15 July, 2003

Mr Andrew Haire
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Dear Mr Haire,

RE: MACQUARIE CORPORATE TELECOMMUNICATIONS' SUBMISSION TO THE IDA IN RESPONSE TO THE REVIEW OF SINGAPORE TELECOMMUNICATIONS REFERENCE INTERCONNECTION OFFER

In response to the Infocomm Development Authority's (IDA's) consultation on the above, please find following Macquarie Corporate Telecommunications' (MCT's) comments for your consideration.

Please feel free to contact me directly on +61 3 9206 6883 if you would like to discuss Macquarie's submission further.

Yours sincerely,

MAHA KRISHNAPILLAI
National Executive, Strategy
Head of Regulatory, Asia and Australia

SUBMISSION BY MACQUARIE CORPORATE TELECOMMUNICATIONS IN RESPONSE TO IDA'S CONSULTATION PAPER

REVIEW OF SINGAPORE TELECOMMUNICATIONS LIMITED'S REFERENCE INTERCONNECTION OFFER

EXECUTIVE SUMMARY

- Macquarie believes the Singapore RIO has largely been a success, particularly in terms of facilitating and expediting interconnect negotiations with the incumbent.
- However, review is needed to make the RIO more effective and competition friendly.
- Review should extend beyond administrative provisions to policies underlying the RIO.
- All elements of the RIO give extensive discretion to SingTel in relation to interpretation, delays, discrimination etc. This is not a commercial market and SingTel should not be the adjudicator – IDA should.
- The most fundamental change needed is to treat service based competition as being just as important as facilities competition.
- Extensive facilities based competition is no longer a realistic proposition and service based competition can add far more value to Singapore in terms of consumer choice and quality of service.
- The RIO should also allow new entrants greater control over the manner of interconnect.
- Bi-directional interconnect links should be mandated and operators should be able to acquire such links from an operator of their choice. Such links should also be provided by SingTel under the RIO at RIO rates.
- Further, SBOs should have rights to more than 2 IGS in line with FBOs.
- Another critical improvement to the RIO would be introduction of proper SLAs, with streamlined processes, shortened timeframes and real penalties for non-compliance that provide compensation to interconnecting operators.
- Macquarie also believes that formal dispute resolution processes under the RIO need to be streamlined and shortened with improved rights to request IDA intervention.

- There should be a further dispute resolution process for implementation disputes over matters such as QoS, with parties able to require IDA informal intervention.

- It is impossible for the IDA to forecast and include in the RIO every possible issue, indeed SingTel will always find and exploit loopholes no matter how prescriptive the RIO is. The better solution is for IDA to set "interpretative rulings" that guide and facilitate industry cooperation.

- A major policy shift is also required in terms of price transparency. The way in which SingTel calculates and justifies costs and IDA incorporates into its FLEC methodology should be subject to broader industry scrutiny, particularly those experienced themselves in building networks.

- As a general principle, the IDA should significantly reduce SingTel discretions under the RIO in relation to both price and non-price terms.

- There are also a number of concerns that Macquarie has with specific RIO provisions or responses to IDA questions, which are contained in our submission.

- Of import, Macquarie is troubled by current regulation of unbundled local loop (**ULL**) under the RIO (and Code) and consequent poor take up of this service in Singapore (we refer to OFTA's 2003 Study of International Competitiveness).

- In particular, there should be improved ULL QoS requirements, preferably in the form of real SLAs.

- Proper ULL technical specifications must also be included, whether they be for xDSL, or POTS specifications at worst case.

- The RIO should also contain adequate information on SingTel's network such as details of exchange locations and areas/lines served, rather than just a list of exchange names.

- The term of ULL licences and related services or facilities should be in line with what SingTel offers its customers for retail xDSL services so that other operators have some ability to compete.

- Collocation procedures should be operator friendly and the RIO should not dictate the design of a licensee's network by way of collocation requirements.

SUBMISSION BY MACQUARIE CORPORATE TELECOMMUNICATIONS IN RESPONSE TO IDA'S CONSULTATION PAPER

REVIEW OF SINGAPORE TELECOMMUNICATIONS LIMITED'S REFERENCE INTERCONNECTION OFFER

1. INTRODUCTION

Macquarie Corporate Telecommunications Pte Ltd (**Macquarie**) provides this submission in response to IDA's "Consultation Paper: Review of Singapore Telecommunications Limited's Reference Interconnection Offer" issued on 18 June 2003 (**IDA RIO Consultation**). Macquarie has a strong interest in the IDA RIO Consultation as the holder of an SBO (Individual) Licence (**SBO(I)**). Under this licence, we provide a wide range of telecommunications services to corporate customers in Singapore.

In order to provide our services, we interconnect with SingTel under the Reference Interconnection Offer (**RIO**). Currently we acquire Virtual Interconnection and Call Origination, Transit and Termination (**OT&T**) such that review of RIO provisions relating to these services is directly relevant to us. However, Macquarie has a broader interest in the IDA RIO Consultation as an operator always looking at expansion opportunities including acquisition of additional RIO services. Further, effective operation of the RIO at an upstream FBO supplier level is critical to ensuring our competitiveness as an SBO(I).

In this context, we thank IDA for the opportunity to comment as part of the IDA RIO Consultation. Comments on regulatory reviews by their nature involve highlighting problems with existing regulation and the need for improvement. However, Macquarie wishes to stress at the outset that we believe the RIO has largely been a success, particularly in terms of facilitating and expediting interconnect negotiations with the incumbent. Most of the following comments are therefore aimed at revising the RIO to make it even more effective and competition friendly. They are in no way a criticism of the approach IDA has adopted in this difficult area.

Our submission first sets out key concerns we have with the RIO, which are primarily matters of policy or those having serious financial impact on us. Some of these will need to be addressed in greater detail as part of the IDA's review of the Code Of Practice For Competition In The Provision Of Telecommunications Services (**Code**) as it applies to SingTel's RIO. We then follow with comments on specific provisions identified for comment in the IDA RIO Consultation before concluding with a provision by provision discussion of RIO schedules of interest to Macquarie.

2. KEY CONCERNS WITH RIO

General comments

The IDA RIO Consultation is framed as more of an administrative review of processes and timescales in the SingTel RIO. However, the RIO raises important policy issues, which should also be addressed. We detail key policy issues in this section in addition to raising RIO provisions that have a significant impact on our business.

Need to promote service based competition

Macquarie submits that an absolutely fundamental issue for the IDA to consider as it is carrying out all regulatory reviews is the extent to which it should continue to overly favour facilities based over service based competition. It should also consider the extent to which it should protect SingTel facilities over new entrant investment.

The government policy to date of promoting facilities based competition has clearly driven many of the provisions found in the current RIO. We believe that this IDA RIO Consultation provides a good opportunity to assess the continued relevance of this policy. Macquarie is of the firm view that as Singapore telecoms markets mature, service based competition should be treated as equally, if not more, important in promoting consumer choice and quality of services. To this end, changes to the RIO must be made from broad issues such as eligibility for RIO services down to specific RIO procedures that make life more difficult in instances where an operator makes an informed business decision to buy SingTel services rather than to build.

Macquarie submits that improving the position under the RIO of SBO(I)s, as well as FBOs where they elect not to build, will be largely neutral in terms of incentives for FBOs to build alternative networks. This is because, even with the current regulatory policy, given current economic conditions and forecasts for the future it is highly unlikely that Singapore will see alternative ubiquitous telecommunications networks appear within the next few years.

The heyday of frantic network build has gone and is unlikely to return. Operators worldwide are moving to more of a service based model where they build as much as makes sense, for example, limited CBD rings, but do not build to the customer premise or even to other operator sites except in special circumstances. We believe that this will continue to be the case with or without improved interconnection rights under the RIO.

It is simply unrealistic these days to expect that FBOs (other than SingTel and StarHub) will start building out extensive fixed networks just because the RIO and interconnect regime do not help them as much as they would like. This is clear from current practice where, despite the RIO provisions being designed to incent network build, such build is only occurring on a very sporadic basis and where it makes economic sense. Current build activity is not creating any significant increase in network facilities from a national viewpoint. In this context, we would point to the merger of StarHub and SCV, which can be seen as a ‘buy’ alternative to build out of further StarHub network.

New entrants should have greater control over manner of interconnect

Macquarie submits that new entrants should be given greater control over the way they interconnect with SingTel. In line with the above concern about the overemphasis on facilities based competition, Macquarie believes that the RIO is unfairly weighted in favour of SingTel. While most of the comments in this submission can be seen as examples of this view, in this section we expand on key concerns we have with SingTel's ability to impose network configurations / interconnect design on new entrants and SBO(I)s in particular.

Lack of bi-directional interconnect

Currently, the RIO only provides for one way interconnect links. This means operators need to make other arrangements and acquire extra links for two way communication. As the IDA will be aware from submissions made at the time the RIO was first introduced, the standard and we believe best practice approach to interconnect agreements is for them to be bi-directional. Clearly this goes to the heart of what interconnection is all about – it is a mutual process. Macquarie therefore strongly urges IDA to revisit this matter and require the RIO to provide for bi-directional interconnect links.

Lock-in to SingTel retail interconnect links

Operators who cannot or choose not to build interconnect links to SingTel IGS have to lease these links. SingTel currently requires that operators lease all interconnect links from it and charges retail prices despite such links being a core interconnect service.

SingTel is able to exert such unreasonable terms as the current RIO does not allow for alternative provision – it actually requires the links to be purchased from SingTel (Schedule 1B, cl 3.5). As the IDA and other experienced regulators have recognised in other contexts, there is little point in regulating one aspect of service if the use of that service depends on supply of another input which is neither regulated nor effectively competitive. As submitted above, we believe that the current practice is outdated and it is more rational for operators to be able to lease links freely. It is essential that the IDA improve the conditions for leasing to support new entrants rather than protecting SingTel's ability to reap profits for core interconnect services.

SingTel should therefore be required to allow operators to acquire interconnect links from other operators where available. More significantly, SingTel should be required to supply interconnect links on regulated terms under the RIO. Interconnect links fall into the same category as LLCs (the SingTel product is in fact the same for both), such that Macquarie's comments on the IDA LLC Consultation are equally applicable here. Interconnect links are a core interconnect service, the market for supply of such links is specifically not competitive under the terms of the RIO, and therefore regulated supply under the RIO is appropriate. Similarly, as core interconnect services, links should be priced based on LRAIC.

Restrictive POIs

FBOs and SBO(I)s compete head on in the supply of most retail services, including ISR. Macquarie strongly submits that regulation at the wholesale level should not distort this competition in favour of FBOs, particularly where they are relying on leased facilities to provide relevant services in the same way as SBO(I)s.

In this regard, the RIO should be amended so that SBO(I)s have the same rights to POIs as FBOs. Currently, while the Code talks in terms of requiring interconnection at any technically feasible point, SBO(I)s are only entitled to interconnect at 2 IGS, with the same IGS being used by all other SBOs. For larger SBO(I)s, this may force them into making otherwise irrational business decisions. For example, a large SBO(I), whose core business is ISR, may need to increase POIs. However, currently, the only way it can do so is to become an FBO. This would require it to make all sorts of investment commitments in relation to infrastructure and services that are unrelated to its core business. Macquarie does not believe that regulation should force such an inefficient outcome.

We propose that SBO(I)s be given the same POI rights as FBOs to address current anomalies. Should SingTel complain that it cannot support multiple licensees over the same IGS in this way, at worst case IDA should still allow SBO(I)s who have reached certain traffic levels the same POI rights as FBOs. Such a policy would be in line with the fact that large SBO(I)s may have more ISR traffic than FBOs who do not focus on switched voice services.

Quality of service is critical to effective interconnect regulation

Regulators worldwide recognise that quality of service is a critical issue in interconnect regulation. If quality is inadequate, interconnection becomes meaningless, competitors cannot compete and consumers suffer.

There are two principle angles from which QoS can be approached:

- Ensuring that the incumbent offers interconnecting parties QoS no worse than the QoS levels the incumbent or its affiliates experience ie. non-discrimination.

- Ensuring that the incumbent offers interconnecting parties QoS that is in line with industry best practice or global benchmarks.

The latter approach will generally tend to support the former or be a mechanism to check for discrimination. In contrast, non-discrimination obligations do not of themselves ensure high quality nor do they provide any means of measuring compliance – they are just guiding principles. As is seen in most jurisdictions throughout the world, these are exceptionally difficult to enforce. Aggregate QoS standards will mask targeted QoS 'degradation' at certain exchanges (eg. IGS), and for certain wholesale customers (eg. in the corporate market). Macquarie therefore submits that the best approach is to supplement non-discrimination obligations with actual SLAs based on best practice benchmarks.

Currently, the RIO lacks any real QoS standards and is limited to non-discrimination principles and weak timeframes for SingTel performance. This should be addressed in the IDA RIO Consultation by requiring inclusion of binding SLAs in the RIO for all key processes; from ordering, to provisioning, delivery, and fault management. Real penalties that reflect the loss to interconnecting operators should replace the current cosmetic provisions included by SingTel that merely allow for reduction in payment of service charges. Even then, there are limited cases of enforceable QoS where the current cosmetic penalties apply.

Regulatory best practice would support inclusion of enforceable SLAs in SingTel's RIO. We refer the IDA in this regard to Oftel's approach to interconnect QoS. As Macquarie outlined in its submission to the IDA LLC Consultation, Oftel itself specifies key provisions to be included in RIOs and also requires enforceable SLAs to be developed for the whole interconnect process. It has stressed the importance of including meaningful penalties given that an incumbent has no other incentive to provide adequate quality of service.

Macquarie does not detail in this submission appropriate SLAs as we believe that this should involve a proper review exercise with industry input on local and global best practice. However, at worst case if the IDA will not conduct such a review, it should at least shorten and fix current RIO timeframes as binding and require SingTel to include penalties of a real, compensatory nature.

Dispute resolution procedures must be user friendly

Macquarie believes that the current RIO dispute resolution process in Schedule 11 is unwieldy. It represents a typical incumbent approach to dispute resolution where the aim is to delay resolution of disputes as long as possible via multiple internal processes and committees. Delays serve the incumbent's interests as generally disputes will relate to concerns raised by interconnecting operators. Delay in resolution will therefore hamper their ability to compete in the meantime and is used by SingTel's retail business to raise 'fear, uncertainty and doubt' in the minds of potential customers.

We are curious as to how often parties have escalated disputes right through the Schedule 11 process to date. Macquarie would suspect that the provisions are not well used but does not believe this reflects successful resolution of all disputes at an initial low level stage. Rather, we believe that other operators, like Macquarie, find the process too difficult and drawn out to use. They would rather go straight to IDA or alternative dispute resolution (**ADR**) or more likely will give up, particularly where disputes may relate to smaller implementation issues that crop up regularly. This leads to the well recognised incumbent strategy of 'death by a thousand cuts' – no single issue warrants the enormous time required in undertaking a dispute resolution process but a multitude of smaller issues effectively bogs down new entrants.

Macquarie proposes that the RIO should widen the areas in which disputes may be escalated (particularly to quality of service issues). Further, RIO dispute resolution processes be improved and made more accessible by requiring a shorter internal

escalation period of 10 business days in total (cf. 10+10) from initial exchange of correspondence. Escalation should be to a relevant senior manager, rather than a "working group", who should then only have a further 10 business days to resolve (cf. 20 days).

In terms of external dispute resolution, the RIO currently provides that the IDA may get involved, but that if it will not hear the dispute, the dispute goes back to the parties' working committee level. Clearly this is a further time waster as the dispute would have only got to the IDA in the first place because the working committee could not resolve it. In such cases, a party should be able to take the dispute to ADR immediately. This should be possible with unilateral action as the requirement for SingTel to agree provides too much room for SingTel to manipulate and delay dispute resolution.

More importantly, Macquarie submits that a party should be able to immediately refer disputes to IDA or to ADR without going through the internal dispute resolution process in the first place. In some cases, it is simply not productive to waste time on internal discussions where the position of parties is diametrically opposed – there is no 'incentive' for SingTel to resolve issues quickly, if at all.

We do not believe interconnecting parties will abuse the process of immediate referral to IDA as, wherever possible, their incentive will be to save time and resources by resolving matters quickly with SingTel if realistic. For the first time, this will lead to setting an incentive on SingTel to resolve the dispute since the threat of IDA involvement will be both real and explicit.

IDA guidance required with RIO implementation disputes eg. QoS issues

Macquarie is concerned that the RIO and Code do not provide sufficient opportunity for IDA facilitation of dispute resolution. We believe IDA can play a critical role particularly in relation to smaller implementation disputes that occur regularly and which are not well suited to a formal dispute resolution process such as in the current RIO or ADR such as arbitration.

A key example would be disputes over whether SingTel has provided adequate quality of service and whether it should be billing in full where it has failed to do so. Macquarie has had experience in this regard which demonstrates that such disputes cannot readily be resolved through SingTel dialogue yet ADR and court action are unwieldy and inappropriate. We have sought IDA involvement yet IDA has not found itself in a position to intervene and consequently Macquarie's loss has not been compensated by SingTel.

To address this sort of situation, Macquarie submits that the IDA should require SingTel to include in Schedule 11 a new procedure for referral of disputes to IDA, backed up by clearer provision for this in the Code. The new procedure would allow either party to unilaterally refer to the IDA for 'informal' dispute resolution at any stage of a dispute. By this, we mean that IDA could take on a role similar to a mediator. It would hear the issues as presented by both parties and then facilitate a resolution, rather than making a binding

decision as under arbitration. The IDA would facilitate the decision by providing the parties with an "advisory opinion" setting out what it believes is the correct position and in whose favour the dispute should be resolved. We believe that such an opinion would be influential on the parties even if not binding.

Macquarie has experienced a similar dispute resolution process in Australia and found this to be extremely helpful in ensuring disputes are dealt with in a timely fashion. It has been particularly successful in the case of reaching agreement to resolve real implementation issues.

We stress that this process will only work for important areas such as QoS disputes if the IDA has properly set QoS parameters by requiring SingTel to include SLAs in the RIO. If SingTel retains all of its current discretions then clearly it is extremely difficult for other operators to establish a dispute. SingTel can argue that it can do as it likes even if competitors are aggrieved and suffer loss. IDA must therefore take a holistic approach to its review of the RIO and ensure it recognises all the interlinking issues. Clear interconnect obligations must be specified to ensure disputes can be resolved on clear grounds.

Macquarie submits that in addition to amending the RIO to provide for IDA involvement in disputes, IDA must also completely revise its "Dispute Resolution Framework To Resolve Any Dispute Arising Out Of The Implementation Of An Interconnection Agreement Between IDA's Licensees". This framework attempts to treat interconnection disputes as 'commercial', rather than recognising that telecommunications is a monopolised, networked industry, where the substantial imbalances in negotiating power mean that agreements are not commercial. The policy needs to dispense with the notion that these discussions are indeed 'commercial'. By definition, 'commercial' means that the 'discussions' in a market exist and should a purchaser not like terms of supply it can go elsewhere. This is not the case with interconnection and is the precise reason for development of the RIO.

The framework raises significant concerns in providing that "IDA will not involve itself in the implementation of the interconnection agreement". There is little point in IDA facilitating negotiation of an agreement if it does not help parties make it work – the agreement would only be satisfactory in form but not substance. A further concern arises from the fact that, even where parties fail to deal with a dispute 'commercially', IDA may still use discretion to reject requests for assistance if it thinks intervention would not be 'appropriate'. IDA's reticence to get involved serves to favour an incumbent such as SingTel as most interconnection disputes will relate to its failure to provide adequate interconnect. Macquarie therefore submits that a review of the entire interconnect dispute resolution regime in Singapore needs overhaul.

Need for transparent pricing

Macquarie applauds the current review of RIO pricing by the IDA. We continue to support application of LRAIC methodology but believe that the prices reached in 2000 may require review. Such review is necessitated not just by the passage of time and

changes in costs, but because industry experience and international benchmarks indicate that interconnect prices in Singapore may not be as low as they should be.

However, we are concerned at the lack of transparency in terms of price regulation in Singapore at both the retail and wholesale level. While we will address retail pricing when the Code is reviewed, here we express our concern that interconnect prices are calculated without any industry oversight to act as a check and balance. Further, that pricing is implemented without any industry or public visibility. Finally, persons not party to the RIO cannot access prices. This is a concern in two key instances:

- where public commentators, or even 'network builders' are trying to benchmark Singapore performance;

- of more importance to Macquarie, where potential acquirers of services want to obtain pricing before they are eligible to sign up to relevant RIO schedules, such as SBO(I)s considering whether to buy ULL and go through the process of becoming an FBO.

In relation to the latter, interconnect costs will be a key factor in an operator's decision whether to offer certain services, invest in infrastructure or even obtain a licence in Singapore. Clearly, transparency of interconnect pricing, and underlying model cost input assumptions, are essential to development of sensible business plans. Transparency will result in greater and more efficient investment in Singapore, stronger competition, and consequent benefits to consumers.

We are aware that the IDA is now taking a more flexible approach to provision of RIO pricing to interested parties, perhaps in recognition of the above points. However, Macquarie remains concerned that the publicly stated position of IDA and its process for requesting RIO prices has not been updated to reflect this flexibility. This leads to substantial confusion as operators naturally look to such public statements and assume that the IDA will not provide price transparency. It also may appear that IDA is taking an inconsistent approach. Clear and updated statements of its RIO processes including re price requests should therefore be issued immediately as a matter of regulator transparency.

Macquarie does not otherwise comment here on actual RIO prices but believes that industry should have a separate opportunity to input to the IDA's current review. We are unable to specifically comment on pricing of key services in any event given the previous restriction of pricing information to eligible FBOs. However, we do note our concern that ULL prices if not others must be high. As per separate correspondence with the IDA on this matter, there has been no real take up of SingTel ULL services. We do not believe this can be due to better alternatives being available but rather find it more likely that the prices are above cost or high compared to best practice benchmarks. As noted later in this submission, there are other weaknesses in current ULL regulation but price is likely to be a key obstacle, given typical business drivers. In addition, there is every likelihood that a price squeeze between wholesale and retail markets is driving FBOs away from investing in this service.

Certainty should replace SingTel discretions

As a final general comment that underscores many of our specific concerns, Macquarie submits that the RIO currently gives SingTel too much discretion to determine and delay interconnection processes. This is exacerbated by the lack of enforceable timeframes and SLAs, which we have addressed above.

Regulation should always aim to provide industry certainty. The IDA RIO Consultation indicates that the current review is designed to improve this in the various proposals to set timeframes for SingTel performance. We support such changes and believe that the IDA should consistently review each RIO provision to wind back SingTel discretions unless there is a fundamental reason they must remain.

Macquarie also remains concerned at the numerous opportunities for SingTel to raise rival's costs. Many of these are indirect but there are also situations where SingTel can use discretion to increase costs directly through imposing charges for interconnect works additional to what it may have quoted to operators. SingTel also has the ability to force operators to pay out charges for services even after services are terminated on grounds other than breach of the RIO.

COMMENTS ON PROVISIONS IDENTIFIED IN IDA RIO CONSULTATION

In this section we comment on provisions specifically mentioned in the IDA RIO Consultation, Annex 1, with a focus on those areas that directly affect Macquarie operations.

Part 1 – Acceptance Procedures

Clause 2 Assessment of acceptance of RIO

IDA has sought views on the criterion in cl 2.1(e) (an existing supply agreement) that renders a non-conformance of a Notification of Acceptance of RIO. Macquarie believes IDA is correct in questioning the need for this provision. A party may wish to firm up RIO arrangements prior to giving notice under any existing agreement or may still be able to serve sufficient notice during the RIO process.

Macquarie believes that the Acceptance Procedures as a whole in Part 1 are unnecessary and should be trimmed down considerably.

Part 2 – RIO Agreement

Clause 4, Commencement, duration and review

IDA has sought views on the impact of automatic amendment of agreements after IDA review of the RIO. Macquarie believes that in an ideal world there should be contract review by parties after IDA amendments. However, SingTel would likely delay this process. Macquarie therefore believes that the automatic amendment process should be retained so that changes to the RIO are implemented as soon as practicable.

Clause 21, Insurance

IDA has sought views on the value of public liability insurance for FBOs ($20M) and SBOs ($1M). Macquarie submits that the current quantum for both categories of licensee is excessive and should be limited to the normal public liability for companies in Singapore. Combined with the credit requirements (which should also be reviewed), that should be sufficient. All companies exclude consequential losses in their dealings with each other, so there is no need for high levels of insurance for telecommunications businesses. We also support IDA recognition that the risk profile of licensees will differ for example as between full service FBOs and those who are only acquiring minimal services under the RIO.

Clause 22 Credit management and security requirements

IDA has sought views on whether SingTel should be allowed to retain security for up to 3 months after a RIO is terminated and all payments have been made. Macquarie submits that this provision should be deleted from the RIO as SingTel can have no legitimate justification for it.

Macquarie believes that clause 22 as a whole is unduly burdensome and many aspects are unnecessary. While SingTel may require some form of insurance, the current security amounts to cash in hand for SingTel. This is an impost placed on competitors by SingTel when there are other approaches which would be far more conducive to doing business.

Schedule 1A – FBO Interconnection

Clause 8 Forecasting

IDA has sought views on the effectiveness of forecasting requirements for provisioning of interconnect capacity in the context of FBOs seeking physical and virtual interconnection.

Macquarie supports the current absence of forecasting requirements for SBO(I)s in Schedule 1B (although we are concerned as to the general application of forecast provisions in clause 20 of the Main Agreement). Just as SingTel does not require forecasts for SBO(I) virtual interconnection, nor should it require these from FBOs in the same scenario. In particular, with the sort of traffic levels many operators such as Macquarie have, forecasting is irrelevant. If forecasting requirements were to apply, some sort of quantum should be put on this combined with notice periods.

In this regard, clause 8 cross refers to the need to comply with forecasting and other provisions under another interconnect link agreement as part of the RIO process yet the IDA does not retain regulatory control over that separate agreement. We believe that the appropriate regulatory approach would be to bring interconnect links under the RIO so that IDA can ensure all supply terms for interconnection are reasonable.

Schedule 1B – SBO(I) Interconnection

Clause 2 Interconnect configuration

IDA has sought views on whether the requirement for SBO(I)s to have at least 2 E1 links to each SingTel SGS is excessive. This is a major area of concern to us as identified in section 2 of our submission. First of all, we should be able to acquire links from other providers. Secondly, the links should be bi-directional. Currently, operators are required to purchase retail leased lines from SingTel. Macquarie wants links to be included under the RIO with cost based pricing applied.

Macquarie also believes that requiring a minimum of 2 E1s does not let SBO(I)s design their network as efficient business planning might otherwise dictate. They may not want this redundancy and the minimum may therefore constitute a barrier to entry. Interconnect requirements should instead be scalable with business growth.

Schedules 2A, 2B, 2C – OT&T

2A:cl 3, 2B:cl 2, 2C cl 3 – Call types

IDA has sought views on the processes for acquiring OT&T services for a call type. Macquarie strongly supports the IDA proposal to streamline SingTel's timelines to facilitate earlier provision of call services. We also believe that the process itself should be simplified as well as shortened.

In relation to transit call types, Macquarie has particularly concerns as SingTel continues to treat transit as a commercial service. Competition is therefore distorted in its favour as SingTel Mobile will not interconnect directly with other operators. We submit that transit should be regulated more stringently in the RIO so that any calls to SingTel can be transited to any other operator directly connected to SingTel on RIO terms, including as to price.

Macquarie does not comment on call type provisions in further detail here but is aware that these provisions have been of great concern to industry. We do, however, take this opportunity to stress the position that ISDN calls, data calls, and Internet calls are the same as comparable voice calls under Schedule 2. On this basis, there should be no differentiation between call types as far as pricing goes.

Schedule 3A – Licensing of loop/sub-loop

Clause 2 Availability of loop

IDA has sought views on the criteria for assessing availability of loop and sub loop. Macquarie generally believes that availability criteria should be tightened so that SingTel cannot abuse its current discretions. Macquarie has particular concerns with cl 2.2(e), which provides that SingTel may not supply local loop if it plans to decommission the loop. There are no boundaries placed on SingTel's discretion such as a list of legitimate technical or commercial reasons as to why they may want to decommission the local loop.

If would be anti-competitive if SingTel began to remove spare capacity (decommission), or even 'hoard', and force other licensees to install new capacity.

Clause 5 Delivery

IDA has sought views on whether it should require SingTel to state a timeframe for provisioning rather than SingTel being able to notify any provisioning date under cl 4.4. Macquarie believes that this is a clear example of where SingTel currently has too much discretion and supports the IDA proposal to fix a period.

Under the current RIO, provisioning is meant to be completed in less than 5 days. However, if SingTel cannot meet this date, it simply has to notify the requesting licensee. There is no statement of penalty and SingTel may continuously breach the 5 day timeframe so long as it keeps notifying of delays. As per our comments in section 2, it is essential that key processes such as provisioning be subject to SLAs with set timeframes and penalties for non-compliance. In this instance, we believe that the provisioning date should be set under cl 4.4 and whatever date is notified must be complied with under cl 5.1. Macquarie submits that three business days is a reasonable period for provisioning of loop/sub-loop.

Clause 6 SingTel build

IDA has sought views on whether it is a useful option to require SingTel to construct loop or sub-loop to address existing unavailability or whether there are better options. Macquarie submits that the key issue is to ensure that SingTel does not abuse discretions to determine loop availability as per comments above.

As a complementary measure, Macquarie believes that the SingTel build option should be retained and at the same time clarified. For example, there is currently no mention of how this new loop will be allocated and whether it will be available generally to any licensee or just the licensee who pays for it. If it is generally available, the ULL charges paid by other licensees should be paid to the sponsor licensee or at least used to rebate its costs of loop build. It would be inequitable for SingTel to charge a sponsor licensee for the loop build, retain ownership of the loop and then charge others to use it.

Schedule 3B – Line sharing

Annex B.2: Spectral compatibility

Macquarie submits that the general RIO references to classifying loop as POTS compatible only are insufficient. There should be a requirement for the RIO to state loop will be DSL compatible.

In terms of the IDA spectrum plan, this should be extended to cover all xDSL services and encompass some sort of classification and specification for SingTel unbundled local loop.

Schedule 8B – POA collocation

Clause 2 Availability

IDA has sought comments on the criteria for assessing space availability. Macquarie supports provision of space on a 'first come, first served' basis. We believe that the ideal position is that where space is vacant, any FBO should have access to it even if another party has forecast a need for that space.

Macquarie also believes that SingTel should be required to provide information in advance on available space to operators so that they do not waste time and resources making requests for unavailable space. Operators should also have the opportunity to inspect space to verify SingTel claims that space is used.

Clause 5 Site preparation work

IDA has sought views on whether it should require SingTel to state a timeframe for site preparation work rather than SingTel being able to notify any date under cl 4.4. Macquarie believes that this is a clear example of where SingTel currently has too much discretion and supports the IDA proposal to fix a period.

Unlike with loop provisioning, this schedule does not even set a target date for site preparation work. SingTel can notify any date. Further, if SingTel cannot meet this date, it simply has to notify the requesting licensee. There is no statement of penalty and SingTel may continuously breach its specified timeframe so long as it keeps notifying of delays. As per our comments in section 2, it is essential that key processes such as site preparation work be subject to SLAs with set timeframes and penalties for non-compliance. In this instance, we believe that the date should be set under cl 4.4 and whatever date is notified must be complied with under cl 5. Macquarie submits that three business days is a reasonable period for collocation site preparation.

IDA has also sought views on alternatives which a licensee may consider in backhauling its traffic from the collocation site to its exchange or office and how this can be reflected in the RIO. Currently, SingTel constructs ducts from the designated manhole for a licensee to connect its ducts to the SingTel lead-in manhole.

Macquarie believes that this is a complex issue. While SingTel argues that it must carry out such construction to protect its plant, it uses contractors for such work in any event. A simple answer may seem to be that other operators should be able to use the same contractors to the carry out connection directly for them. However, SingTel tends to be obstructive of use of the same contractors as between competitors such that other operators may find it difficult to get the work done. Of course, liability issues complicate this alternative as well.

As a result, Macquarie submits that the best option is to treat all backhaul involving ducts/manholes as an essential service to be regulated under the RIO with no conditions re usage attached. Not all licensees will choose to install their own backhaul and the RIO should allow for purchase of backhaul from SingTel.

Clause 7 Licence term

IDA has sought views on whether the licence for collocation space should be automatically renewed after its 2 year term. Macquarie believes there should be provision for this, given that the RIO would currently allow the licence to expire and presumably licensees would have to go through the whole process of licensing space again for no apparent reason.

General

As Macquarie has not yet experienced Schedule 8B in practice, we do not comment in further detail but note our concern that IDA ensures collocation prices are truly cost based, there is ease of access to space and reasonable terms and conditions apply.

Schedule 9 – Charges

IDA has sought views on integrated IGS/SGS charges. Macquarie simply comments that any innovation that reduces costs should result in reduced LRAIC charges. As innovations clearly will occur independently of IDA's three yearly review of the RIO, IDA should make a point of checking the validity of RIO pricing more frequently than it may choose to look at the RIO as a whole.

Schedule 11 – Dispute Resolution

IDA has sought views on current dispute resolution procedures. Macquarie believes there is a real need for amendment to these and refers to the discussion in section 2 of this submission.

Other schedules

To the extent Macquarie has an indirect interest in other schedules specified in the IDA RIO Consultation, we do believe that amendments are necessary to improve RIO processes. However, given the short period given for submissions, we are unable to comment at this stage.

COMMENTS ON REMAINING PROVISIONS OF INTEREST TO MACQUARIE

Schedules 3A and 3B – Unbundled local loop

General comments

Various aspects of current ULL regulation are not suitable for new entrants. For example, the requirement for licensees to take loop for 2 years, when SingTel's own downstream contracts have a minimum of 1 year, is inequitable. This means that other operators can only offer their customers 2 year retail contracts, unless they use the clumsy option of terminating 2 year loop on 6 months notice.

Further, quality of service is too uncertain. There are no timeframes for fault rectification and the first appointment time of 3 days to respond to a fault is not acceptable. Singapore corporate customers will not accept down time of days for their telecommunications services. IDA should not treat these RIO provisions as effective to ensure ULL quality, just because there are some timeframes and processes mentioned. The timeframes and processes must first be streamlined and certainty provided through fixed timeframes and removal of SingTel discretions. In other words, there must be proper SLAs as outlined earlier in our submission.

Additional uncertainty arises from the failure of current RIO provisions on ULL to provide a technical specification for the quality of loop SingTel will provide. They refer to POTS Quality, yet also state that technical parameters such as frequency response, impedance may change over time. It is not possible for new entrants such as Macquarie to evaluate an xDSL or ULL business case when a base level of technical specifications is not provided. A reasonable specification for line capabilities in terms of xDSL should be provided and the current spectrum plan for line sharing extended to cover the various 'flavours' of DSL.

The RIO also contains insufficient information on SingTel's network. FBOs considering roll out of ULL need more than just a list referring to SingTel exchanges. For example, they cannot work out from this how many exchanges they may need to collocate and install DSLAMs in. The RIO should include exchange locations for ease of reference, maps of exchange boundaries and operators should be able to readily access information on which phone line connects to which exchange (in the case of line sharing).

It is an inadequate response for SingTel or IDA to claim it is not possible to provide exchange information as customers between exchange boundaries may be served by both exchanges. There will still be a large number of customers whose exchange is clearly defined and these should be identified. Macquarie also queries whether it is that difficult for SingTel to further list exchanges even for 'grey area' customers given SingTel will have and be able to use that information itself, with highly discriminatory results. This is compounded by the highly asymmetric nature of information gained and utilized by SingTel. For example, all forecasting for all SBOs and FBOs is gathered by SingTel. This centralized repository of information is a major commercial advantage to incumbents throughout the world in all highly networked industries.

The current provisions also act against new entrants in that where they pay for SingTel to install new loop, ownership or cost sharing is not addressed, with the apparent result that SingTel gets a windfall.

Finally, the excessive SingTel discretion creates too much uncertainty for new entrants. ULL provisions contain too many situations where SingTel may simply cancel the ULL without adequate explanation.

Below we comment on specific ULL provisions. References are to Schedule 3A but Schedule 3B raises the same concerns, albeit at least the latter suggests that loop must be suitable to carry xDSL.

Clause 1.5 Scope, provisioning remedy

This clause states that if SingTel fails to meet timescales for provisioning, it will provide a remedy. However, the remedy is limited to a credit on charges. This is not a genuine pre-estimate of loss from provisioning delays and real SLA penalties should be included.

Clause 3.1 Ordering & Provisioning

Clause 3.1 currently provides that SingTel will allocate local loops and sub-loops to others using the same allocation criteria it uses for itself. However, the allocation criteria are not disclosed. The RIO should specify the criteria so that licensees know if allocation is on a 'first come, first served' basis or if SingTel can 'pre-allocate' according to forecast and lock up large numbers of ULL for its own use.

Clause 4.6 Response time, application fees

SingTel is able to charge licensees an application fee regardless of whether successful or not. However, certain application criteria depend on SingTel availability. SingTel should be required to provide reasonable information on loop availability in advance of an application, so that licensees are not repeatedly making applications for unavailable loop.

Clause 9.2 Standard terms, quality

SingTel has stated that the quality of loop cannot be guaranteed over the licence period. Macquarie submits that if the loop does not meet the minimum specification for POTS at any time, then it should be deemed faulty. To support this, the RIO should elaborate on the base specification of a POTS service as a minimum, even if it does not improve QoS to DSL standards.

The IDA should not assume that, just because it has referred to voice or 'POTS' standard of service in the Code and required non-discriminatory quality for loop, it has covered off quality of service issues. Greater detail is required for industry certainty and SingTel accountability. IDA should require POTS specification for ULL for cases where this is all SingTel offers customers. It should also assume that SingTel will be providing loop with higher quality to its customers as any typical or efficient incumbent would. IDA should therefore require a second level of DSL compatible service with specifications. Further, real SLAs should be included. This is necessary to give effect to the current superficial non-discriminatory provisions in the RIO and section 5.3, Appendix 2 of the Code. In this regard, we refer to our earlier comments that IDA must improve mechanisms to ensure discrimination does not occur.

The same comments apply to Schedule 3B, cl 8.2.

Clause 9.3 Standard terms, POTS quality

The RIO currently provides that the loop may not be suitable for services other than POTS but does not otherwise include any specification of loop. SingTel needs to define the specification to support POTS at a minimum. Macquarie observes that other parts of

the RIO refer to the POTS service being able to carry ADSL but do not guarantee this. A better approach would be to require DSL compatibility and include specifications.

Macquarie questions in this regard whether SingTel is acting in a non-discriminatory fashion or is in fact providing itself with loop that is DSL compatible rather than meeting a POTS minimum. In the absence of any certainty that SingTel is not engaging in this anti-competitive conduct, the IDA can best act by setting clear specifications at the higher level that SingTel is likely to be offering itself as an efficient incumbent.

We believe that IDA's ULL regime may be more successful if the QoS requirements are improved. There should be concern that there has not been ULL take up in Singapore as compared to other jurisdictions where it is getting a lot of attention.

The same comments apply to Schedule 3B, cl 8.3.

Clause 9.4 Standard terms, interference

A requesting licensee must not do anything while using the loop that would interfere with SingTel or other licensee services. Macquarie submits that SingTel should similarly be required to avoid any conduct that would interfere with the licensed loop or requesting licensee services.

Clause 9.8 Standard terms, loop interest

Macquarie is concerned this clause simply provides that requesting licensees have no rights or ownership to loop. We believe the RIO should be amended to improve the position of licensees who pay for loop build as elaborated earlier in this submission.

Clause 11.4 Fault management

Macquarie submits that a licensee should only have to pay charges for faults in its network if these are reported to SingTel and SingTel actually incurs costs in fault analysis. Currently the clause is ambiguous and would allow charges even where SingTel has not done anything. Further any charges should reflect what SingTel would charge itself ie. its real costs of fault analysis. Finally, a licensee should not have to pay a charge where the fault arises from factors in both parties' networks.

Clause 11.6 Fault response

The RIO currently gives SingTel will 3 business days to respond to a fault report to commence fault analysis. As stated above, 3 days is totally unacceptable for a first appointment. Corporate customers will not tolerate service outage for hours, let alone days. Macquarie believes that this provision is an extremely significant factor in licensees deciding to date not to use SingTel's ULL. Regardless of input prices, there is no point rolling out xDSL services if customers will experience unsatisfactory QoS due to SingTel anti-competitive delays in fault rectification. Macquarie submits that the RIO should be amended to include an appropriate fault response period of less than 4 hours with a target repair time of 8 hours.

Clause 11.14 Repair work

Clause 11.14 provides that, where practical, SingTel will provide reasonable notice of repair work on any components of the local loop. However, the clause does not elaborate on the notice period. Macquarie believes that this should relate to the severity of repairs. At least 10 business days notice should be given for non-critical repair or upgrading.

Clause 13.1 Term

As stated at the outset, it is unacceptable for the RIO to impose a 2 year licence term on loop where SingTel itself is able to offer 1 year contracts to its retail DSL customers. This means that other operators are unable to offer a competitive short term DSL product without terminating input loop early – this is a clumsy process and may result in penalties for them.

Macquarie believes that there is already significant disadvantages in relation to investment 'certainty' and capex payback times – these are generally 5 years plus – which leads to significant risk being undertaken by an operator using SingTel ULL. This should not be compounded by the lack of flexibility, at the other end of the spectrum, to acquire ULL on a short term basis.

The same comments apply to Schedule 3B, cl 12.1.

Clause 15.3 Termination

SingTel may terminate a loop licence if it is no longer suitable in SingTel's opinion or it is no longer available to be licensed. The RIO should elaborate at this point the grounds on which SingTel can reasonably form this opinion.

Clause 15.9 Put option

If a new loop has been installed and the licensee has its license terminated, SingTel may request a 'put option' (payback) re the cost of installing the loop. However, the licensee is required to pay for the loop construction in the first place under clause 6. SingTel should not be able to charge to install cable and then recoup costs again if the loop licence is terminated. Either the licensee should own loop that it sponsors or it should not be required to pay for construction, perhaps even at all but definitely not twice.

Schedule 3D – MDF

Clause 14.1

Currently, the term for MDF use is 2 years. As stated above, it is unacceptable for the RIO to impose a 2 year licence term on loop where SingTel itself is able to offer 1 year contracts to its retail DSL customers. The result is that other operators are unable to offer a competitive short term DSL product without terminating input loop early – this is a clumsy process and may result in penalties for them. The same principle applies to the use of MDF supporting that loop.

Schedule 8B POA Collocation

Attachment A – Equipment procedures

Clause 1.4.1

Currently, only 2 optical fibres are allowed. This is unreasonable. If an operator has a fibre ring then this is a typical design, but if it has a mesh network, more fibres will be required. The RIO should not dictate the design of a licensee's core network.

Clause 1.4.2

This clause limits operators to only 8 fibre strands per cable. This is unreasonable. 8 fibre strands was typical in 2001 but this is no longer the case in 2003. The RIO should not limit the fibre strands a licensee can use as this limits core network design and capacity.

Clause 1.4.3

Currently, only 2 optical fibres per manhole are permitted. This is unreasonable. If an operator has a fibre ring then this is a typical design, but if it has a mesh network, more fibres will be required. The RIO should not dictate the design of a licensee's core network.

General

The RIO collocation provisions do not refer to licensees being able to interconnect with each other within the collocation area. Macquarie submits that this is an area that IDA should address.

Attachment C – Physical access procedures

Clause 1.5.1

The current SingTel procedures provide that only 4 people can be nominated to access a collocation site. It is not possible/practical for a company to maintain its physical sites in Singapore with just 4 people. The RIO should allow operators to list up to 20 people.