates. To ensure that this discretion is not exercised in a manner contrary to the TCC, to delay provisioning or increase costs to RL unnecessarily, limitations should be placed on the degree of variance allowed between the original estimates and revised estimates. Furthermore, SingTel should be held accountable for the discrepancies and should give reasons for the variance. If the variation exceeds the original estimate by more than 15%, SingTel should bear the additional costs. No more than 2 revised estimates should be permitted in relation to any one request.

As noted above in relation to clauses 5.4 and 5.5, clause 5.6 should not apply if the RL decides to construct its own Connection Ducts. In this manner, the RL is better able to manage the costs and risks.

n) Clause 5.7 – Delivery

The obligations of the RL to complete the connection to the Connection Duct within the specified timeframe should correspond to SingTel's obligation to complete the construction of Connection Duct under clause 5.5. If StarHub's proposal in relation to Clause 5.5 is not accepted and SingTel retains a unilateral right to extend the timeframe in relation the construction of Connection Duct, the RL must also have a corresponding right to unilaterally extend the timeframe under this Clause 5.7.

In any event, if the RL is required to seek an extension of time under clause 5.7, SingTel should be obliged to respond to that request within three (3) Business Days. Otherwise, SingTel can delay the provisioning process by delaying responding to a request for extension of time.

o) Clause 6.1 – Cable Pulling

StarHub submits that a request for cable pulling should be made no less than five (5) Business Days in advance, rather than ten (10) Business Days in advance. There is no good reason why SingTel needs ten (10) Business Days' notice, as this creates significant disadvantages for the RL. Also, no specific duration should be stated in relation to the timeframe after the Completion Date in circumstances where the RL has constructed its own duct to the Manhole.

p) Clause 6.2 (e) – Cable Pulling

As drafted, SingTel has restricted the type of cable to be installed to copper cables. With advances in technology, there should not be such a restriction. StarHub submits that the phrase "gauge and number of cable pairs of each cable" should deleted. Instead, SingTel should simply state that RLs should provide the overall physical diameter of the cables to be installed.

q) Clause 6.4 – Cable Pulling

The timeframe for SingTel's approval should correspondingly be reduced.

r) Clause 6.5 – Cable Pulling

It is not possible for RLs to comply with the twenty-five (25) Business Day-period allocated by SingTel for cable pulling. Rather, RLs own timeframe for cable pulling is influenced by the timeframes of building developers and contractors who need to complete their own construction works before RLs are able to complete cable pulling activities. Accordingly, StarHub submits that the timeframe should be able to be extended by RLs by notice to SingTel without any penalty.

s) Clause 6.6 & 6.7 – Cable Pulling

The RL should not be required to pay a processing charges to SingTel if its application is unsuccessful. Such a processing fee creates incentives for SingTel to err on the side of rejection, thereby benefiting from further processing fees when the same application is later resubmitted. In particular, the RL should not be required to pay a processing charge to SingTel in the event of an unsuccessful application which is rejected due to circumstances beyond the RL's control.

In addition, any alternative installation schedule proposed by SingTel should remain subject to approval by the RL. Again, the RL is frequently dependent on third party developers to complete their own building development works before StarHub is in a position to pull cables to that building.

t) Clause 6.10 – Cable Pulling

SingTel should give the RL at least ten (10) Business Days' notice before SingTel proceeds with verification of work completion. Alternatively, the RL should be able to extend the timeframe for submission of the work completion report by notifying SingTel.

u) Clause 6.11 – Cable Pulling

SingTel should be required to provide the RL with the reason(s) for rejection of the work completion report since rectification by the RL can simply be the re-submission of another photograph. SingTel should not have the ability to reject the entire report without giving any reason.

v) Clause 6.12 – Cable Pulling

SingTel should not be permitted to charge the RL for the costs incurred in undertaking site inspections. Such site inspections would occur in any event as a part of SingTel's normal O&M programme.

w) Clause 7.1 – Replacement or Addition of Underground Equipment

Any processing charges should be audited and approved by IDA and specified in Schedule 9.

Further, as Underground Equipment are already existing and SingTel would have prior knowledge of the presence of the Underground Equipment, a lengthy process is not appropriate. StarHub submits that notification under this clause should be by fax and that approval be given within three (3) Business Days before commencement of work.

x) Clause 8 – Access to Lead-in Duct through SingTel's Lead-in Manhole

SingTel should not be permitted to use the RIO as a means of constraining the RL's downstream customer connections. StarHub submits that clause 8.1 is unnecessary and should be deleted. In addition, by imposing a constraint of only one riser for each building, SingTel is constraining the RL's cable routing within the building.

y) Clause 9.2 – Standard Terms and Conditions

As currently drafted, SingTel's obligations in relation to "maintaining and administering" the Duct and the Manhole is unclear and unspecified. SingTel's obligation should be clarified. SingTel's maintenance and administration requirements for Ducts should expressly include repairing Ducts due to choke, blockage, dislocation, damage by any source, and sinking/movement of soil/earth. SingTel's maintenance and administration requirements for Manholes should expressly include exposing frames and covers, replacing damaged frames and covers, removing oil residue and debris, raising frames and covers, and maintaining visible manhole identification on the cover and inside the manhole wall.

z) Clause 9.6 – Standard Terms and Conditions

The current drafting provides SingTel with extensive discretion to unilaterally assess and determine whether RL's Underground Equipment poses a threat. Further, it allows SingTel to incur costs on the RL's behalf. Such discretion should be strictly limited. SingTel should notify the RL where it considers the Underground Equipment a threat, and allow the RL the opportunity to rectify the problem. In addition, the word "*reasonable*" should be inserted before "interim measure" to limit the extent of rectification that SingTel can unilaterally take and the costs it can incur.

aa) Clause 9.7 – Standard Terms and Conditions

SingTel's requirement that SingTel always has priority access is discriminatory against the RL in circumstances where the RL's need for access may be more pressing. In addition, it creates considerable problems where the RL's personnel are already on-site and have commenced work, as the RL's personnel would be required to halt work while SingTel's personnel undertake their own. A more fair, efficient, reasonable and non-discriminatory way of determining priority for access would be to give priority to the personnel that are on-site first.

Alternatively, priority access should be decided on-site by the site personnel and will be dependent on the party that can justify why it requires such priority (eg extent of damage and number of affected customers).

bb) Clause 10 – Access and Approvals Required

The RL should not be responsible for obtaining consents where such consents are required by SingTel. Rather, it is SingTel that should have responsibility for obtaining such consents.

cc) Clause 11 – Unauthorized Access to SingTel's Underground Plant

In circumstances where SingTel claims unauthorized access has occurred, SingTel should be required to provide documentary evidence that SingTel actually owns the infrastructure to which it claims unauthorized access has occurred.

Further, any action to be taken by SingTel should be with the prior approval of IDA. To this end, StarHub submits that Clause 11.1(b) should have the words "subject to prior approval of the Authority" added at the end.

In relation to Clause 11.7, SingTel should not be allowed to reject an application which it has directed RLs to submit under Clause 11.1(c). Instead the Clause should be amended such that SingTel will not unreasonable withhold its approval provided RLs adhere to the Ordering and Provisioning procedures.

dd) Clause 12 – Physical Access Procedure

Not all the procedures specified in Clause 12.1 are applicable in all circumstances. Accordingly, the words "*the following procedures, to the extent they are applicable in the circumstances*" should be inserted at the end of the clause.

ee) Clause 12.1(a) and (b) – Physical Access Procedure

As currently drafted, SingTel is given the absolute discretion to unilaterally amend the procedures in relation to physical access. Such a right defeats the purpose of a RIO which is intended to ensure that all procedures are agreed in advance under IDA oversight. In accordance with the TCC, any changes to the Physical Access Procedures should be agreed between the parties and/or should be subject to IDA approval. Accordingly, the word "SingTel" should be deleted and replaced by "*agreement in writing between the Parties".*

ff) Clause 12.1(c) – Physical Access Procedure

StarHub submits that Clause 12.1(c) is superfluous given that the main body of the RIO already contains a requirement to comply with all applicable laws.

gg) Clause 12.1(d) – Physical Access Procedure

As with clause 12.1(a) and (b) above, SingTel should not have the ability to give instructions to the RL at its absolute discretion at any time. Such instructions would have the effect of unilaterally varying the RIO without the consent or approval of the IDA. All procedures should be agreed to in advance and approved by the IDA. If an amendment is sought, it should be subject to due process and agreed between the Parties. Accordingly, the words "written instructions provided to the Requesting Licensee by SingTel" *must be deleted and replaced with "other procedures agreed between the Requesting Licensee and SingTel*".

hh) Clause 14 – Marking of Underground Equipment

Consistent with the comments above, SingTel should not have the ability to unilaterally direct cable markings. Rather, markings should be agreed between SingTel and the licensee or otherwise by IDA oversight.

ii) Clause 15 – Requesting Licensee Rights

Where the RL constructs the lead-in pipe, the RL should retain rights, title and proprietary interest in that lead-in pipe. Clause 15 should be amended accordingly.

jj) Clause 17.1 – Suspension

SingTel's rights of suspension of the RL's licence should be subject to the qualifications on suspension as set out in clause 12 of the Main Body of the RIO. Clause 12 of the Main Body of the RIO provides that where the relevant schedule provides that Clause 12 applies to the licence, the IDA must give prior written approval for any suspension. As currently drafted, clause 17.1 gives considerable discretion to SingTel, which could be used to SingTel's competitive advantage. It is important that the IDA can ensure that such discretion is exercised reasonably by SingTel.

Furthermore, SingTel should also provide for a form of remedy to the RL where the harm arises through the fault of SingTel and thus necessitates suspension. Clause 17.1 should be modified accordingly.

kk) Clause 17.2 – Suspension

If SingTel wrongly suspends the RL's licence, SingTel should be liable to the RL for damages. Such suspension is likely to place the RL in breach of its contract with its own customer.

ll) Clause 19.1 – Termination of Licence

Where an extension is requested, SingTel should be required to respond within five (5) Business Days.

mm) Clause 19.2(d) – Termination of Licence

This provision should be deleted. The removal or abandonment of underground equipment does not automatically mean that the RL no longer needs access to the Duct or Manhole.

nn) Clause 19 & 20 – Termination of Licence & Expiry of Term of Licence

The drafting should be modified to address circumstances in which the RL constructs the lead-in duct.

oo) Annex B, Clause 1.4 - General

SingTel should not be allowed to impose a charge for processing the RL's Master List. This is an operational procedure imposed by SingTel and it is unreasonable that SingTel gains by then imposing a Charge for such work. If allowed, such Charges should be subject to IDA's approval and included in Schedule 9.

pp) Annex B, Clause 2.2 – Physical Access Request

StarHub submits that SingTel should be required to provide notification by fax of any approval for physical access.

StarHub is concerned that there is no incentive for SingTel to process applications within the time indicated in this Annex. RLs have little remedy if SingTel were to delay responding to applications in a manner which, in turn, delayed RLs from providing services to their customers. Such a delay would deny RLs the ability to access SingTel's manholes. Accordingly, incentives for SingTel to respond promptly must be created within the drafting of this Annex. StarHub proposes that such an incentive for SingTel to respond promptly would be created if authorization were deemed to have been granted if SingTel did not respond within the specified time period.

qq) Annex B, Clause 3 – Emergency Physical Access Request

StarHub submits that a definition of "emergency" is required to avoid disputes and for clarification. StarHub suggests that the following definition be adopted:

"*For the purposes of this Clause 3, an "emergency" includes any instance where there is, or is likely to be, or the circumstances may lead to, a major service interruption (i.e., an interruption of service to any RL customers) and the RL requires access to SingTel's manholes too perform restoration work and/or address the risk of, or the circumstances leading to, the major service interruption.*"

rr) Annex B, Clause 3.2 – Emergency Physical Access Request

Current drafting requires the RL to provide written and verbal requests before emergency access is granted. Due to the nature of an emergency, the RL should be permitted to direct its resources to responding to the emergency rather than to paperwork. Request for emergency access should first be through a verbal notification via telephone. The telephone notification should provide the material details and upon such telephone notification, emergency access should be deemed to be granted. The RL can subsequently provide a confirmation of emergency access by providing the necessary paperwork.

In an emergency situation, time is of the essence and a rapid response is paramount. RLs' response to an emergency should not be hindered by SingTel's paperwork and time consuming administrative procedures. Most importantly, SingTel should not have the discretion to deny RL's from responding to an emergency on the basis that paperwork is incomplete.

Consequential changes to Clause 3.3 are required to reflect the amended procedures for emergency access.

ss) Annex B, Clause 3.5 – Emergency Physical Access Request

As currently drafted, the RL is only allowed 8 hours for emergency access. The maximum period should be extended to 24 hours, allowing for serious emergencies and/or those which require significant work to address the situation. Further, the RL must be able to request an extension to the emergency access period from SingTel. In such circumstances, SingTel must not unreasonably withhold its approval for such an extension.

tt) Annex B, Clause 3.7 – Emergency Physical Access Request

StarHub submits that there is no basis for SingTel to have priority over the RL in cases of emergency. StarHub proposes that the parties should be permitted simultaneous access to a manhole to respond to emergencies that affect them both, supported by obligations of co-operation. If a co-ordinated response or simultaneous access is not possible, the first personnel on site should be permitted the first access (therefore avoiding the issue of RL personnel being half-way through rectifying an emergency and having to give way to SingTel personnel who arrive later). However, there is a need for a carve-out to address the situation in which one party is likely to suffer significantly greater damage than the other, in which case that party should be given priority access.

Accordingly, StarHub proposes that the words "*SingTel will have priority with the RL's knowledge*" should be deleted and replaced with "*the Parties shall co-operate in good faith to ensure both parties can undertake corrective action. Where possible, the RL will be permitted simultaneous access with SingTel and the respective personnel of both parties on-site shall co-ordinate their corrective action. If simultaneous access is not possible, the Party with the first personnel on site shall be permitted the first access, unless the other Party can clearly indicate that it will suffer significantly greater damage than the first Party if the other Party does not have priority access*".

uu) Clause 4.1 – Rejection of Physical Access Request

Consistent with the comments above, StarHub proposes the following amendments to reduce the scope of SingTel's discretion:

(i) It is important that SingTel's ability to reject applications is defined comprehensively, by use of the word "only". SingTel's only right to reject applications should be the rights set out in clause 4.1 of Annex B.

(ii) SingTel should be placed under an obligation to act reasonably when exercising its right to reject applications. SingTel should not be permitted to act unreasonably in a manner that would delay access by RLs.

(ii) SingTel's ability to reject applications on the basis they are incomplete should be addressed to avoid circumstances in which SingTel may reject applications on the basis of typographical errors, spelling errors, immaterial mistakes, and easily correctable errors. Such circumstances should not provide SingTel with the ability to delay providing access. In circumstances where an error in an application can be easily corrected, or omitted information can readily be obtained, SingTel should not have the ability to reject an Application, and require that the entire Application should be re-submitted. Such rejection creates inefficiency and delay. Rather, SingTel should contact the RL by telephone to seek clarification. If the information cannot be provided immediately, the 2 Business Day processing period will be extended by the amount of time that the RL takes to respond.

StarHub considers this approach to be reasonable and would prevent SingTel from rejecting entire applications on the basis of simple errors or mistakes in one aspect of an application. The missing information is not of such a nature that there would be a significant delay in RLs obtaining such information. Rather, such information could be provided quickly by RLs.

(iii) SingTel should not have the ability to reject an application because one of the persons named on the application is not on the master list or is barred from access. Rather, SingTel should accept the application subject to the RL

nominating an alternative person that is on the Master List and is not barred from access within two (2) Business Days of receiving notification of acceptance.

(v) StarHub understands that SingTel will need to schedule SingTel's own maintenance work. However, SingTel should not have a discretion to schedule maintenance work in a manner which is intended to deny access by RLs, hence SingTel should be placed under an obligation to act reasonably and in good faith. SingTel should also be required to advise RLs when the maintenance work will be completed so that RLs can schedule their own access to coincide with that completion date, thereby avoiding delay.

(v) SingTel should not be permitted to form its own *subjective* view whether access *may* threaten health and safety, etc. SingTel should be required to exercise its discretion to reject an application on an *objective* basis, subject to a test of reasonableness, based on the fact that access *will* threaten health and safety, etc. Again, StarHub's principal concern is that SingTel could use this grounds of rejection as a means to unreasonably deny access.

(vi) Again, SingTel should be required to act objectively and reasonably in determining whether an area is unsafe. SingTel should not have the ability to make an unreasonable determination that an area is unsafe and use this as a basis for denying RL's access.

StarHub submits that SingTel should be required to clearly identify why it is rejecting a physical access request, consistent with the earlier comments in this submission. Furthermore, SingTel should be under a contractual obligation to act reasonably and co-operate in good faith with RLs in relation to the consideration of requests for physical access, thereby ensuring that SingTel cannot continually reject access requests for spurious reasons.

vv) Annex C, Clause 1.2 – Working Inside SingTel Lead-in Manhole

The RL should only be required to remove debris from inside the manhole to the extent necessary for the RL to perform the required work. The RL should not have an obligation to maintain SingTel's manholes on behalf of SingTel. Accordingly, StarHub submits that the clause should be deleted.

ww) Annex C, Clause 2.3 –Cable Pulling Inside SingTel's Lead-in Manhole

StarHub submits that the word "material" should be added before "obstruction" for clarity.

xx) Annex C, Clause 2.5 - Cable Pulling Inside SingTel's Lead-in Manhole

The words "*If applicable*" should be inserted to clarify that a sub-Duct may not be required in all circumstances. Further, current drafting provides considerable scope for SingTel to delay the process by withholding approval for an unlimited time. Accordingly, the words "and must be granted within two (2) Business Days of receiving the request" should be added to the end of the clause.

yy) Annexes D & E – Forms

Consequential amendments are required as a result of the amendments identified above.

zz) New Provision – Notification of Need for Maintenance

The RL may encounter site problems such as duct blockage, duct congestion or missing manholes and duct segments due to inaccurate digital maps or any other situation (including manhole inaccessibility, hidden manhole covers, need for manhole cover exposure, or need for cleaning of debris from manholes). Such site problems may prevent the RL from accessing the approved duct sections and associated manholes to install its cables or construct the manhole connection. In such circumstances, the RL should have the ability to notify SingTel by fax or email, indicating the location(s) of the site problem.

StarHub submits that within ten (10) Business Days from the date of receipt of such notice, SingTel should proceed with all necessary maintenance works (including, for example, clearance of blocked and congested ducts, locating missing manholes, exposing, raising or lowering of manhole covers and repair of ducts) to correct the site problem at SingTel's own cost. SingTel should ensure accessibility of availability of the relevant ducts and their associated manholes. SingTel should inform the RL on completion of the maintenance works.

SCHEDULE 5B – LICENSING OF TOWER SPACE & CO-LOCATION SPACE AT TOWER SITES

a) General Comments

All comments provided to other parts of the RIO should be applied to this Schedule where applicable.

b) Clause 3.4 (e), (f), (g) – Ordering and Provisioning Procedure

SingTel should not be allowed to reject an application on these grounds. Instead, SingTel should make publicly available, or available on request, the criteria/specifications that must be adhered to when using its Tower Space. This Clause should be amended accordingly.

c) Clause 1.4 – Scope

The RL should benefit from a reciprocal clause, given that the potential for damage is mutual.

d) Clause 4.1 – Project Study

SingTel should commence the Project Study within five (5) Business Days from preliminary acceptance. By stipulating a Project Study commencement timeframe of fifteen (15) Business Days, the total time required from commencement to completion will be at least six (6) weeks. This is unacceptable and would cause undue delay to RLs.

e) Clause 4.2 – Project Study

StarHub submits that the preliminary site survey and joint site survey should be undertaken at the same time. There only one (1) site visit is necessary and should include the RL's personnel and consultant (if any).

f) Clause 4.6 – Project Study

As RLs are already required to engage professional engineers and/or consultants, which are subject to SingTel's approval, to perform structural analysis and electromagnetic tests, RLs should not be required to bear SingTel's cost should it decide to engage its own engineers and/or consultants to verify the results of such analysis. This Clause should therefore be deleted.

g) Clause 4.9 – Project Study

Any charges for site preparation work should be set by IDA, rather than at SingTel's discretion.

h) Clause 5.1 – Site Preparation Work for the Co-location Space

SingTel should be required to complete the Site Preparation Work within a specified timeframe. As drafted, SingTel can extend the Site Preparation Work indefinitely. StarHub submits that SingTel should be allowed a maximum of two (2) extensions and it if fails to meet complete the works by the second extension deadline, SingTel should bear the full cost of the Site Preparation Work.

SCHEDULE 5C – LICENSING OF ROOF SPACE & CO-LOCATION AT ROOF SITES

a) General Comments

All comments provided to other parts of the RIO should be applied to this Schedule where applicable.

In particular, comments to Schedule 5B above will similarly be applicable to this Schedule 5C.

b) Clause 1.3 – Scope

RLs should only be required to pay the "reasonable" costs incurred by SingTel. Further, such costs should be subject to IDA's approval.

c) Clause 6.10 (b) – Installation and Maintenance of Equipment in the Roof Space

This Clause should clarify that RLs are only expected to remove any flammable, toxic material, building material, or rubbish that resulted from the work it carried out and should not be expected to remove "material" that were already present when the RLs accessed the Roof Space.

SCHEDULE 5B AND 5C ATTACHMENTS

a) Attachment A, Clause 1.1.1 – Installation of Equipment at Co-location Space

As currently drafted, substantial discretion is provided to SingTel for the approval of installation plans. The words "*Approval must not be unreasonably withheld, and SingTel will provide a response within two (2) Business Days of receiving the plans."* should be inserted at the end of the clause.

b) Attachment A, Clause 1.7.1 – Interference

For clarity, the word ”material” should be inserted after the words “*Where the Requesting Licensee’s equipment is causing*”.

c) Attachment A, Clause 1.8.1 & 1.8.2 – Standard Operating Procedure & Safety

Please refer to comments in relation to clause 12.1(a) of Schedule 5A above. The word “*and any written instructions which are provided to the RL by SingTel*” should be deleted and replaced by “*by agreement in writing between the Parties*”.

SCHEDULE 6 – NUMBER PORTABILITY

a) General Comments

i) Fault Escalation Procedures

StarHub notes that while the DNO ad RNO are required to work together to resolve problems associated with the NP service, there are no proper fault escalation procedures included in this Schedule. StarHub submits that SingTel should be required to include such procedures.

ii) 1800/1900 Number Porting

StarHub further submits that the RIO should also include terms and conditions for porting of 1800/1900 numbers.

b) Annex A, Clause 1.1.7 – Processing Procedure of RNO

StarHub submits that a processing limit of twenty (20) numbers per Business Day is too low. With technological development, it can be expected that competition in fixed telephony services will increase. The limit of twenty (20) numbers per day will therefore be an artificial barrier to competition.

StarHub submits that the limit be increased to one hundred (100) numbers per Business Day with a further breakdown of fifty (50) numbers per batch (i.e. morning and afternoon).

c) Annex A, Clause 1.2.2 – Processing Procedure for the DNO

StarHub submits that the NP service is a time critical service as the availability and activation of the NP service can have an impact on service activation dates for the RNO's own Customers.

Therefore, timeframes from submission of an NP Application to service activation must be kept to a minimum. Further, any slippage in timeframes can lead to great inconvenience to customers.

StarHub therefore submits that SingTel must be required to notify RNOs of its acceptance/approval of the NP Application. StarHub further submits that the timeframe should be reduced to one (1) Business Day. This means that when a NP Application is submitted, the DNO must notify the RNO of its acceptance/rejection by the next Business Day.

d) Annex A, Clause 1.2.3 – Processing Procedures for the DNO

As stated above, the NP service will have an impact on service activation dates for the RNO's own Customers. Therefore certainty about the exact date/time when the NP service will be activated is important so that RNOs can notify their own Customers. As such, StarHub submits that the phrase "use its reasonable endeavours to" be removed from this Clause.

StarHub further submits that the timeframes for activation of the NP application be reduced to four (4) Business Days from the date of submission of the NP Application. Having too long a timeframe is a barrier to competition as Customers are not likely to be willing to wait so long for service activation and therefore have to continue to bear additional charges.

StarHub submits that a common reference point should be used to avoid confusion and that the date of submission is the best reference point.

e) Annex A, Clause 1.2.4 – Processing Procedures for the DNO

Arising from our comments above, this Clause should be consequentially amended.

f) Annex A, Clause 1.3 – Exceptions

StarHub submits that as NP applications arrive in bulk, and for ease of management, any rejected NP Application will be treated as null and void. The RNO will therefore have to re-submit a new NP Application for the same (rejected) customer and the NP Application will then be processed in accordance with Clause 1.2.

StarHub requests that this understanding be made clear in the RIO.

g) Annex A, Clause 1.4.3 – Implementation

StarHub submits that there should be different activations times for consumer and corporate customers and the activation times should be specified by RNOs as they will need to co-ordinate with their Customers.

It is proposed that the two timeframes be between midnight and 0700 hrs; and between 0800 hrs and 1000 hrs. The former will be typically used for corporate customers to ensure minimal service disruption and the latter for residential customers. StarHub also submits that activation of the NP service must take place in the morning so that where any fault is detected, both parties will have time to troubleshoot and resolve the fault.

Consistent with our comments on Clause 1.2.3 above, the timeframe should be amended to "the 4th Business Day of the date of submission of the NP Application".

h) Annex A, Clause 1.4.5 – Implementation

There should be a defined process for testing and fault notification, complete with contact numbers and a escalation process.

i) Annex A, Clause 2 – Termination of Number Portability Service

StarHub notes that the same Termination Form is used for both the Clause 2.1 and Clause 2.2 scenarios. As the considerations of both scenarios are different and especially in consideration that any errors in termination under the Clause 2.1 scenario can have more serious impact, StarHub submits that Annex 6F be modified to enable RNOs to indicate the type of termination i.e. Termination of Local Telephone Service and Number Portability Service; or Termination of Number Portability Service only.

j) Annex A, Clause 2.1.1 – Termination of Local Telephone Service

To remain consistent with the previous timeframes, StarHub proposes that these timeframes be similarly amended to four (4) Business Days from date of termination.

Consequential amendments will be required for subsequent clauses.

k) Annex A, Clause 2.1.2 – Termination of Local Telephone Service & Clause 2.2.2 – Termination of Number Portability Service

Again, for consistency, the notification by the DNO in relation to an NP Termination request should be within one (1) Business Day from date of receipt of the NP Termination Form.

l) Annex A, Clause 2.3 – Termination of Number Portability Service with RNO ad Return to RNO

StarHub submits that the timeframe for such termination be restricted to five (5) Business Days.

m) Annex A, Clause 5.1.1 – Termination of Line/Number Portability Service

Consistent with StarHub's comments on earlier clauses, we propose that the timeframe be reduced to four (4) Business Days.

n) Annex 6B, 6C and 6D

Theses Annexes seem to be inconsistent with the procedures described in Annex A and should be amended accordingly.

o) Annex 6H – Rejection Codes

Code 007 should be amended to read four (4) Business Days instead of seven (7) Business Days.

p) Annex 6I – Technical Specifications

For efficient use of scarce numbering resources, StarHub submits that there is no need to use a valid PSTN number to route the call and therefore proposes that a routing prefix be used instead. StarHub's proposal is described in greater detail below.

Technical Proposal for Number Portability

1 Routing Prefix Method

1.1 In a Network, where Number Portability is offered, a ported Customer has a routing prefix, which represents the Operator ID and the directory number, which represents the logical identity of the user itself.

1.2 The subscriber can be created into a switch by using the directory number.

1.3 The prefix is only for routing to the respective operator and can be stripped off on the local switch.

1.4 The Originating network must deliver the routing prefix and B-number to the Recipient Network in the Call Path.

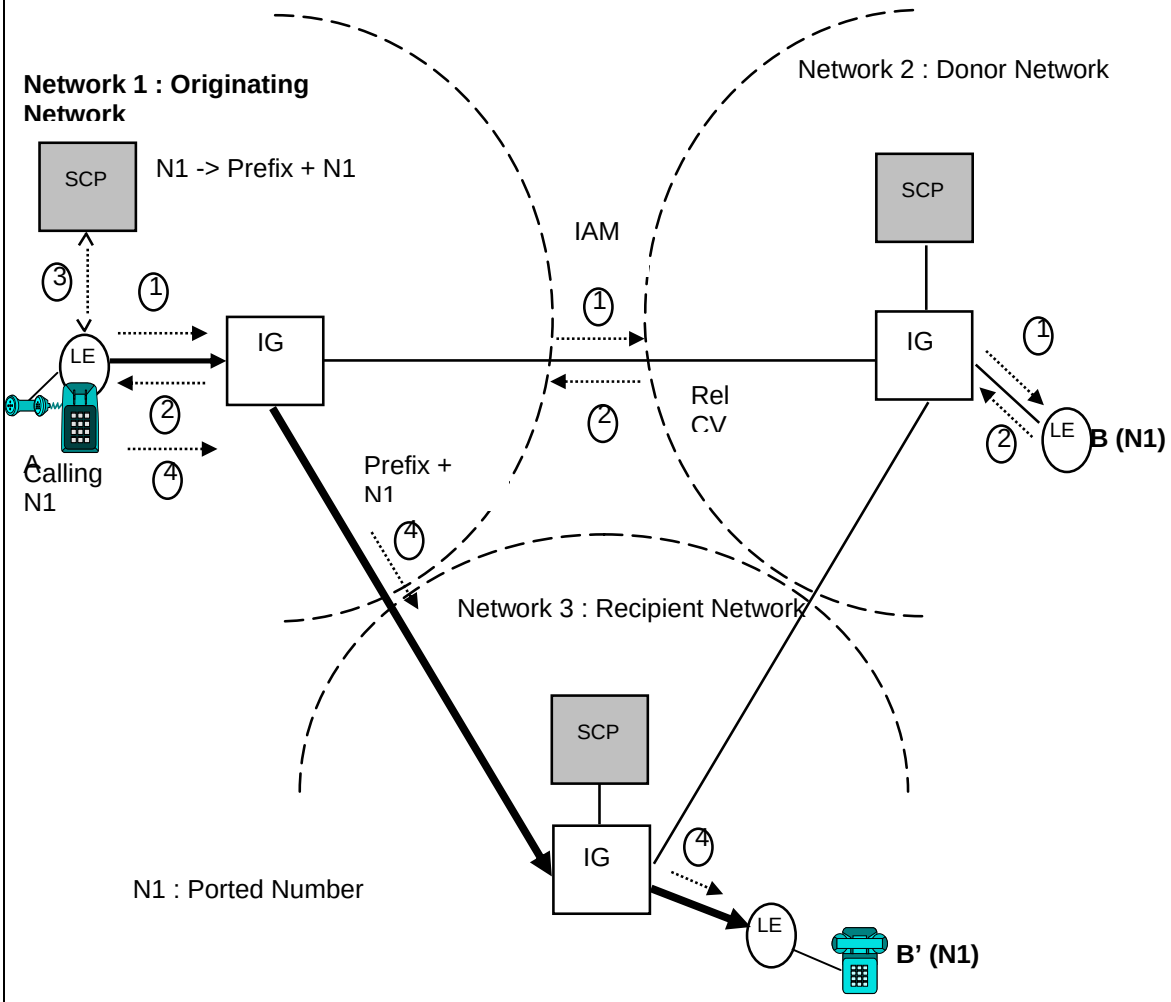
1.5 The Number Portability method to be adopted shall be QoR.

1.6 To support QoR, the Donor Network shall send a Release Message with a specified cause value to the Originating Network. The originating Network shall query the Database for the routing prefix and route the Call to the Recipient Network.

1.7 The cause value for QoR shall be ‘0001110’ or 14. The format shall be in accordance with Q.850.

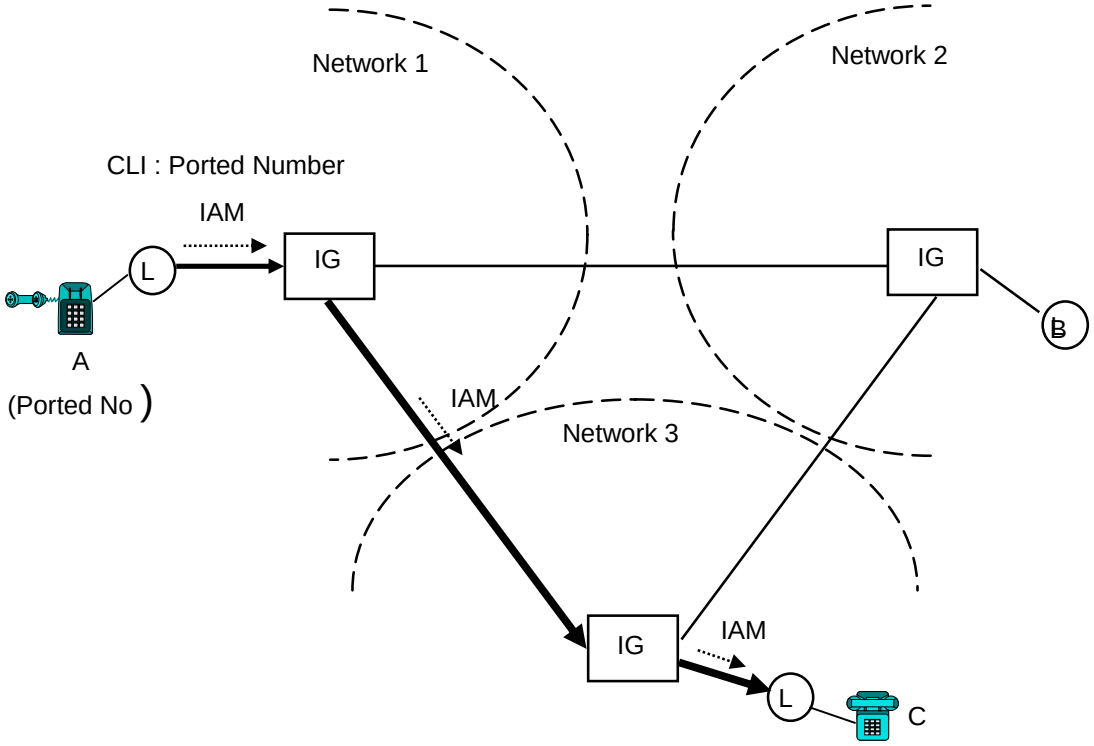
Below are the 2 scenarios for Number Portability:

a) Call to Ported Subscriber.



1. A, from Originating Network, calls B (N1).
2. The call is routed in accordance with the B (N1) number (to Donor Network)
3. If the number does not exist in Donor Network, the number is checked from Donor Network SCP database.
4. If the number is ported, Donor Network SCP sends a release message with the cause value #14.
5. Donor Network release the call with the cause code #14
6. A local switch of the originating network sends a query and B (N1) number to the SCP
7. The SCP continues the call and sends a new B (N1) number, which consist of a prefix (Operator ID) and the B (N1) number.
8. The call is routed in accordance with the prefix number to the new destination. (Recipient Network)
9. The local switch connects call to the terminating line.

b) Call from Ported Subscriber.



1. A ported subscriber is calling a non-ported subscriber, CLI = A (Ported number)
2. The call is routed normally to the destination

2. Benefits of Prefix Model

2.1 The prefix model makes the number analysis in switches much easier. The switches do not need the whole analysis trees for all routing number.

2.2 It facilitates the identification of each Operator.

2.3 No requirement of additional database for CLI modifications.

2.4 ISDN terminal number, directory number and subscriber number in switch are the same number, which will ease the maintenance of numbers.

3. Limitations of Routing Number

3.1 Need additional database for ACLI information

3.2 It will cause difficulties in maintaining two different numbers for subscriber.

3.3 It will cause wastage of numbering space.

3.4 Terminals and switch have different numbers, which will have the difficulties in maintaining.

SCHEDULE 7 – WHOLESALE LEASED CIRCUITS

a) Connection to Mobile Base Stations

Singapore enjoys one of the highest mobile subscriber penetrations rates in the world. Statistics on IDA's website show that even while fixed line penetration rates are dropping, mobile phone penetration rates have increased.

However, the RIO restricts the ordering of SingTel's Wholesale Leased Circuits for connection to mobile base stations (see Schedule 7A & 7B – Clause 1.4a). StarHub submits that this restriction should be removed. With a ubiquitous island-wide network, mobile operators are highly dependent on SingTel's leased circuits for connection to various points of their mobile networks. In fact, mobile operators are one of the largest users of SingTel's leased circuits. As such, this restriction means that mobile operators will not be able to enjoy the mandated rates under the RIO but will have to continue to pay SingTel its extremely high "commercial" leased circuit rates. If the RIO restriction on the ordering of wholesale leased circuits for connection to mobile base stations was lifted, this would reduce the cost structures of the mobile operators, which would allow cost savings to be passed on to mobile users.

Further, mobile operators also hold Facilities-based Operator Licenses and invest substantially in developing mobile networks in Singapore. It is therefore unclear why they should be prevented from benefiting from the mandated wholesale leased circuit rates under the RIO. They clearly meet all the same criteria as other FBOs.

StarHub therefore submits that this restriction be removed. StarHub further submits that with the high mobile penetration rate in Singapore, the removal of this restriction can provide mobile operators with substantial costs savings which can be used for the benefit of the mobile community at large.

b) Connection to SingTel's FM Sites

While the RIO does not restrict ordering of wholesale leased circuits to SingTel's FM sites, StarHub's experience is that SingTel unfairly and unreasonably blocks RLs from ordering FLLCs to connect to End Users located in SingTel's FM Sites. StarHub contends that there is no legitimate reason for such action and that SingTel's action to block RLs from using FLLCs to serve their End Users is to enable SingTel to establish itself as the monopoly service provider to such End Users.

StarHub submits that the RIO must make clear that SingTel FM sites are legitimate A-end sites and that amendments should be made to the RIO to prevent SingTel from restricting access to the Mandated Wholesale Leased Circuit service for connection to such sites. We do not believe that SingTel should be allowed to act as gatekeeper, denying customers the benefits of IDA's determination.

SCHEDULE 7A – WHOLESALE LEASED CIRCUITS (FULL CIRCUITS)

a) General Comments

i) As rightly pointed out by IDA, the leased circuits service is a crucial service for provision of telecom services to business End Users. As such, there must be assurance provided to RLs and therefore end users on the status of the FLLCs ordered under Schedule 7A when the term of the circuits expire. As a minimum, IDA should require that SingTel provides assurance that there will be no service

disruption during migration of the circuits/service from Schedule 7A to either a commercial agreement or to Schedule 7B.

ii) StarHub also proposes that when requested SingTel should be required to provide information as to the availability of the requested capacity for speeds about 45 Mbps. This information is currently available to licensees ordering circuits under a commercial agreement with SingTel. This will enable RLs to avoid situations when FLARs are rejected due to a lack of capacity and therefore allow them to provide more effective solutions to their own Customers.

b) Clause 1.4(a) – Scope

StarHub submits that FBO Sites should not be part of the list of Excluded Sites. Allowing connection to FBO Sites will facilitate competition in the wholesale market. This will ultimately benefit End Users. IDA's decision to designate the LLC service as a Mandated Wholesale service under the RIO is to facilitate competition and therefore ultimately benefit End Users. StarHub therefore submits that there should not be any barriers to the way this service is being used.

It must also be recognized that a healthy wholesale market supports competition as it provides licensees with a choice of service provider. StarHub therefore submits that SingTel should be required to provide the FLLCs to FBO Sites.

Should IDA not accept StarHub's proposal, StarHub would request that Clause 1.4(a) be clarified such that it does not apply to RLs requesting for FLLCs for provision of telecommunications services to other FBOs.

c) Clause 2.2 – Ordering and Provisioning

StarHub submits that, for this particular service, SingTel should be obliged to notify RLs of acceptance or rejection of their requests.

By looking at the timeline provided by SingTel, with the removal of SingTel's obligation to acknowledge receipt of the request, SingTel will only be required to notify the RL of its acceptance/rejection after ten (10) Business Days (upon completion of Project Study). RLs are usually also working on extremely tight provisioning timeframes to provide the service(s) to their own Customers so any delay can be detrimental to both RLs and Customers.

If a mistake, say SingTel claims not to have received the request, is discovered after ten (10) Business Days, it would lead to a lot of inconvenience to Customers. StarHub therefore submits that SingTel should notify RLs whether it accepts the submitted request within two (2) Business Days from date of request. This acceptance should be based on whether the request form is in order. Given SingTel's familiarity with the RIO procedures, and with the operations of its own network, we believe that this timeframe is appropriate. StarHub would note that SingTel's retail LLC customers are not subject to a lengthy approvals process for the circuits they order. We therefore believe that comparable (short) approvals processes should be put in place for wholesale LLCs.

Further any rejection, at this stage should only result in RLs having to pay a processing fee and not the entire application fee. StarHub submits that a fee of not more than S$10 is reasonable since the work by SingTel only entails making sure that the request form is in order.

For avoidance of doubt, this step is not meant to replace Clause 3 (Project Study) which can be retained.

d) SingTel Comment : New Clause 2.5

Clause 2.5 appears to be missing. Should IDA allow SingTel to include such a Clause, StarHub would request that an additional round of public comments be sought.

e) Clause 3.1 (c) – Project Study

This Clause should be deleted. There is no reason why SingTel should be allowed to impose restrictions in relation to access to its own buildings. As long as there are End Users or their Equipment housed within such SingTel buildings, RLs must be able to use the FLLC service to provider telecommunications services to such End Users. This restriction imposed by SingTel is clearly aimed at retaining its position as monopoly service provider to such End Users.

f) Clause 4.1 – Delivery

StarHub submits that this Clause be amended to clarify that the Cancellation Fee is only applicable where cancellation occurs after the RL has received notification of acceptance from SingTel (i.e. after completion of Project Study) and before the Service Activation Date.

g) Clause 4A : Express Provisioning

Timelines

StarHub submits that the timelines for Express Provisioning are inadequate. Clause 4A.1 states that on receipt of a request for Express Provisioning, "SingTel will promptly and in good faith discuss with the Requesting Licensee its requirements."

However, as there is no assurance when SingTel will commence discussions, RLs are unable to provide any assurance to their own customers. Also, if SingTel only accepts the request on the 10th Business Day, and then provision the circuit on the 13th Business Day (3 days after acceptance) then it is unreasonable for RLs to pay SingTel Express Provisioning charges since there is hardly any difference in the provisioning timeframes between normal and express orders in such cases.

StarHub therefore proposes that the Express Provisioning procedures/timelines be improved such that SingTel will activate the service within three (3) Business Days for speeds between 64kbps and 128 kbps (inclusive) and within seven (7) Business Days for speeds above 192 kbps (inclusive). This are the timeframes which SingTel provides under its commercial agreement.

Rejections

Consistent with our comments to Clause 2.2 above, StarHub proposes that SingTel be required to notify RLs of its acceptance/rejection of the FLARs in respect of whether the FLAR are properly filled out. Such notification should take place within two (2) Business Days from submission of the FLARs by the RL.

h) Clause 5 – FLLC Re-routing, Relocation and Change of Bandwidth

StarHub requests for clarification of the re-location process. In particular, StarHub requests for confirmation that under the a request for re-location, RLs are not required to terminate the existing circuit and activate the requested circuit (i.e. a separate termination

and activation request). StarHub submits that for re-location, SingTel should simply migrate the same circuit to the new location/address.

i) Clause 5.3(b) – FLLC Re-routing, Relocation and Change of Bandwidth

Clause 5.3(b) states that RLs are liable to pay SingTel an Application and Re-location Charge, where applicable. StarHub would like to clarify that for re-location, RLs need not pay a separate Application Charge but will only need to pay a Re-location Charge.

Further, it must be noted that under normal circumstances, where a FLAR is accepted and successfully provisioned, RLs are not liable to pay SingTel the Application Fee.

j) Clause 5.3(c) - FLLC Re-routing, Relocation and Change of Bandwidth

There is no reason why RLs must produce evidence that the End User is re-locating from one End User site to another. This is clearly an unnecessary additional burden on RLs. SingTel should simply provision the re-location circuit as requested as long as the same customer name is reflected on the request form.

k) Clause 8.2 – Access and Approvals Required

The requirement for RLs to provide SingTel with a copy of the permission given by the End User is not acceptable. SingTel already imposes an obligation on RLs to obtain permission from the End Users for access to A-end sites and should not be allowed to impose an additional obligation on RLs of having to provide a letter of permission.

It is clearly in the interest of RLs to ensure that SingTel is able to obtain access to the A-end sites on the required date(s) especially since it is clear that SingTel will not be flexible and will not hesitate to enforce its rights under the RIO (canceling the order, imposing penalties etc). There is therefore no need to provide any letter of permission to SingTel, which would add to the (already heavy) administrative burden on RLs seeking wholesale LLCs.

Further, it is not practical, nor feasible for such permission to be provided at point of submission of FLAR since permission can only be granted after SingTel confirms the RFS date or date/time when it requires access and the name of SingTel's personnel requiring access.

StarHub therefore submits that the original clause 8.2 should be deleted.

l) Annex 7A-5 – Technical Information of Full Local Leased Circuit Information

StarHub submits that there should be greater clarity and choice of the technical interfaces provided by SingTel at both customer end and network end.

FLLC Service (Point to Point)

For customer end, StarHub submits that SingTel should provide both V35 and G.703 interfaces for speeds of 1536Kbps, 1984Kbps and 2Mbps.

However, at the network end, SingTel should provide both V35 and G.703 interfaces for all speeds between 64Kbps and 2Mbps.

The choice of technical interface should be left to the RL taking up the service.

StarHub understands that SingTel is currently offering such interface standards under its commercial agreements. Further, these are the common standards requested by customers. As these interfaces are technically available, there is no justification for reducing the RL's choice of interfaces.

FLLC Service (Point to Multi-Point)

For tail circuits, SingTel should provide both the V35 and G.703 interfaces at the 1536Kbps speed.

SCHEDULE 7B – WHOLESALE LEASED CIRCUITS (TAIL CIRCUITS)

a) General Comments

Please see comments for Schedule 7A above.

StarHub also requests that IDA make known the cost-based charges that are applicable to TLLCs after the expiry of the TLLC services. RLs will need such information to make investment decisions. If such information is not available, it will discourage licensees from taking wholesale LLCs. At the very least, IDA should set out, in the RIO or elsewhere, the costing methodology it intends to adopt for the "cost-based" charges.

b) Annex 7B-4 – Technical Information of Local Leased Circuit

Consistent with StarHub's comments to Schedule 7A above, StarHub submits that there must be greater clarity of the interface standards that SingTel will provide at both the customer end and network end.

We also refer IDA to StarHub previous correspondence with IDA on the matter of "groomed" G.703 interface for handover between networks.

On the customer end, SingTel should be required to provide the V35 and G.703 interface for speeds between 1536Kbs and 2Mbps (inclusive).

On the network end, if IDA does not accept StarHub proposal as highlighted in our earlier correspondence, then as a minimum, SingTel must give RLs the choice of the V35 or the G.703 interface standard for all speeds between 64Kbps and 1984Kbps (inclusive). However, StarHub must highlight that this is really the second choice solution and is less efficient than the solution previously submitted to IDA.

SCHEDULE 8 – CO-LOCATION

a) General Comments

i) Comments made previously to other parts of the RIO should similarly apply to Schedule 8A, 8B and 8D. In particular, comments to Schedule 8A will apply to Schedule 8B and 8D where the same drafting formulation has been adopted.

ii) We would also refer IDA to our comments in relation to co-location at SingTel's Exchanges (Schedules 8A and 8B). StarHub submits that RLs should be allowed to use the same co-location space for both interconnection and access. This will lead to more efficient use of space. StarHub therefore proposes that Schedules 8A and 8B be combined into a single Schedule or that it be made clear in both Schedule 8A and 8B that RLs will not be prohibited from using the same co-location space for both purposes.

b) Attachment A, Clause 1.1.2 – Installation of Co-location Equipment

The floor loading should be increased to 10 kN per sqm. Greater density saves space and therefore is beneficial for all parties. The figure of 10 kN per sqm is an industry norm.

Further, there is no necessity for SingTel to approve the Professional Structural Engineer ("PSE") engaged by RLs. PSE are certified by professional bodies and such certification is sufficient proof that they are able to discharge their duties competently. SingTel's approval is therefore unnecessary and will only result in delays and unnecessary costs. StarHub submits that SingTel is not a competent authority to approve PSEs.

Alternatively, SingTel should be required to provide RLs with a list of approved PSEs.

c) Attachment A, Clause 1.4 – Optical Fibre Cable

The restrictions on the number of fibres and cables are not reasonable as they create inefficiencies as spare capacity cannot be used. For submarine cable stations, fibre terminations are undertaken at the RL's own equipment so should not be limited. The situation for POI terminations is slightly different given that termination occurs at SingTel's equipment. However, even for POI terminations the restrictions are still not reasonable and should be lifted as they impede competition.

d) Attachment A, Clause 1.5 – Cable Pulling and Tie Cables

SingTel should advise the type of connectors to be used at SingTel's Distribution Frame and the length of cables between the RL's equipment and SingTel's Distribution Frame. The specified connectors should be commercially available and SingTel should make such connectors available on the RL's request.

e) Attachment A, Clause 1.5.3 – Cable Pulling and Tie Cables

The provision of tie cables by SingTel should include reasonable spares for redundancy purposes to enable the RL to connect. Similarly, in situations where the RLs have to provide tie cables to SingTel, SingTel should also be required to install reasonable spares for redundancy purposes.

f) Attachment A, Clause 1.6.1 – Power and Earth

The earthing standards should be clearly defined. Such earthing requirements are necessary for the protection of equipment against electrical hazards. Less than 1 ohm is an industry standard, for example.

g) Attachment A, Clause 1.6.2 – Power and Earth

SingTel should provide protected power in the event of power failure. For example, A/C power back-up with a generator, D/C power back up with a battery and generator. If the power is not protected, the RL's equipment may cease to operate in the event of a power failure from the utility company or if the battery is drained. Protected power is standard international practice as a protection against the risk of power outages, particularly given the importance of telecommunications services.

h) Attachment A, Clause 1.6.3 – Power and Earth

StarHub submits that this Clause should be deleted. As the supplier of the co-location space, SingTel must meet minimum power requirements of the RLs. If power is not available, it must be SingTel's responsibility to undertake such works, at its own cost, to provide such power. It is clear that any co-location space that does not have any power is useless and cannot be accepted by RLs.

StarHub further submits that IDA should specify the minimum provisions that SingTel must meet when it supplies its co-location space.

i) Attachment B – Hoisting Requirement

Where hoisting is required to bring co-location equipment into the co-location space, SingTel personnel should be made available to undertake hoisting where requested by the RL. SingTel should make available the SingTel hoisting facility on-site and its operator. StarHub submits that a schedule of work could be provided to SingTel ten (10) Business Days in advance so that SingTel has sufficient time to arrange this.

j) Attachment B, Clause 3.1(e) – General Exchange Regulation

The requirement that every worker is expected to "*have a decent haircut*" seems unnecessarily prescriptive, as do many of the other requirements in Attachment B. Given that the RIO is intended to represent "international best practice" we must seriously question the necessity of such clauses.

k) Attachment C – Physical Access Procedures

Please refer to the comments in relation to the Physical Access Procedures in Annex B of Schedule 5.

l) Attachment C, Clause 1.2 – Physical Access Procedures

The requirements for RLs to provide a Master List is an additional requirement imposed by SingTel, and SingTel should therefore not be allowed to charge any fees for processing such information. RLs have no choice but to continuously update SingTel with new Master Lists, failing which the RL's personnel or contractors will not be able to access SingTel's facilities to carry out maintenance and/or other works. It is therefore unfair and unreasonable for SingTel to impose processing fees for such a requirement.

Alternatively, SingTel should at a minimum allow RLs to update the Master List once a quarter without any charge.

m) Attachment C, Clause 1.5.1(c) – Physical Access Procedures

StarHub submits that the current limitation on the number of persons that may access a facility is unreasonable. In certain circumstances, more than 4 persons may need to obtain access to a facility. If more persons can access a facility, work can also be undertaken more efficiently and speedily.

Further, it is not feasible to only be able to provide four (4) names to SingTel for access. This does not take into account the fact that personnel can be taken ill and a replacement will need to be sent. StarHub submits that there must be greater flexibility to cater to unforeseen circumstances.

StarHub therefore proposes that RLs should be able to submit up to eight (8) names to SingTel under Attachment E for approval and that the number of personnel that can access the SingTel facility be increased to six (6).

n) Attachment C, Clause 1.5.6 – Physical Access Request

Where SingTel is notified within the six (6) hours timeframe stipulated, RLs should not be required to pay SingTel any fee.

o) Attachment C, Clause 1.5.7 – Physical Access Request

It is unreasonable for SingTel to recover the full escort Charges for the entire duration of the approved duration of access in cases of no-show. SingTel should at most be entitled to recover escort Charges equivalent to two (2) hours duration.

p) Attachment C, Clause 1.6.2 – Emergency Physical Access Request

StarHub submits that SingTel should add an Attachment/Annex listing out the Fault Handling Procedures and contact persons for each Co-location Space. The contact numbers of such personnel, escalation procedures and a commitment that such telephone lines will be manned 24 x 7 should also be provided.

q) Attachment C, Clause 1.6.3(f) – Emergency Physical Access Request

Please our comments to Clause 1.5.1 above.

r) Attachment C, Clause 1.6.5(f) – Emergency Physical Access Request

StarHub submits that as the Co-location Spaces are owned by SingTel, there is no reason why SingTel is unable to provide shorter access timeframes especially in consideration that this is for Emergency Access. StarHub therefore proposes that SingTel should be required to provide access within one (1) hour.

s) Attachment E

StarHub notes that SingTel has modified the form to allow only four (4) names to be submitted, instead of the previous five (5).

Consistent with our comments to Attachment C, Clause 1.5.1, this Attachment should be amended accordingly.

SCHEDULE 8A – CO-LOCATION FOR POINT OF INTERCONNECTION (POI)

a) Clauses 2.1 & 3.4(e) – Availability

Please refer to the comments in relation to clauses 2.2 and 5.4(d) of Schedule 3A above.

Further, pursuant to the Government Gazette that came into effect on 4 March 2005, the dominant licensee must also "*demonstrate that, as a result of its reasonably projected growth, the Dominant Licensee will use that space to locate equipment".*

b) Clause 3.3 – Ordering and Provisioning Procedure

The RL should not be required to pay an application fee to SingTel if its Request is unsuccessful. Such an application fee creates incentives for SingTel to err on the side of rejection, thereby benefiting from further application fees when the same Request is later resubmitted. In particular, the RL should not be required to pay an application fee to SingTel in the event of an unsuccessful request which is rejected due to circumstances beyond the RL's control (e.g., rejection under clauses 3.4(d), (e) and (f)).

Further, SingTel should not be allowed to reject a Co-location Request once it is past the three (3) day deadline for SingTel to reject such request. We refer IDA to our concerns highlighted in the Executive Summary section of this submission.

c) Clause 4.1 – Project Study

It is unreasonable for SingTel to only commence Project Study after fifteen (15) Business Days after the expiry of the timeframe for rejection. The commencement date should be reduce either to ten (10) Business Days from receipt of request or five (5) Business Days from the expiry of the timeframe for rejection.

d) Clauses 4.4 (b) & (c) – Project Study

SingTel should designate two lead-in manholes for diversity purposes. Clause 5.2 should also be amended accordingly.

e) Clauses 4.4(e) & 5.1 – Site Preparation Work

SingTel should be required to complete the Site Preparation Work within a specified timeframe. There are two potential timeframes. A maximum timeframe of twenty-one (21) Calendar Days should apply where no renovations are required. A maximum timeframe of forty-two (42) Calendar Days should apply where renovations are required. The concept of "renovations" should be clearly defined by reference to such matters as installation of air conditioning and raising of floor levels. A failure by SingTel to comply with these timeframes should trigger appropriate compensation to the RL.

SingTel should also provide a detailed project schedule in relation to the site preparation works. This should include, for example, all electrical, cable tray, tie cable installation, and lead-in pipe construction. Such a schedule enables each RL to plan and allocate resources to follow-up works.

SingTel should also not be allowed to vary Charges at will especially under a situation where it is the monopoly provider of such Co-location Space. StarHub proposes that SingTel be allowed to only vary the Charges by no more than 15% of the originally estimated Charges. Any Charges above the 15% limit should be borne by SingTel.

SingTel must also provide the breakdown of the various cost components.

f) Clauses 7 & 9 – Term of Licence

The term of each licence should correspond with the term of the RIO and should be automatically renewed at the same time the term of the RIO is renewed. SingTel should not have an ability to terminate the licence on 6 months' notice. Such discretion for SingTel to terminate does not provide sufficient contractual certainty to RLs. Upon the expiry of the term, there is no guarantee that SingTel will continue to provide co-location. Accordingly, there is a high risk that the RL may lose the customer. This undermines the business case of the RL by providing insufficient certainty for investment decisions.

g) Clauses 9.1, 9.3 and 9.4 – Termination of Licence

Various provisions of Clause 9 should be subject to a requirement that SingTel give a seven (7) Business Day "cure notice" prior to exercising a right of termination. This will ensure that the RL is provided with time to correct any breaches. This obligation is particularly important given the severe consequences of termination. Provisions of clause 9.4 which should be subject to a "cure notice" include clauses 9.4(b), (c), (d), (e) and (f).

h) Clause 9.4 – Termination of Licence

SingTel should only be permitted to exercise a right of termination in relation to a "material" breach. The right of termination is a draconian right which should only be exercised in the worst circumstances, particularly given the severe consequences of termination identified above. SingTel should not be permitted to exercise a right of termination for any breach, no matter how technical or minor.

i) Clause 11 – Additional Co-location Space and POI Co-location Equipment

The timeframes and procedures for SingTel to revert to the RL on the RL's request for replacement, modification, rearrangement and additional Co-Location Equipment should be prescribed in detail. Such timeframes should be short. StarHub would propose that SingTel allow the RL to commence such replacement, modification or rearrangement etc., three (3) Business Days after the RL has submitted the request.

StarHub further submits that such requests relating to co-location equipment should not be treated as a separate Co-Location Request (subject to the lengthy procedures for obtaining access to co-location space) so long as additional Co-Location Space is not required.

SCHEDULE 8B – CO-LOCATION FOR POINT OF ACCESS (POA)

General Comments

StarHub's comments to other Schedules of the RIO, in particular to Schedules 3A and 8A, will apply where the same drafting formulation is used.

SCHEDULE 8D – CO-LOCATION AT SUBMARINE CABLE LANDING STATION

a) General Comments

i) StarHub's comments to other Schedules of the RIO, in particular to Schedules 3A and 8A, will apply where the same drafting formulation is used.

ii) It should also be clarified that RLs will be able to use the same co-located equipment for multiple Cable Systems.

iii) Further, where RLs are forced to use separate co-location space, they should be allowed to connect their equipment in separate co-location spaces together. This is to allow for efficient use of equipment and capacity.

b) Clause 1.2 – General

StarHub submits that there should not be any restrictions as to whom SingTel will provide the Co-location Services to. StarHub notes that the purpose of the Co-location Service is to enable RLs to access cable systems landing at the Submarine Cable Landing Stations. It is also to facilitate competitive backhaul services.

IDA should be aware that purchasing or even investing in Cable Systems is not always possible. This is especially so for some "club" cables which comprise a consortium of former monopoly carriers who therefore have the interest in preventing new carriers from investing in such cables. Therefore even if new entrants are willing to acquire capacity or invest in cable systems, it is not always possible to do so.

Clause 1.2 serves no other purpose than to allow SingTel with another reason to deny services to RLs. Clause 1.2 should be deleted.

Alternatively, IDA should require SingTel to allow any Public Telecommunications Licensee ("PTL") access to the Co-Location Space as PTLs have invested substantially in Singapore ad should not have to provide any further proof of investment. A Clause 1.2(d) should therefore be added to state "a Public Telecommunications Licensee".

c) Clause 4.4(d) – Project Study

StarHub proposes that instead of the number of Business Days expected to complete the Site Preparation Work, SingTel should be provide the exact date by which Site Preparation Work is expected to complete. This will avoid confusion where there is a difference in "counting" the number of Business Days between SingTel and RLs.

d) Clause 5.1 – Site Preparation Work

SingTel should also not be allowed to vary Charges at will especially under a situation where it is the monopoly provider of such Co-location Space. StarHub proposes that SingTel be allowed to only vary the Charges by no more than 15% of the originally estimated Charges. Any Charges above the 15% limit should be borne by SingTel.

SingTel must also provide the breakdown of the various cost components.

SCHEDULE 11 – DISPUTE RESOLUTION

a) General Comment

StarHub submits that the Dispute Resolution Procedures should be kept short and simple as far as possible in order to achieve a fair and expeditious disposal of the dispute. StarHub submits that the Dispute Resolution Procedures in Schedule 11 should therefore be modified with this objective.

b) Clause 2 – Initial Escalation Procedures

If issues are unresolved by exchange of correspondence prior to the expiry of the Notice Period, either party may by notification to the other party state its wish to either (i) escalate the issue and subsequently form an Inter-Working Group to discuss the issue; or (ii) refer the issue to dispute resolution by IDA.

The IWG procedure is lengthy and delays dispute resolution. The timeframe of 30 business days (10 business days for Notice of meeting and 20 business days for IWG meetings) has not assisted in expeditious resolution of issues, rather it has delayed the parties seeking IDA resolution, mediation or arbitration. As IDA is aware, past experience has been the procedures are highly ineffective. Hardly any disputes have been resolved at the IWG level. We believe that there is little incentive for SingTel to act reasonably in resolving disputes.

StarHub therefore proposes that Clause 2.3 be modified such that at the end of the Notice Period, either Party can opt to refer the matter to IDA for dispute resolution.

Clause 3 should therefore be deleted as there will no longer be a need for an IWG.

Should StarHub's proposal above not be accepted, then there is a need to address situations where one Party decides to convene a IWG but the other Party decides to refer the matter to IDA. StarHub proposes that in such situations, the matter should be referred to IDA for dispute resolution, as it unlikely that both Parties will reach any agreement at an IWG under such circumstances.

In addition, it is not practical to expect parties who have reached this stage in a dispute to agree to seek Mediation or Arbitration. It must be borne in mind that parties seeking Mediation must agree to the terms of the Mediation. It is highly unlikely that parties will be to reach a consensus on such terms at this stage.

Further, as there is a requirement for mutual agreement by both parties before the dispute can be referred to either Mediation or Arbitration, this provides an opportunity for a party to delay the resolution process by simply not providing its mutual agreement.

In the circumstance, StarHub submits that IDA restrict the Clause 2.3(b) to only Arbitration. StarHub submits that as Arbitration provides a more binding decision (compared with Mediation), it will be more effective in resolving such disputes.

SCHEDULE 12 – DICTIONARY

a) Clause 1.5 – Interpretation

StarHub suggests that this clause should be deleted. SingTel is the dominant licensee and the RIO is intended to provide a means of asymmetric regulation to address that dominance. It is entirely appropriate that provisions in the RIO Agreement should be construed against SingTel and in favour of RLs in circumstances of ambiguity. In this manner, the effectiveness of the RIO will be heightened.