

SINGAPORE TELECOMMUNICATIONS LIMITED

**RESPONSE TO IDA CONSULTATION PAPER – INDUSTRY STRUCTURE FOR
NEXT GENERATION ACCESS NETWORKS**

1. INTRODUCTION

- 1.1. Singapore Telecommunications Limited (**SingTel**) refers to the consultation paper issued by the IDA on 17 April 2008 in relation to the industry structure for next generation access networks (**Consultation Paper**).
- 1.2. SingTel welcomes the opportunity to make a submission on the Consultation Paper but wishes to express concern about the intrusive nature of the IDA's proposals in relation to the structural/operational separation of existing licensees in Singapore.
- 1.3. Such regulatory measures are disproportionate in the Singapore context. They fail to recognise the high levels of network competition that already exist in Singapore and the prospect of greater competition following the deployment of the Next Generation National Broadband Network (**NGNBN**).
- 1.4. This submission is structured as follows:

Section 1 – Introduction

Section 2 – Executive Summary

Section 3 – The existing industry structure in Singapore

Section 4 – No clear criteria for the imposition of separation to existing networks in Singapore

Section 5 – Separation may be appropriate for government funded NGNBN deployments but is inappropriate for existing networks in Singapore

Section 6 – Conclusion.

2. EXECUTIVE SUMMARY

Key messages

- 2.1. SingTel does not consider that it is necessary or appropriate for the IDA to separate existing telecommunications licensees in Singapore.
- 2.2. There is no need for such a regulatory measure to be available to the IDA:
 - a. Singapore has a high level of network based competition, including two nationwide wireline networks and the prospect of greater competition following the deployment of a third nationwide wireline network, the NGNBN; and
 - b. existing regulatory measures are sufficient to safeguard competition.
- 2.3. International practice suggests that the implementation of separation must be proportionate and only used as a measure of last resort (i.e. where it is established that existing regulatory measures are insufficient). The IDA's Consultation Paper does not propose a similar restrained approach to the use of such an intrusive regulatory remedy.
- 2.4. Other regulators have specifically rejected operational separation as a regulatory remedy on the basis of the existence of two nationwide wireline networks, as is currently the case in Singapore. The pending deployment of a third nationwide wireline network, the NGNBN, is a further reason for the IDA to forebear from the imposition of structural/operational separation in respect of existing networks in Singapore.
- 2.5. In light of the already high levels of network based competition in Singapore (and the pending deployment of the NGNBN), SingTel submits that the separation of existing networks:
 - a. would be disproportionate as a regulatory remedy; and
 - b. would result in costs that significantly outweigh the benefits (if any) from separation, to the detriment of infrastructure based competition and end-users.

High levels of network competition in Singapore

- 2.6. The Singapore telecommunications sector is characterised by a high level of network based competition.
- 2.7. All end-user premises in Singapore are currently passed by a minimum of two wireline networks. This number is higher in the CBD, industrial areas and business parks. These wireline networks are also complemented by wireless networks that support high speed broadband services.
- 2.8. Following the deployment of NGNBN, Singapore will have three nationwide wireline networks offering high speed broadband services, including:
- a. the SingTel network;
 - b. the StarHub network; and
 - c. the NGNBN.
- 2.9. Two out of three of these nationwide wireline networks will provide for “*open access*”, including:
- a. the NGNBN, in respect of which:
 - i. NetCo will operate the passive infrastructure of the NGNBN on a structurally separate basis and will supply Mandated Services to OpCo under an Interconnection Offer (**ICO**);
 - ii. OpCo will operate the active infrastructure of the NGNBN on an operationally separate basis and will supply active services to retail service providers under an ICO; and
 - b. the SingTel network, which is currently subject to the requirements of the Telecom Competition Code 2005, including the obligation for SingTel to supply unbundled local loops and line sharing pursuant to the SingTel Reference Interconnection Offer (**RIO**) on IDA approved prices, terms and conditions.

2.10. In light of the existing levels of network competition and the existence of a 3 nationwide wireline networks following the deployment of the NGNBN, it is appropriate for the IDA to reduce the level of regulation in respect of existing licensees, rather than increase it. This would be consistent with the principle of proportionate regulation and the removal of regulation where competition is working effectively.

2.11. Proposals put forward by the IDA in its Consultation Paper are contrary to these regulatory principles and erroneously envisage an increase in the level of regulation, rather than a proportionate reduction.

The competitive dynamics of the telecommunications sector in Singapore are readily distinguishable from other countries

2.12. Operational separation has been proposed as a regulatory remedy by the European Commission and there are already some countries that have sought to implement such an arrangement, including the United Kingdom and New Zealand.

2.13. The main justification for the use of operational separation (and its implementation in certain countries) is the existence of a single nationwide wireline network, low levels of network based competition and chronic instances of discrimination by the incumbent operator.

2.14. The situation in Singapore is readily distinguishable from these countries – the Singapore telecoms sector is characterised by high levels of network based competition relative to other countries and this will increase further following the deployment of the government funded NGNBN.

The competitive dynamics of fixed wireline broadband capable networks in Singapore are similar to mobile networks

2.15. SingTel considers that the regulatory treatment of existing wireline networks in Singapore should be the same as the IDA’s proposed treatment of mobile networks in the Consultation Paper. In the Consultation Paper, the IDA states:

“it would not be necessary to impose structural and operational separation on operators that control these networks”.

2.16. There are 3 nationwide mobile networks in Singapore and there will soon be 3 nationwide wireline networks following the deployment of the NGNBN. The IDA has determined the mobile segment is competitive with 3 mobile networks. On a similar basis, three nationwide wireline networks will enable the competitive provision of high speed broadband services in Singapore.

2.17. In light of the competitive nature of broadband enabled, wireline networks in Singapore, SingTel does not consider that it is appropriate for the IDA to forcibly separate existing networks in Singapore or to have the power to do so.

No clear criteria has been proposed for the implementation of separation in Singapore

2.18. The IDA's Consultation Paper appears to be heavily influenced by overseas developments, including the European Commission's recent proposals in respect of functional separation.

2.19. Unlike the European Commission, however, the IDA has not sought to adopt any of the safeguards or limitations that have been proposed by the European Commission against the improper use of functional separation as a regulatory remedy.

2.20. The European Commission's proposals in respect of functional separation seek to prevent the improper use of this intrusive regulatory remedy by requiring national regulatory authorities to conduct a thorough analysis of:

- a. the existing state of competition in defined markets;
- b. the effectiveness of existing regulatory remedies (e.g. accounting separation) in addressing the identified competition problem; and
- c. the appropriateness of functional separation as a means of addressing the identified competition problem,

prior to the imposition of functional separation as a regulatory remedy.

2.21. The IDA has not proposed any such criteria or requirement in its Consultation Paper. Accordingly, if no such criteria was adopted, the IDA would have failed to:

- a. identify the competition issues that allegedly exist in the Singapore telecommunications sector before it could impose separation on existing licensees; and
- b. establish that these competition issues cannot be otherwise resolved through existing, less intrusive regulatory remedies.

2.22. Indeed, in the event that such analysis was conducted in Singapore, it would be clear that the criteria for separation would not be satisfied. In particular:

- a. there are no documented cases of chronic discrimination by any wireline operator that would justify the imposition of separation;
- b. there is no evidence to suggest that existing regulation is insufficient; and
- c. Operators such as SingTel are already subject to a high level of regulation, including:
 - i. separate telecommunications licences for each SingTel entity (i.e. SingTel Telecommunications Ltd, Singapore Telecom Mobile Pte Ltd and SingNet Pte Ltd);
 - ii. accounting separation;
 - iii. the provision of access pursuant to IDA approved prices, terms and conditions under the SingTel RIO (this is not common in other countries); and
 - iv. strict prohibitions on anti-competitive conduct.
- d. the pending deployment of a third nationwide wireline network, the government sponsored NGNBN.

2.23. The IDA's Consultation Paper also overlooks the fact that the European Commission's proposals in respect of functional separation remains subject to the principle of proportionality and is to only be used as a measure of last resort (i.e. where analysis suggests that existing regulatory measures are not a sufficient remedy).

2.24. When the principle of proportionality is applied in the context of existing networks in Singapore, it is clear that the imposition of structural/operational separation would not be a proportionate regulatory response.

2.25. OPTA, the Dutch regulator, has recently rejected the use of UK style, functional separation in the Netherlands on the basis that such a measure would be disproportionate in light of the level of competition provided through the existence of multiple wireline networks (as is currently the case in Singapore):¹

“...an obligation which compels KPN to introduce a functional separation appears to be disproportionate for the time being, and it could produce undesirable effects with a view to the primacy of infrastructure competition”.

Cost/Benefit analysis

2.26. Structural and operational separation has both costs and benefits. These costs and benefits ultimately inform the decision to impose (or not impose) separation as a regulatory remedy.

2.27. While the IDA’s Consultation Paper recognises the existence of some benefits associated with separation, it does not identify (or even acknowledge) the existence of the various costs associated with the imposition of such a regulatory measure on existing licensees in Singapore. Nor does it propose criteria for the measurement of these costs and benefits.

2.28. International best practice provides that separation should not be considered as a regulatory measure until such an analysis has been properly performed and it is established that the benefits associated with separation exceed the costs.

2.29. Some overseas regulators have already rejected separation as a regulatory remedy on the basis that the costs associated with separation will significantly outweigh the benefits. Such an outcome would be well justified in environments with high levels of network based competition, as is the case in Singapore.

¹ OPTA, *Letter to Market Parties regarding All-IP: Policy Rules and Separation of Functions*, Public Version, 2 March 2007, pages 5-6.

2.30. Indeed, it is clear that that the costs associated with the separation of existing licensees in Singapore will outweigh the benefits (if any). This is because the costs of separating an existing licensee will be very high relative to the benefits (if any), given that these benefits:

- a. are already realised to an appreciable extent through the existence of high levels of network based competition, including two nationwide wireline networks; and
- b. will be further realised following the deployment of the government sponsored NGNBN, which will further enhance network based competition.

Separation is unnecessary for networks other than the government funded NGNBN

2.31. The IDA has already determined that the NGNBN will be subject to an “*effective open access*” regime, comprising the structural separation of NetCo and the operational separation of OpCo.

2.32. In light of the fact that the NGNBN will receive up to S\$1 billion in government funding and there is a strong “public good” element to the NGNBN, SingTel accepts that the NetCo and OpCo businesses that comprise the NGNBN will be subject to structural and operational separation respectively and considers that this may represent an appropriate model for publicly funded NGN deployments.

2.33. However, the fact that separation may be an appropriate regulatory measure for the NGNBN does not mean that other wireline networks in Singapore should also be subject to structural or operational separation, particularly where these other networks have been constructed through private investment. Such a measure would be disproportionate.

2.34. In fact, the existence of a structurally and operationally separate NGNBN mitigates against the need for imposing a similar requirement on other existing wireline networks.

2.35. In other countries that have adopted an NetCo/OpCo type model, such as the Netherlands, OPTA has not sought to impose separation on the incumbent operator (or their next generation network deployments).

3. THE EXISTING INDUSTRY STRUCTURE IN SINGAPORE

Unique characteristics of the Singapore telecommunications sector

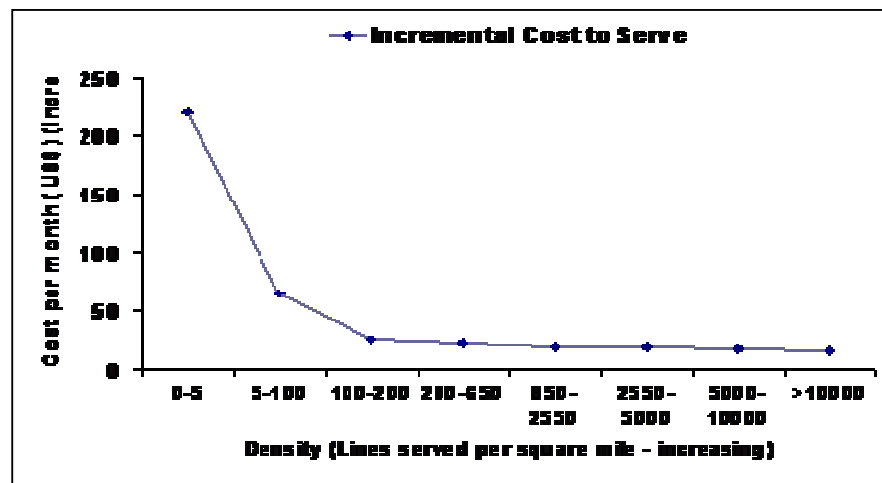
- 3.1. Singapore has unique features that distinguish its telecommunications sector from other countries, such as the United Kingdom, the United States, Australia and European countries. Many of these unique features have a positive impact on the level of network based competition.
- 3.2. These characteristics have shaped the rapid and highly developed state of competition in the Singapore telecommunications sector and include:
 - a. its small and compact geography;
 - b. its high population density; and
 - c. the high concentration of multi-national corporations, which facilitates global network operator rollouts in Singapore.

(a) Singapore's compact geography

- 3.3. Singapore is a small city-state of only 685 square km. Singapore's small size is in stark contrast to other countries such as the United Kingdom (244,820 sq km), the United States (9,629,091 sq km) and Australia (7,686,850 sq km), and is geographically smaller than many cities, such as London and Sydney. Unlike geographically large countries such as the United States and Australia, Singapore is small and densely populated on a relatively even basis.
- 3.4. The compact size of Singapore is not merely a geographic observation – it has a real impact on the viability of deployment of alternative telecommunications infrastructure in Singapore. In fact, Singapore's small size and compact geography has facilitated network deployment by new entrants throughout the country, including a nationwide wireline network by StarHub.

(b) *High population density*

- 3.5. Consistent with Singapore's compact geography, Singapore has one of the highest population densities in the world.² This has a direct influence on the ability of licensees to establish alternative telecommunications infrastructure. This contrasts with other countries with larger, and more dispersed, populations than Singapore.
- 3.6. In support of its application in August 2003 for a declaration of non-dominance in the market for Business DEL services, PCCW-HKT Telephone Limited (**PCCW**) constructed a graph derived from a cost model developed in the United States by the Federal Communications Commission (**FCC**) for estimating the cost of building a local telephone network.³ The graph indicates that the monthly cost per subscriber line declines steeply until the population density is such that the operator is able to serve more than 200 lines per square mile. Beyond this point, the incremental cost to serve an additional customer flattens out. This model suggests that economics of density are essentially captured when the operator is able to serve more than 200 lines per square mile.
- 3.7. A stylised version of the graph produced by PCCW-HKT using the FCC model is shown below:



² *Statistics Singapore* reports that the population density for 2002 was 6,086 persons per square kilometre. Singapore's total land area is 685.4 sq kilometres.

³ PCCW-HKT, *Application by PCCW-HKT Telephone Limited for a Declaration of Non-Dominance in the Market for Business Direct Exchange Link Services*, 8 August 2003, page 24.

- 3.8. With a population density in excess of 6,000 persons per square kilometre⁴ in Singapore, economies of density are readily available to new entrants wishing to construct their own network infrastructure.
- 3.9. For example, StarHub fully deployed its CBD network in two years and a nationwide mobile network by 1 April 2000. Similarly, Verizon completed its network roll-out in the CBD and other key business/industrial/technology parks within 12 months. This speed of deployment reflects the relatively low infrastructure costs involved in deploying a network in such a small geographic area.
- (c) *The high concentration of multi-national corporations, which facilitates global network operator rollouts in Singapore*
- 3.10. Singapore's position as a regional hub has meant that there is a prevalence of business and government customers, which means it is attractive for global network operators to invest in network infrastructure in Singapore.
- 3.11. The overall government policy of encouraging overseas business investment in Singapore has resulted in a comparatively large number of MNCs choosing Singapore as their regional base. In January 2006, it was reported that 7,000 MNCs as well as more than 6,000 enterprises from China, India, Australia and New Zealand had set up operations in Singapore.⁵
- 3.12. The presence of a large number of MNCs and regional business drives not only local competition between operators for this business customer base, but has also resulted in extensive network deployments by large regional and global operators.

High levels of network competition already exist in Singapore

- 3.13. The above illustrates that network based competition is readily possible in Singapore. In fact, there is clear evidence to suggest that Singapore's telecommunications sector is characterised by high levels of network based competition. This situation differs significantly from other countries, which generally only have a single nationwide wireline network.

⁴ Statistics Singapore.

⁵ Keynote address by Mr Teo Ming Kian, Chairman, Singapore Economic Development Board, NUS Global Entrepreneurship Summit 2006 Opening Ceremony, 16 January 2006

- 3.14. Over the past 10 years, there has been significant facilities based investment in the Singapore telecommunications sector, resulting in the establishment of two nationwide wireline networks.
- 3.15. The IDA has also initiated the NGNBN to encourage further investment in wireline and wireless network infrastructure. The NGNBN will constitute a third nationwide wireline network.
- 3.16. Singapore is in an almost unique position where extensive infrastructure investment is either already in place (in the case of the existing SingTel, SCV and StarHub networks) or will be made in the near future (in the case of the NGNBN).
- 3.17. There will be a minimum of 3 nationwide wireline networks in Singapore capable of supporting high speed broadband services, as well as complementary wireless and mobile networks (which can also support such services).
- 3.18. The nationwide wireline networks include:
- a. SingTel's network, over which SingTel supplies:
 - i. xDSL services to retail customers;
 - ii. fibre-based services;
 - iii. unbundled local loops and line sharing to wholesale customers; and
 - iv. the Wholesale-B Access Service to Internet Access Service Providers (**IASPs**);
 - b. StarHub's existing networks, over which StarHub supplies:
 - i. a 100 Mbps broadband service to retail customers; and
 - ii. a range of wholesale services to telecommunications licensees;
 - c. the NGNBN, which will initially provide a minimum download speed of 100 Mbps per end-user (scalable to 1 Gbps per end user); and

- d. any network enhancement or additional network established by an existing or new participants, such as SingTel, SCV or StarHub.

3.19. Of these 3 nationwide wireline networks:

- a. the NGNBN will be subject to “*effective open access*”, including the structural separation of NetCo and the operational separation of OpCo from retail service providers, with access to both the passive and active infrastructure of the NGNBN available through an ICO containing IDA approved prices, terms and conditions (that is developed following a transparent public consultation process);
- b. the SingTel network is currently subject to the existing framework under the Telecom Competition Code, including obligations to supply local loop unbundling and line sharing pursuant to the SingTel RIO on IDA approved prices, terms and conditions, as well as the Wholesale-B Access Service.

3.20. These wireline networks are supplemented by several broadband enabled, wireless networks, including:

- a. three nationwide mobile networks, offering high speed broadband services. For example:
 - i. SingTel Mobile announced last month that it will invest S\$220 million in its 2G and 3G mobile networks as part of its expansion and enhancement programme so that customers can expect even better user experience, including download and upload data speeds of up to 42 Mbps and 12 Mbps respectively within the next 18 months;
 - ii. StarHub has recently announced a similar programme to expand and upgrade its current nation-wide 3.5G mobile broadband network to HSPA+ by 2Q-2009 in order to offer better overall mobile coverage island-wide indoors and outdoors, and support even larger volumes of data traffic than current offerings in the marketplace; and
 - iii. M1 has also announced similar plans;

- b. wireless broadband access, following the IDA's grant of six new wireless broadband access (WBA) licences to 6 entities to offer WiMAX services; and
- c. Wireless@SG, a widely available and pervasive wireless broadband network arising from the IDA's launch of Wireless@SG in December 2006. As at April 2008, there were more than 7,260 Wireless@SG hotspots located around Singapore, with WiFi services offered by iCell Network Pte Ltd, QMAX Communications Pte Ltd and Singapore Telecommunications Ltd.

High levels of network competition remove the need for separation as a regulatory remedy

3.21. The existence of competition from 3 nationwide wireline networks represents the best form of competition and provides a strong reason for not imposing structural/operational separation on existing wireline networks in Singapore.

3.22. In fact, SingTel submits that it would be appropriate for the IDA to reduce the level of regulation in the Singapore telecommunications sector, rather than increase it. This would be consistent with the principle of proportionate regulation and the removal of regulation where competition is working effectively.

3.23. Section 1.5.3 of the Telecom Competition Code provides as follows:

“IDA believes that effective and sustainable competition will be best achieved through facilities-based competition.”

3.24. This principle has been widely accepted by other regulators (and regulatory bodies) and represents international best practice.

3.25. The European Regulators Group has commented that:

“Competition over competing infrastructure has many advantages. The pressure to minimise costs is exerted over the whole value chain. This will induce greater scope for innovation, process innovation, etc which creates a downward dynamic for costs. Consumers also benefit from more diversified offerings, which correspond more closely to their individual needs. There is general agreement

that a great potential harm to welfare occurs when replication is feasible but not promoted.”⁶

3.26. In recognition that facilities-based competition is first-best competition, overseas regulators have specifically suggested that it is appropriate to forbear from regulation of next generation access networks in circumstances where there are multiple networks.

3.27. For example, Ofcom has recognised that facilities-based competition resulting from a number of fibre networks should be sufficient to protect the interests of end users, and that in these cases little, if any, regulation would be required:⁷

“If there were a number of fibre networks serving individual homes then there might be sufficient infrastructure competition to ensure a competitive market. As a result there might be little need for regulation promoting access to networks to ensure the benefits of competition are available to consumers. However, if there is only one access network, wholesale access to that network might be required to promote competition in services to consumers”.

3.28. The proposals put forward by the IDA in its Consultation Paper are contrary to these established regulatory principles and erroneously envisage an increase in the level of regulation, rather than a proportionate reduction.

Regulation only necessary in the case of market failure

3.29. As a general principle, regulation is only warranted in the case of market failure.

3.30. The IDA has already recognised this important principle in section 1.5.3 of the Telecom Competition Code, which provides as follows, after stating that facilities-based competition represents the best competition outcome:

“However, where there are technological, market or other impediments that would hamper competing Licensees’ ability to build facilities, IDA will seek to strike a balance between providing the economic incentives to build facilities and permitting services-based competition to take place for the benefit of consumers.”

⁶ European Regulators Group, *ERG common position on the approach to appropriate remedies in the new regulatory framework*, 23 April 2004, page 67.

⁷ Ofcom, *Next Generation New Build: Promoting higher speed broadband in new build housing developments*, (16 April 2008) page 2.

- 3.31. There is no market failure in Singapore that has been alleged or which would warrant the introduction of structural/operational separation in respect of existing wireline networks. To the contrary, Singapore is characterised by high levels of network based competition.
- 3.32. SingTel and StarHub offer numerous wholesale access services to IASPs. These services are provided on non-discriminatory terms and in accordance with tariffs that have been filed with, and approved by, the IDA.
- 3.33. In light of the current state of the market in Singapore, the availability of wholesale services and particularly in light of the likely future state of that market, there is no reasonable basis for the IDA to consider that there is manifest and enduring market failure in Singapore. It is not reasonable for the IDA to intervene with the heavy handed and disproportionate regulation it has proposed in the absence of such failure.

Conclusion for Singapore

- 3.34. In light of the existing levels of network competition and the prospect of 3 nationwide wireline networks, conventional wisdom suggests that there is sufficient scope for a reduction in the level of regulation.
- 3.35. The IDA's Consultation Paper is inconsistent with this conventional wisdom, as it appears to endorse an increase in the level of regulation, notwithstanding the fact that Singapore has high levels of network competition.
- 3.36. The competitive landscape in Singapore is readily distinguishable from other countries, particularly those that only have a single nationwide wireline network and lower levels of competitive pressure on the incumbent operator.
- 3.37. While separation may represent an appropriate regulatory remedy in other countries, SingTel submits that separation is an inappropriate remedy for existing networks in Singapore.

4. NO CLEAR CRITERIA FOR THE IMPOSITION OF SEPARATION TO EXISTING NETWORKS IN SINGAPORE

Circumstances that justify the implementation of operational separation internationally

- 4.1. International regulatory practice provides for the implementation of operational separation in a limited range of circumstances and includes safeguards to ensure the proper use of functional separation as a regulatory measure.
- 4.2. Even though the IDA's Consultation Paper appears to be heavily influenced by recent policy proposals from the European Commission, it is clear that many of the safeguards proposed by the European Commission to ensure the proper use of functional separation as a regulatory remedy have been ignored by the IDA.
- 4.3. For example, the European Commission's proposal (which is still to be approved by the Council of Ministers and the EU Parliament) limits functional separation to exceptional circumstances where there has been persistent failure to achieve non-discrimination⁸.
- 4.4. The European Commission's proposed directive on functional separation specifically states that where a national regulatory authority intends to impose functional separation, it must submit a request to the European Commission that includes:⁹
 - a. evidence that the imposition of appropriate obligations to achieve effective competition following a co-ordinated analysis of the relevant markets in accordance with Article 16 of Directive 2002/21/EC (Framework Directive) has failed and would fail on a persistent basis to achieve effective competition and that there are important and persisting competition problems/market failures identified in several of these products markets;
 - b. an analysis of the expected impact on the regulatory authority, on the undertaking, and on its incentives to invest in its network, and on other stakeholders including in particular the expected impact on infrastructure competition and any potential entailing effects on consumers; and

⁸ European Commission, Report on the outcome of the Review of the EU regulatory framework for electronic communications networks and services in accordance with Directive 2002/21/EC and Summary of the 2007 Reform Proposals COM (2007) 696 final

⁹ European Commission, *Proposal for a Directive of the European Parliament and of the Council amending Directives 2002/21/EC on a common regulatory framework for electronic communications networks and services, 2002/19/EC on access to, and interconnection of, electronic communications networks and services, and 2002/20/EC on the authorisation of electronic communications networks and services*, 2007/0247 (COD), Brussels, 13 November 2007, pages 45-46.

- c. a draft of the measure being proposed.
- 4.5. The IDA has not proposed any such criteria (or similar criteria). Nor has the IDA acknowledged in its Consultation Paper that national regulatory authorities in Europe are subject to such significant restrictions on the use of functional separation as a regulatory remedy.
- 4.6. If the IDA did not adopt any such analysis, then the IDA will not have the analytical tools to:
- a. identify the competition problems that allegedly exist in Singapore before it could impose separation on existing licensees; and
 - b. establish that existing (and less intrusive) remedies were not sufficient to resolve any competition problems that may be identified.
- 4.7. Indeed, SingTel submits that, in the event that level of analysis required by the European Commission was conducted by the IDA in Singapore, it would be clear that:
- a. there are no documented cases of chronic discrimination by any wireline operator that would justify the imposition of separation;
 - b. there is no evidence to suggest that existing separation (e.g. accounting separation) is insufficient; and
 - c. SingTel is already subject to effective regulation, including:
 - i. separate telecommunications licences for each SingTel entity (i.e. SingTel Telecommunications Ltd, Singapore Telecom Mobile Pte Ltd and SingNet Pte Ltd);
 - ii. accounting separation;
 - iii. the obligation to provide access pursuant to IDA approved prices, terms and conditions; and
 - iv. strict prohibitions on anti-competitive conduct.

- d. the pending deployment of a third nationwide wireline network, the government sponsored NGNBN.

Proportionality and the use of separation as a regulatory remedy of last resort

- 4.8. Regulatory measures that are imposed by national regulatory authorities in Europe must be proportionate. To this end, the European Commission has made it clear that its proposal in respect of functional separation should not be used without good cause and only as a measure of last resort:¹⁰

“Functional separation as a new remedy of last resort could improve competition where competition problems and bottlenecks persist and where other remedies are not effective at achieving non-discrimination” (our emphasis).

- 4.9. Indeed, while the European Regulators Group has expressed support for functional separation, it has also emphasised the need for decisions that seek to implement functional separation to be proportionate and only used in circumstances where other less interventionist remedies have proven insufficient in eliminating discrimination:¹¹

“In a number of member states, the strengthening of non-discrimination may be sufficient of itself to address the competitive issues some NRAs face. However, for others the existing suite of remedies provided for in the Framework may be insufficient to fully address anti-competitive behaviour by a vertically-integrated incumbent, and hence why the option of functional separation should be available to NRAs as an additional remedy. In any case, the effective application of this remedy should be in accordance with the principle of proportionality and take into account the special specificities of the markets in the Member States”.

- 4.10. And further:¹²

“The decision to impose functional separation needs to be considered by the NRAs after careful analysis and based on the nature of the problems identified, proportionate and justified in the light of the objectives of the Directives. Functional separation should only be implemented when it can be shown that

¹⁰ European Commission, *Commission Staff Working Document: Summary of the Impact Assessment*, SEC(2007) 1473, Brussels, 13 November 2007, page 7.

¹¹ European Regulators Group, *ERG Opinion on Functional Specification*, ERG (07)44, page 6.

¹² *Ibid.*, page 2.

other mechanisms or remedies (accounting separation, non-discrimination, etc) cannot ensure non-discriminatory access”.

4.11. The European Regulators Group approach to this issue is consistent with the regulatory principles set out in Telecom Competition Code and the principles that are adopted by other competition regulators.

4.12. Section 1.5.4 of the Telecom Competition Code 2005, which provides that regulation should be applied in a proportionate manner:

“...IDA will seek to impose regulatory requirements that are carefully crafted to achieve clearly articulated results. Such requirements will be no broader than necessary to achieve IDA’s stated goals”.

4.13. Notwithstanding the need for proportionality in regulatory decision making in Singapore, the IDA’s Consultation Paper does not contain any reference to the issue of proportionality or consideration of the fact that such a regulatory remedy should only be used as a last resort.

4.14. SingTel considers that these important principles should form a fundamental part of any regulatory framework that may be adopted in respect of separation in Singapore. Decision.

Implementation of operational separation in other jurisdictions has been proportionate, evidence based and used as a measure of last resort based on voluntary undertakings

4.15. In its Consultation Paper, the IDA has recognised that *“international practices differ in the criteria for imposing structural and/or operational separation, although the policy objective of most jurisdictions when imposing any form of separation is to ensure effective competition...”*.

4.16. While it is correct to say that criteria for the imposition of separation as a regulatory remedy differs to some extent from jurisdiction to jurisdiction, the implementation of operational separation in various countries has generally been predicated on a comprehensive review of the following matters:

- a. the competition problems that exist in defined markets;

- b. an analysis of the effectiveness of existing regulatory remedies in dealing with these competition problems; and
- c. consideration of whether separation will provide an appropriate and proportionate means of addressing the identified competition problems.

4.17. For example, the implementation of operational separation and equivalence of inputs in the United Kingdom followed Ofcom’s strategic review of the telecommunications sector, which concluded that:¹³

“twenty years of telecoms regulation had yet to overcome the problems of enduring bottlenecks combined with unequal access to these parts of the network. In parts of the network where it is uneconomic for new entrants to build their own infrastructure, competitors are reliant on BT to provide wholesale access to its network. Yet those who have relied on BT to provide such access have to date experienced slow product development, inferior quality products, poor transactional processes, and a general lack of transparency” (our emphasis).

4.18. Similarly, in Sweden, the National Post and Telecom Agency conducted extensive analysis of the competition problems that existed with respect to LLU and bitstream access before concluding that functional separation of TeliaSonera represented an appropriate remedy in light of the competition problems identified and the structural nature of those problems.¹⁴

4.19. Therefore, the decision to implement operational separation (or similar remedies) in the United Kingdom and Sweden have been underpinned by extensive analysis, resulting in a decision that:

- a. existing regulatory remedies are insufficient; and
- b. operational separation is required to address chronic instances of discrimination in service delivery.

¹³ Ofcom, *Final Statements on the Strategic Review of Telecommunications and undertakings in lieu of a reference under the Enterprise Act 2002: Statement*, 22 September 2005, paragraph 4.7.

¹⁴ National Post and Telecom Agency, *Improved broadband competition through functional separation: Statutory proposal for non-discrimination and openness in the local loop*, Report Number PTS-ER-2007:18, 14 June 2007.

4.20. The Consultation Paper does not identify the need for the IDA to conduct such an analysis prior to the implementation of operational separation, but rather appears to proceed on the basis that it is open for a regulator to impose structural and/or operational separation without performing such an analysis. SingTel strongly disagrees with this position in the event that it is held by the IDA.

4.21. SingTel submits that any decision to impose separation on an existing telecommunications licensee in Singapore is highly intrusive and must be preceded by extensive analysis of the following:

- a. the competition issues that allegedly exist in the relevant market;
- b. the effectiveness of existing regulatory measures in dealing with these alleged competition problems; and
- c. consideration as to whether separation will provide an appropriate and proportionate means of addressing the identified competition problems.

4.22. As Professor Martin Cave has remarked in respect of the UK process of operational separation and prospect of a similar approach being adopted in other countries:¹⁵

“Ofcom undertook an analysis of the regulatory history of key access products, which led it to the conclusion that BT had been obstructive in their provision. It also undertook a careful analysis of the scope for competition in various markets, in order to delineate those services which were immune from competitive pressure in the medium term, and hence should be placed in the separated access services division.

Any NRA proposing to avail itself of a new operational separation remedy should undertake the same analysis. It would also be desirable if some form of scrutiny of remedies, by the Commission or the European Regulators Group, were in place to prevent ‘copy-cat’ use of a fairly draconian remedy” (our emphasis).

¹⁵ Martin Cave, ‘Six Degrees of Separation: Operational Separation as a Remedy in European Telecommunications Regulation’, in *Communications & Strategies*, No. 64, 4th quarter, 2006, page 12.

International practice suggests that separation is a disproportionate remedy where there is competition from at least two wireline networks, as is the case in Singapore

4.23. SingTel considers that separation may be an appropriate remedy in certain countries.

4.24. However, such a regulatory measure would be disproportionate in the context of existing licensees in Singapore, given the high levels of network competition that currently exist in Singapore relative to other countries and the prospect of further competition following the deployment of the NGNBN.

4.25. Indeed, the competition problems identified in other jurisdictions and the adoption of operational separation as a means of addressing those problems are moot points in the Singaporean context.

4.26. SingTel's view in this regard is supported by "regulatory thinking" in other countries that have similar levels of network competition to Singapore. For example, OPTA, the Dutch regulator, has recently rejected the functional separation of KPN as "*disproportionate*" in light of the existence of multiple nationwide wireline networks (as is currently the case in Singapore).

4.27. OPTA has stated:¹⁶

"In light of the study conducted for OPTA by NERA, OPTA is of the opinion that the functional break-up of BT in the United Kingdom is of limited relevance to the Dutch situation at present given that competition has evolved further in the Netherlands as a result of infrastructure competition. At present such a remedy appears to be disproportionate in the situation prevailing in the Netherlands. After all, the concept of a functional split is more logical in a market in which infrastructure competition plays a subordinate or marginal role and in which access to networks is the most important source of competition".

¹⁶ OPTA, *OPTA Vision 2008*, 2008, page 32.

4.28. And further:¹⁷

“...an obligation which compels KPN to introduce a functional separation appears to be disproportionate for the time being, and it could produce undesirable effects with a view to the primacy of infrastructure competition”.

4.29. SingTel strongly agrees with the views expressed by OPTA and considers that the imposition of separation on existing licensees in Singapore would also have the undesirable effect of undermining network based competition.

4.30. Indeed, OPTA’s adopted approach is consistent with regulatory practice in the United States, where the FCC has sought to forbear from regulation as a means of encouraging, rather than stifling, facilities based competition.

4.31. The OECD has stated:¹⁸

“to the extent that the telecom sector can sustain competition from alternative platforms, structural separation could adversely affect incentives for investment in new platforms. For example, in the United States, competition among separate physical platforms is developing in the market for broadband connections to end users. Alternative platform providers include cable companies and wireline telecom operators (which currently are the two most significant service providers) as well as mobile wireless 3G service providers and providers of other technologies such as fixed wireless. Availability, price and quality affect the competitive impact of the alternative platforms but cable, where it provides broadband services, has had the largest competitive impact. Given these market conditions, the U.S. FCC has designed its policies to promote investment in competing next-generation broadband platforms by eliminating or declining to impose access obligations that could deter such investment. Not all countries have the same breadth of alternative infrastructure in place as the United States, however, so these policies may not be equally applicable in other OECD countries” (our emphasis).

¹⁷ OPTA, *Letter to Market Parties regarding All-IP: Policy Rules and Separation of Functions*, Public Version, 2 March 2007, pages 5-6.

¹⁸ OECD, *Report on Experiences with Structural Separation*, Competition Committee, 7 June 2006, paragraph 61.

4.32. In fact, SingTel considers that there is actually a stronger case against the imposition of separation in Singapore relative to nearly all other countries in light of the pending deployment of a third nationwide wireline network in Singapore, the NGNBN.

Costs versus benefits of structural and operation separation

4.33. Structural and operational separation has both costs and benefits. These costs and benefits ultimately inform the decision to impose (or not impose) structural or operational separation as a regulatory remedy.

4.34. In its Consultation Paper, the IDA has not sought to identify (or even acknowledge the existence of) the costs associated with the structural and/or operational separation of existing licensees in Singapore. Instead, the IDA has merely sought views “*on the comparative benefits of structural separation vis-à-vis operational separation, in relation to the scope of separation and the criteria for separation for both structural and operational separation*”.

4.35. SingTel submits that the IDA’s proposed question misses the point entirely. The proper test involves an analysis of the costs and benefits (if any) associated with structural and operational separation.

4.36. International practice suggests that separation should not be considered as a regulatory measure until a cost-benefit is performed and it is established that the benefits associated with separation exceed the costs.

4.37. The costs associated with separation would include:

- a. the costs associated with the loss of certain efficiencies associated with vertical integration;
- b. degradation of service quality stemming from a ‘lowest common denominator’ approach to service provisioning, delivery and supply;
- c. disincentives for investment that may arise following separation; and
- d. the costs of implementing structural separation, including information system separation, staff training and recruitment costs, etc.

4.38. Structural separation has been reviewed and considered by various regulatory authorities and other bodies over recent years and there is a consensus that the costs of structural separation significantly outweigh any potential benefits.

4.39. For example, in March 2001, the Pennsylvania Public Utilities Commission (**PUC**) reversed its previous position regarding structural separation and acknowledged it would require substantial implementation costs and complementary behavioural remedies.

4.40. Similarly, in November 2001, the Florida Public Service Commission (**FPSC**) granted BellSouth's motion to dismiss a petition by competitive local exchange carriers regarding the structural separation of BellSouth. The FPSC criticized the CLECs' petition as "*a solution in search of a problem*" and noted that the CLECs had "*request[ed] relief so draconian that of the states that have examined the issue, all have rejected it.*"

4.41. The FPSC noted in relation to the costs of structural separation:

"Each additional regulation imposed on BellSouth creates costs and inefficiencies; may interfere with other regulations previously imposed; and brings uncertainty to an industry in which stability is necessary to foster competition. Not only is it premature to judge the efficacy of our earlier efforts, but it is also premature to determine that another solution is necessary."

4.42. In Japan, in May 2002, an expert group called the Telecommunications Council in recommendations to the Ministry of Public Management, Home Affairs, Posts and Telecommunications, made the following observations:

"There are no actual cases in other countries, and it is hard to generate confidence that a smooth implementation is possible."

4.43. The OECD also confirms that:¹⁹

"a full analysis of whether and how to structurally separate a firm weighs the costs and benefits of various structural separation scenarios against the status quo and other possible policy approaches, such as access regulation."

¹⁹ Ibid, paragraph 15 and 17.

...

Costs and benefits differ from sector to sector and from country to country, so uniform recommendations are not possible”.

4.44. If the IDA considers this issue on a country specific basis (as suggested by the OECD), SingTel submits that the costs of structural separation of existing licensees in Singapore would be significant and would outweigh an perceived benefits.

4.45. More recent “regulatory thinking” in respect of operational separation also confirms that it is necessary to ensure that the costs of separation do not outweigh the benefits that are likely to accrue through such a regulatory measure.

4.46. The European Regulators Group has stated:²⁰

“Functional separation is an effective remedy in cases where non-discrimination remains an issue. It is however necessary to take into account carefully, the implementation costs that in some cases could exceed the expected benefits. Therefore, before deciding the implementation of FS in a particular market, the NRA must carefully evaluated [sic] the particular costs and benefits of such a measure, given the fact that FS is a remedy very difficult to reverse once it has been implemented” (our emphasis).

4.47. There is already evidence emerging from the United Kingdom that suggests that the costs associated with the implementation of operational separation are significant. For example:

- a. the United Kingdom is not witnessing the same level of investment in next generation access networks as seen in some other countries, such as the United States, Japan, Korea and the Netherlands²¹ - indeed, BT has only made very limited deployments of fibre in its access network, with these deployments focusing on new developments, such as in Ebbsfleet Valley in Kent²²;

²⁰ European Regulators Group, *ERG Opinion on Functional Specification*, ERG (07)44, page 8.

²¹ NERA, *Ofcom's Strategic Review of Telecommunications and BT's Undertakings: Prepared on behalf of OPTA, Netherlands*, 15 February 2007, page 34.

²² British Telecom, *Media Release: 100 Megabits available at Ebbsfleet Valley from August 2008*, DC08-009, 10 January 2008.

- b. the costs associated with the establishment of Openreach and the implementation of the BT undertakings are significant - the BT Group's annual report for 2008 has quantified these costs as follows:²³

Creation of Openreach and delivery of undertakings	2008	2007	2006
	£53 million	£30 million	£70 million

- c. the teething problems associated with implementation have been significant, including staff training, operational and service issues (e.g. service delivery timeframes, effective product development, correct billing etc) and the need to ensure that the focus on equivalents does not result in a "lowest common denominator" approach, whereby service is "equally poor" rather than "equally good".²⁴

4.48. On the other hand, the benefits associated with the implementation of separation are likely to primarily flow from the competition improvements associated with the implementation of separation. Ofcom has noted:²⁵

"Ultimately the success of the Undertakings will be judged by the benefits experienced by consumers, both business and residential consumers".

4.49. However, as the competitive benefits that flow from operational separation ultimately depend on the improvements to competition that accrue following the implementation of operational separation, it follows that the benefits associated with the implementation of operational separation in Singapore in respect of existing wireline networks are likely to be very limited, particularly in light of the existing high levels of infrastructure competition in Singapore.

4.50. SingTel's view in this regard are supported by various overseas regulators, which have considered and rejected separation as a regulatory remedy on the basis that the costs associated with such a remedy exceed the costs.

²³ BT Group plc, *Annual Report 2008*, page 105.

²⁴ Spectrum Strategy Consultants, *Summary of findings: Ofcom Survey of BT's wholesale customers*, April 2006, page 2.

²⁵ Ofcom, *Impact of the Telecoms Strategic Review: Evaluation*, Statement, 10 December 2007, paragraph 2.10.

4.51. OPTA has stated:²⁶

“...the Commission is aware of the advantages of a functional separation. However, ...the Commission is of the opinion that the benefits are outweighed by the severity of imposing a functional separation, more so, because these benefits – or at any rate some of them – can already be achieved by means of existing obligations (transparency and non-discrimination)” (our emphasis).

4.52. Similarly, ARCEP, the French regulator, has criticised functional separation on the basis of the significant costs associated with implementation and the loss of efficiencies that would otherwise arise through vertical integration:²⁷

“the implementation of functional separation entails costs which are well in excess of those involved, for instance, in the implementation of accounting separation. These costs relate to the reorganisation of the company, the duplication of technical staff and engineers and, in general, the splitting up of various activities which had presented a certain degree of synergy. In the case of telecommunications, it is therefore possible that functional separation will therefore result in increased network access costs for all operators across the board”.

4.53. SingTel considers that the IDA’s Consultation Paper has not given sufficient regard to this important issue. Accordingly, SingTel considers that there is a need for the IDA to consider separation in the broader context of the costs/benefits that will be created and need for any costs to be passed through to consumers.

4.54. SingTel submits that in the Singapore context the costs of structural separation are highly likely to exceed the competitive benefits, as the competitive benefits have already been derived through the existing of network based competition.

²⁶ OPTA, *Letter to Market Parties regarding All-IP: Policy Rules and Separation of Functions*, Public Version, 2 March 2007, page 6.

²⁷ *La lettre de l’Autorite de regulation des communications électroniques et des postes*, No. 55, March/April 2007, Page 4.

5. STRUCTURAL SEPARATION MAY BE APPROPRIATE FOR GOVERNMENT FUNDED NGNBN DEPLOYMENTS BUT is INAPPROPRIATE FOR OTHER NETWORKS IN SINGAPORE

- 5.1. The IDA has already determined that the NGNBN will be subject to an “*effective open access*” regime, comprising the structural separation of NetCo and the operational separation of OpCo.
- 5.2. The NGNBN will be subject to approximately S\$1 billion in government funding. In the case of government funded networks, SingTel submits that it is in the public interest for that next generation broadband network deployment to be subject to structural and operational separation.
- 5.3. SingTel accepts that the IDA has established a structurally separate NetCo and operationally separate OpCo to deliver the NGNBN and considers this may represent an appropriate model for the delivery of a government funded broadband network, both within and outside of Singapore.
- 5.4. However, even though the NGNBN is based on structural separation between NetCo and OpCo and operational separation between OpCo and retail service providers, it does not follow that all other networks in Singapore should also be subject to structural and/or operational separation.
- 5.5. In SingTel’s view, this would be a disproportionate regulatory measure in light of the structural and operational separation that already exists in respect of the NGNBN and the level of network based competition in Singapore.
- 5.6. Indeed, in the Netherlands, which has also adopted an open access model in respect of the CityNet deployment in the City of Amsterdam, there has been no move to impose the same model on the incumbent operator, KPN.
- 5.7. As noted above, OPTA has specifically rejected the imposition of functional separation on KPN on the basis of the existence of competition across the country from alternative infrastructure operators.

6. CONCLUSION

6.1. SingTel responds to the IDA's questions as follows:

Question 1: IDA seeks views and comments on the scope of separation that may be included in the regulatory toolkit, particularly differentiation in terms of types of operator, network elements, markets or any other manner of differentiation. For example, should separation be considered for dominant licensees, and/or network elements that are costly and difficult to replicate, in respect of next generation access networks with extensive coverage etc.

SingTel does not consider that it is necessary or appropriate to have structural and/or operational separation in Singapore in respect of existing telecommunications licensees. There are already two nationwide wireline networks in Singapore and the prospect of even greater competition following the deployment of the NGNBN.

Question 2: IDA recognises that international practices differ in the criteria for imposing structural and/or operational separation, although the policy objective of most jurisdictions when imposing any form of separation is to ensure effective competition in the telecommunications markets.

IDA seeks views and comments on the appropriate criteria for the imposition of structural and/or operational separation as a regulatory measure.

SingTel does not consider that it is necessary or appropriate to have structural and/or operational separation in Singapore in respect of existing telecommunications licensees.

Question 3: IDA seeks views and comments on the comparative benefits of structural separation vis-a-vis operational separation, in relation to the scope of separation and the criteria for separation for both structural and operational separation, stated in Questions 1 and 2.

The comparative benefit of structural separation vis-a-vis operational separation is irrelevant, as neither option is appropriate in the Singaporean context in respect of existing telecommunications licensees.