

**CONSULTATION PAPER ISSUED BY THE INFO-
COMMUNICATIONS DEVELOPMENT AUTHORITY OF
SINGAPORE:**

**“INDUSTRY STRUCTURE FOR NEXT
GENERATION ACCESS NETWORKS”**

Submission by the StarHub Group

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1 Statement of Interest

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

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

1.3 StarHub acquired CyberWay (now StarHub Internet Pte Ltd) for the provision of Public Internet Access Services in Singapore on 21 January 1999.

1.4 In July 2002, StarHub completed a merger with Singapore Cable Vision to form StarHub Cable Vision Ltd (“SCV”). SCV holds a FBO licence and offers broadband and cable TV services.

1.5 StarHub Online Pte Ltd is a wholly-owned subsidiary of StarHub Ltd. StarHub Online Pte Ltd was issued with a licence to provide Public Internet Access Services in Singapore on 22 February 2005.

1.6 This submission represents the views of the StarHub group of companies, namely, StarHub Ltd, StarHub Mobile Pte Ltd, StarHub Internet Pte Ltd, StarHub Online Pte Ltd and StarHub Cable Vision Ltd.

2. Executive Summary

2.1 StarHub believes that it is timely to review the regulatory regime for “Next Generation Access Networks”. Operators around the world are starting to rollout such networks, and it is clear that such networks can present a unique set of regulatory challenges for regulators.

2.2 StarHub believes that IDA should have the full powers it needs to regulate the industry, and we would support any moves to strengthen the separation powers in IDA’s “regulatory toolkit”. We believe that those powers:

- Should focus on Fibre-to-the-Home (“FTTH”) networks, which are likely to generate the most significant regulatory issues;
- Should focus on those FTTH networks that (similar to the NGNBN) have extensive coverage;
- Should only be used on a case-by-case basis, after a detailed investigation of the circumstances in question; and
- Should not be applied retrospectively to existing networks (unless operators seek to convert existing networks into FTTH networks).

2.3 In considering the criteria for imposing structural and operational separation, StarHub would respectfully suggest that IDA’s regulation of the NGNBN entities provides a useful benchmark. If an operator builds out a FTTH network similar to that built out by NetCo or OpCo, IDA should consider regulating that operator in a similar manner to the regulation of NetCo and OpCo.

2.4 While the comparative benefits of structural separation vis-à-vis operational separation are likely to vary from case-to-case, we would draw IDA’s attention to recent research commissioned by SingTel-Optus in Australia. This research concludes that: “without structural separation, Telstra will have very powerful incentives to damage competition in downstream markets that rely on access services provided by the NBN [National Broadband Network]”, and goes on to note that “these incentives would apply to any other vertically integrated owner of the NBN.”¹ SingTel’s research suggests that, in regulating vertically-integrated incumbents, structural separation will be more effective than operational separation.

¹ Please see: “Structural Separation for a National Broadband Network, A report for SingTel Optus”, Competition Economists Group, May 2008 (<http://www.optus.com.au/dafiles/OCA/AboutOptus/MediaCentre/Speeches/08.05.26%20CEG%20Structural%20Separation%20Report%20Final.pdf>).

- 3 *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.*
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BACKGROUND:

3.1 Under the Code of Practice for Competition in the Provision of Telecommunication Services (“the Code”), IDA already has some ability to impose operational and/or structural separation on licensees. In particular,

- Under Section 10.7.3.2 of the Code, IDA can require parties undergoing consolidation to put Accounting Separation in place;
- Under Section 10.7.3.3 of the Code, IDA can require parties undergoing consolidation to put in place Structural Separation (in which the structurally separate entity “*may be required to have separate books of accounts, separate facilities, separate officers, separate personnel, separate credit lines, and other appropriate forms of separation*”); and
- Under Section 10.7.3.4 of the Code, IDA can require parties to divest certain assets to an acceptable purchaser, in an arms-length transaction.

3.2 However, we would note that these powers are strictly limited to consolidations and mergers, and that IDA does not appear to have the explicit power to mandate operational or structural separation in other circumstances (for example, if an existing operator or an entrant decided to build out a nationwide FTTH network).

3.3 StarHub believes that IDA should have the full powers it needs to regulate the market. We would be concerned if IDA was unable to take effective regulatory action because it lacked the necessary powers. We therefore believe that IDA should have the full power to impose structural and operational separation, where circumstances warrant it (beyond just cases of mergers and consolidations).

3.4 However, we would note that the imposition of operational or structural separation could have a major impact on the operator in question. If implemented in a hasty or incorrect manner, operational or structural separation could discourage investment and impose unnecessary costs. We therefore submit that structural and operational separation must be the subject of detailed analysis before it is implemented.

THE SCOPE OF REGULATION:

3.5 In its Consultation Paper, IDA has asked for comments on the scope of separation IDA should consider. StarHub believes it is important for any operational or structural separation to focus on the rollout of new Fibre-to-the-Home (“FTTH”) networks. The logic underlying this position is as follows:

- FTTH networks are likely to be bottlenecks, which are technically difficult and prohibitively expensive to replicate.
- Unbundling FTTH networks may not be possible, depending on the design of the network. The deployment of FTTH networks (and the replacement of copper networks) may therefore make it impossible to provide some RIO services (such as line-sharing).
- Rolling out a FTTH network could allow an existing incumbent (such as SingTel) to reinforce its dominance. As has been noted by SingTel-Optus in Australia, a vertically-integrated broadband operator *“will have very powerful incentives to damage competition in downstream markets”*.

3.6 StarHub respectfully submits that the imposition of structural and/or operational separation should not be applied retrospectively (i.e. it should not apply to networks that have already been built and which are in operation). Separation of existing networks would be extremely disruptive, and could unfairly penalize existing network operators. In addition, we do not believe that existing (DSL and HFC) networks present the same regulatory challenges as FTTH networks.

3.7 Nevertheless, StarHub accepts that an existing operator could modify its existing network, converting that network into a FTTH network. Should such an event take place, we believe that this network could be subject to separation obligations.

3.8 StarHub is not suggesting that all networks which include optical fibre elements should potentially be subjected to operational or structural separation. Many FBO licensees utilize networks that contain optical fibre, and it would clearly be inappropriate to subject them to the scope of separation. Rather, we submit that FTTH networks (given their bottleneck nature and their ability to reinforce dominance) should be subject to the scope of structural and/or operational separation.

3.9 StarHub agrees with the suggestion in the consultation paper that it is unnecessary to include mobile operators within the scope of structural or operational separation. We believe that these markets are already subject to strong competition.

WHO SHOULD BE SUBJECT TO OPERATIONAL OR STRUCTURAL SEPARATION?

3.10 In its Consultation Paper has asked for comment on the potential networks to be subject to structural or operational separation. StarHub respectfully submits that it would be inappropriate to limit the scope of operational and structural separation to just “Dominant Licensees” as defined under the Code.

3.11 If IDA were to limit the scope of separation to just “Dominant Licensees”, this might encourage such Licensees to circumvent any separation obligations by rolling-out a FTTH network via a non-Dominant subsidiary. In addition, if an entrant into the Singapore market began deploying a nationwide FTTH network, we submit that this network should be subject to the same separation framework as a nationwide FTTH network deployed by an existing operator.

3.12 We therefore believe that “Dominance” should not be a pre-condition for imposing a structural or operational separation. Rather, we believe that structural or operational separation should be imposed:

- In cases where an operator is rolling out a new FTTH network (or modifying an existing network into a FTTH network); and
- In cases where an operator is rolling out an extensive FTTH network, as this is likely to make the network prohibitively expensive to replicate. We believe that “extensive” can be considered in relation to the NGNBN networks to be deployed.

4. *Question 2: IDA recognizes that international practices differ in the criteria for imposing structural separation and/or operational separation, although the policy objective of most jurisdictions when imposing any form of separation is to ensure effective competition in the telecommunication markets. IDA seeks views and comments on the appropriate criteria for the imposition of structural and/or operational separation as a regulatory measure.*
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WHEN TO IMPLEMENT STRUCTURAL/OPERATIONAL SEPARATION?

4.1 As noted above, StarHub supports the imposition of structural or operational separation in relation to the rollout of new FTTH networks (and when existing networks are modified to become FTTH networks). We believe that such an approach has the potential to facilitate Open Access, and to help prevent dominance increasing in the market.

4.2 In considering when and how to impose separation, StarHub believes that IDA should look to the regulatory framework for the NGNBN as a point of reference. If an operator rolls out a network of similar coverage, capacity, and technology as NetCo and OpCo, StarHub would suggest that there are strong grounds for imposing on that operator the same separation obligations that have been imposed on NetCo and OpCo. We would respectfully note that:

- If it is appropriate to impose operational and structural separation on NetCo and OpCo, it would clearly be appropriate to impose the same regulatory obligations on a party rolling out a new parallel FTTH network; and
- If IDA was to impose operational and structural separation on NetCo and OpCo, but did not impose the same regulatory obligations on a party rolling out a parallel FTTH network, this would clearly discriminate against NetCo and OpCo.

4.3 Nevertheless, it is important to note that structural and operational separation are significant regulatory obligations. As such, these obligations should only be imposed after detailed investigation; and should not be used retrospectively.

WHY IMPOSE SEPARATION? THE EXAMPLE OF THE SINGTEL RIO:

4.4 In considering the imposition of structural and/or operational separation, it is useful to consider the example of the SingTel's Reference Interconnection Offer ("RIO"). As IDA will be aware, the majority of services covered by SingTel's RIO are not used, or are only used to a limited extent by a small number of operators. In StarHub's opinion, this is not because RIO services are unnecessary or not needed. In reality, many of the RIO services (if priced and structured appropriately) could bring significant benefits to competing operators (and to the competitiveness of the Singapore telecommunications market overall).

4.5 StarHub would respectfully submit that the key reasons why RIO services are not subject to higher demand is because they are: (i) expensive; (ii) subject to onerous terms and conditions (particularly in regard to ordering processes); and (iii) very difficult to use in practice (and we would highlight StarHub's experience with Line Sharing, in this regard). We would also respectfully query whether SingTel's own retail operations must follow all of the terms and conditions set out in RIO; and we would repeat the conclusion of SingTel's own research that a vertically-integrated operator will have "*very powerful incentives to damage competition in downstream markets*".

4.6 StarHub would submit that one reason why it is difficult to regulate SingTel's RIO terms is because SingTel is a vertically-integrated entity. It therefore unclear how SingTel treats its own operations (compared to its competitors'), and what SingTel's cost structures actually are. We believe that if structural separation had been used to regulate interconnect-related services, SingTel's RIO services would be more widely used, and the RIO regime would be more effective than it is today.

4.7 StarHub would respectfully suggest that if new FTTH networks are regulated in a manner similar to RIO, this will generate an outcome similar to the current situation with SingTel's RIO services, and Open Access will not occur.

The Importance of Open Access:

4.8 StarHub supports Minister's statement that Open Access will create "*a more vibrant and competitive broadband market*". We believe that without structural separation it will not be possible to get "true" Open Access of new FTTH networks. StarHub would respectfully suggest that the most effective way to ensure Open Access of new FTTH networks is through structural separation.

5. *Question 3: IDA seeks views and comments 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, stated in Questions 1 and 2.*
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POTENTIAL BENEFITS OF STRUCTURAL AND OPERATIONAL SEPARATION:

5.1 The potential benefits of structural separation, in the regulation of vertically-integrated incumbent operators, are well known. These potential benefits include:

- Bringing the incumbent's incentives into alignment with a non-integrated carrier, thereby ensuring non-discriminatory access to the incumbent's networks, thereby promoting competitiveness.
- Promoting access to the incumbent's network, and in turn promoting innovation, either by new entrants or by the incumbent which would now be under increased pressure to innovate (to avoid new entrants acquiring the competitive edge).
- Creating a "level playing field" in the market by forcing the incumbent's retail arm to deal with its wholesale arm on the same terms that it deals with any other competitor (which would potentially solve many interconnection issues).
- Eliminating any conflict of interest between the incumbent's retail and network divisions in terms of pricing and marketing (as the network division would be guided by its own commercial interests, rather than the commercial interests of its retail division).
- Allowing regulators to focus on the wholesale network, to more effectively regulate the service quality, network reliability, and access to essential network facilities at cost-based prices.
- Helping to eliminate any cross-subsidization between the incumbent's networks and retail divisions, by requiring those entities to transact on a truly "arms-length" basis.

5.2 Nevertheless, there are also potential disadvantages of separation (such as losses of efficiency and implementation costs). StarHub believes that structural and operational separation need to be implemented on a case-by-case basis, and should be focused on new FTTH networks (where there is a clear benefit in such regulation).

OPERATIONAL SEPARATION VS STRUCTURAL SEPARATION:

5.3 In considering the benefits of operational separation against those of structural separation, we would highlight that research commissioned by SingTel-Optus in Australia (“the SingTel Report”) suggests that structural separation would be more effective than operational separation.

5.4 The SingTel Report highlights that:

- The incentives for a vertically-integrated owner of a National Broadband Network to damage competition in downstream markets *“are unchanged by accounting or operational separation regimes.”*
- *“Operational separation is likely to reduce the benefits of vertical integration without significantly deterring anti-competitive conduct”*; and
- *“International surveys suggest that operational separation has not worked as some had hoped.”*

5.5 The SingTel report essentially argues that a vertically-integrated incumbent operator will seek to deny access to its competitors, and thereby foreclose competition. Drawing on evidence from Australia and the United Kingdom, the SingTel Report suggests that operational separation has failed to overcome the incumbent’s incentive to deny access.

5.6 The SingTel report concludes that:

- Structural separation *“removes the incentive to engage in price or non-price sabotage against particular access seekers and allows all downstream operators to compete on an equal footing”*;
- Structural separation *“provides a strong incentive to engage in efficient pricing at the wholesale level such that all access seekers face the same access prices and importantly, face prices that reflect the true economic cost of using the services of the network”*; and
- *“A key benefit of structural separation would be promotion of ... innovation (by removing the threat of vertical foreclosure)”*

5.7 StarHub would respectfully suggest that this argument would appear to be as relevant for SingTel in Singapore as it is for Telstra in Australia.

6. Conclusion:

6.1 StarHub agrees with IDA that it is timely to consider the regulatory regime to apply in regard to Next Generation Access Networks.

6.2 We believe that IDA should have all the powers it needs to effectively regulate the industry, and that IDA should have the power to impose structural and operational separation. However, we submit structural and operational separation are significant regulatory steps, and should not be imposed retrospectively on existing networks, given the disruption this would cause.

6.3 In regulating Next Generation Access Networks, StarHub strongly believes that IDA should focus on parties building out new FTTH networks (similar to those to be deployed by NetCo and OpCo). We believe that this focus is necessary, given the potential for such networks to become bottleneck facilities, and to reinforce the Dominance of existing operators. In regulating new FTTH networks in this manner, IDA can establish a level playing field with the NGNBN networks to be built.

6.4 StarHub believes that structural and operational separation should be imposed on a case-by-case basis. However, as noted in research commissioned by SingTel-Optus, without structural separation, a vertically-integrated incumbent has very powerful incentives to damage competition in downstream markets. This research also suggests that structural separation is likely to be more effective than simple operational separation.

6.5 StarHub is grateful for the opportunity to comment on this issue.